5.0 ENVIRONMENTAL IMPACT ANALYSIS

The following impact analyses are based on a plan-to-ground analysis. A plan-to-ground analysis compares the proposed General Plan Update with existing baseline conditions. The comparison of the adopted General Plan and the proposed General Plan Update is discussed as part of the No Project alternative, in Chapter 10 of this report.

5.1 Land Use

5.1.1 Existing Conditions

5.1.1.1 Planning Areas

The Chula Vista General Plan area is divided into four planning areas; land use and circulation changes are proposed within three of the four planning areas as part of the General Plan Update. Changes are proposed within the Northwest, Southwest, and East Planning Areas; no changes are proposed with the Bayfront Planning Area. The update areas refer to the specific areas within those three planning areas wherein land use and circulation changes are proposed. The Northwest Planning Area lies north of L Street and west of I-805; the Southwest Planning Area lies south of L Street and west of I-805; the East Planning Area lies east of I-805, and the Bayfront Planning Area lies west of I-5 overlooking the San Diego Bay. Figure 5.1-1 shows the planning areas within the General Plan area and incorporated boundaries.

Northwest Planning Area

The Northwest Planning Area is bordered by SR-54 on the north, I-805 on the east, L Street on the south, and I-5 on the west. Established early in Chula Vista's growth, the Northwest Planning Area has several well-established residential neighborhoods and a central commercial area referred to as the "Urban Core." The San Diego trolley line runs along the Urban Core's west edge and has two stations at E Street and H Street immediately east of I-5. The Northwest Planning Area serves as the historic focus of the city and is the central connecting area between the Bayfront and newer master planned communities to the east.

Retail uses are located primarily along Broadway from E to L Streets and along Third Avenue from E to H Streets. Important public buildings including the Civic Center, Chula Vista Public Library, and new Police Station are located at the intersection of F Street and Fourth Avenue. The South County Regional Center, providing courtroom, records, and other administrative functions, is located at the intersection of Third Avenue and H Street. Scattered industrial uses occur along I-5 and also adjacent to National City.

Within the Northwest Planning Area, areas east of Second Avenue and south of H Street are generally residential with well-maintained, traditional single-family homes. Residential areas

west of Second Avenue and north of I Street along with areas west of Broadway and south of I Street are considered to be in transition with portions of these areas zoned and developed with large- and small-scale multi-family residential. Large-size (greater than 0.25 acre) and larger estate lots establish the character of an island of unincorporated area of the county located northeast of Hilltop Drive and H Street. Areas of commercial, industrial, and institutional lands (including parks) comprise the remaining areas. Streets and freeways account for an estimated 30 percent of the area.

Currently, the Downtown Third Avenue and Mid-Third Avenue Districts are designated primarily for retail, professional/office, and public/quasi-public uses. The Mid-Broadway District is designated almost exclusively with retail and visitor-serving uses except for limited medium to medium-high density residential in the northern portion. Special attention is also provided along the east/west Gateway streets (E and H Streets) and existing and proposed transit stations. Redevelopment efforts have been focused on the city's gateways, including I-5, SR-54, I-805, E and H Streets, Broadway and Fourth Avenue, and the existing downtown area. Redevelopment Planning is discussed below in Section 5.1.1.2.

Southwest Planning Area

The Southwest Planning Area is bounded on the north by L Street, on the south by the Otay River, on the east by I-805, and on the west by the San Diego Bay. The Southwest Planning Area contains several established neighborhoods, including Harborside, Castle Park, Otay Town, Woodlawn Park, Broderick Acres, Whittington Subdivision, and West Fairfield. Also included is the approximately 3.5-square-mile Montgomery community, which in 1985 was annexed from the County of San Diego into the City of Chula Vista. This annexation was the largest inhabited annexation in the state of California up to that time, with approximately 26,000 residents.

The Southwest Planning Area has a grid street pattern and a diversity of land uses, including a mix of residential, commercial, and industrial businesses that in some cases have evolved over time without adequate planning, and have resulted in land use conflicts. The Montgomery Subarea of the Southwest Planning Area is the focus of proposed land use changes and includes the South Broadway Corridor, South Third Avenue, Main Street, Palomar Gateway, and West Fairfield Districts.

Lands within the update area consist primarily of areas designated industrial, retail, and open space/park and recreation. Target areas also include some medium-high and high-density residential and a limited amount of older, traditional single-family neighborhoods, primarily in the Palomar Gateway District and the northern perimeter of the Main Street District.

Notable features within this planning area include the San Diego Country Club, which occupies a large area south of, and fronting L Street, east of Third Avenue; Chula Vista's new animal shelter in the vicinity of Fourth Avenue and Beyer Way; and the Otay Valley

Regional Park. The City is coordinating with adjacent jurisdictions for preservation and enhancements within the park, which occupies the southern boundary of the planning area. Adjacent lands to the south of the planning area are within the City of San Diego's Otay Mesa Community Planning Area.

East Planning Area

The East Planning Area encompasses areas of open space and developed and developing, largely master planned communities, including all of the Otay Ranch. The area is bounded by I-805 on the west; on the north by the city's corporate and sphere of influence boundaries along SR-54 and the Sweetwater River valley; on the northeast and east in the San Miguel Mountain/Proctor Valley area extending to Highway 94, near the communities of Jamul and Dulzura in unincorporated San Diego County; and on the south within and adjacent to the Otay Ranch General Development Plan (GDP) boundaries, including areas within the city of San Diego and the unincorporated county of San Diego.

The Otay Ranch is the largest of the city's master planned communities. This 23,000-acre master planned community was jointly planned by the City of Chula Vista and County of San Diego. As such, the East Planning Area includes areas within unincorporated county of San Diego that, for the most part, are expected to remain within County jurisdiction. The Chula Vista City Council and the San Diego County Board of Supervisors approved the Otay Ranch GDP in October of 1993.

The easterly lands are largely under public control; specifically, the City of San Diego, who owns and manages the Otay Reservoir (upper and lower), is required by state and federal laws to protect water quality for potable drinking purposes. As such the use of pesticides, herbicides, irrigation water, and fertilizers are strictly controlled. Additional water quality monitoring of the reservoir would be required if herbicides or pesticides are used.

There are significant open space lands within the East Planning Area that are designated for preservation under the Otay Ranch Resource Management Plan (RMP). These open space areas are outside designated villages, planning areas, or other areas intended for development. The majority of development in this area has occurred over the last several years and is progressing pursuant to the adopted Otay Ranch GDP. Existing and approved uses within the areas targeted for update include low-medium village (LMV), a subcategory of residential low-medium located elsewhere within the city; public, quasi-public, and open space; retail; mixed-use (office, retail, and multi-family); and limited industrial.

Bayfront Planning Area

The Bayfront Planning Area occupies the area generally west of I-5 and overlooks the San Diego Bay. Water-related recreational and retail/commercial and industrial uses occupy the western Bayfront area. Industrial, visitor-serving commercial, limited residential, and the I-5

corridor comprise the remaining portions. Major features on the Bayfront include the Sweetwater Marsh National Wildlife Refuge and Chula Vista Nature Center, Chula Vista Harbor and Marina, the South Bay Power Plant, the Salt Works, and the Goodyear industrial complex.

The Bayfront Planning Area encompasses approximately 1,013 acres, of which 748 acres are uplands or filled areas above mean high tide and 265 acres are wetlands. The majority of the upland area within the planning area is currently developed with urban uses. The remainder of the planning area is either vacant or used for smaller industrial, storage, and commercial purposes. The intensity of development is essentially suburban with low-rise buildings and open parking areas.

The General Plan Update does not propose any changes in the land use designations for the Bayfront Planning Area, although as discussed in Section 2.2 of this EIR, the southernmost portion of the Bayfront Planning Area, south of Palomar Street, is proposed to become part of the Southwest Planning Area. A joint planning effort of the Port of San Diego and City of Chula Vista to develop a Bayfront Master Plan was initiated in 2002. The Port of San Diego will serve as the lead agency for CEQA review of this planning effort. The master plan process is estimated for completion in late 2005 and is an implementing document for the California Coastal Act Local Coastal Program described below.

5.1.1.2 Redevelopment Planning

The City of Chula Vista has established a number of redevelopment areas. The following discussion provides a brief description of these redevelopment areas. Figure 5.1-2 shows the location of major projects and redevelopment areas within the planning area.

Chula Vista Bayfront/Mid-Bayfront Redevelopment Area

City redevelopment plans address the need to enhance the Bayfront's appearance and access. E and J Streets, Marina Parkway, and I-5 generally form the boundary for the Bayfront area, which is a designated candidate area for a limited amount of mid- and high-rise development. The City is actively involved in attracting new development to the area and is working cooperatively with the San Diego Unified Port District, which shares jurisdiction for some portions of the Bayfront. Approximately 400+ acres of property is within the redevelopment area.

As discussed above, the General Plan Update does not propose any changes in the land use designations for the Bayfront Planning Area, although the southernmost portion of the Bayfront Planning Area, south of Palomar Street, is proposed to become part of the Southwest Planning Area.

Town Centre I

The relationship of the Town Centre I redevelopment area to other redevelopment areas of the city is shown in Figure 5.1-2.

Efforts to revitalize downtown Chula Vista began with establishment of the 138-acre Town Centre I Redevelopment Area in 1976. The goal is to establish a business, entertainment, civic, and cultural focal point of the city. The area is urbanized and developed with a mixture of public and private land uses, including the South San Diego County Superior Court complex, Norman Park Senior Center and Memorial Park, the 60,000-square-foot Park Plaza commercial center, and a variety of other commercial office, retail, and residential uses. The most recent significant redevelopment project is Gateway Chula Vista at the northwest corner of Third Avenue and H Street. When completed, the Gateway project will provide an estimated 347,000 square feet of Class A office space with ground floor retail and restaurant uses and employ up to 1,200 people. Phase I of Gateway was completed in 2003 and Phase II is currently underway. Another important recent project is the city's new Police Station at the southeast corner of Fourth Avenue and F Street, which was completed in early 2004.

Town Centre II

Figure 5.1-2 shows the Town Centre II location in relation to other redevelopment areas. First established in 1978, the Town Centre II Redevelopment Area includes the Chula Vista Center, a 65-acre regional shopping mall located in central Chula Vista. Subsequent amendments adopted in the late 1980s added a total of 11 additional acres. The amendment areas are comprised of various school district projects and are intended to promote redevelopment of blighted land uses. In total, Town Centre II comprises 10 non-contiguous sites totaling 76 acres, and includes properties such as the Civic Center, the Chula Vista Main Branch Library, the Old Public Works Yard, Eucalyptus Park, Scripps Memorial Hospital, the Best Buy/WalMart Shopping Center, and various other commercial, public, and residential properties in the city's central core.

Recent revitalization projects in the area include renovation of Chula Vista Center, and improvements that led to the development of the 200,000-square-foot South Bay Marketplace, anchored by Wal-Mart and Best Buy. Plans are currently under consideration for updating and reconfiguring the Chula Vista Center to remain competitive with other regional shopping centers.

Southwest Redevelopment Area

The Southwest Redevelopment Area encompasses areas along the bay south of the Bayfront Redevelopment Area and areas generally south of J Street along segments of Broadway, Industrial Boulevard, Third Avenue, and Main Street. This redevelopment area is shown on Figure 5.1-2 and encompasses approximately 1,100 acres. The area, which includes a mix of

industrial, commercial, thoroughfare, and residential uses approved prior to annexation from the City of San Diego, in general lacks conformance to minimum design standards. Areas lacking unified, integrated development include the Montgomery area (annexed from the County of San Diego in the 1980s) and nearby areas. Consequently, the Chula Vista City Council has identified code enforcement as a top priority for this area and redevelopment efforts are beginning to be more evident. The Otay Valley Regional Park and river forms the southern boundary of the area. The area is experiencing some recent development, most notably, the city's animal shelter north of the Otay Valley Regional Park in the vicinity of Main Street from near Banner Avenue and industrial complexes along Main Street.

Otay Valley Road Redevelopment Area

Located in the southeastern portion of the city, the Otay Valley Road Redevelopment Area includes some 770 acres. The area supports light industrial businesses and some large retail businesses as well. Projects range from the Chula Vista Auto Park Phase I, to landscaping and environmental clean up. The City recently developed the new Public Works Center at 1800 Maxwell Road on a 25-acre site which houses all of Public Works/Operations Division's equipment, vehicles, buses, and personnel. Future projects include development of a retail center, and expansion of the Chula Vista Auto Park.

5.1.1.3 Regulatory Plans and Policies

The following section describes the planning framework and additional regulatory documents, plans, and policies relevant to land use for the proposed General Plan Update. These include regional planning documents prepared by SANDAG, which address regional growth, transportation and land use in the county of San Diego, LCP, the zoning ordinance, community planning documents, and the Multiple Species Conservation Program (MSCP), among others.

San Diego Association of Governments (SANDAG)

The San Diego Association of Governments (SANDAG) functions as a forum for decision-making on regional issues such as growth, transportation, and land use in San Diego County. The agency membership is comprised of representatives from each of the county's local jurisdictions, including the City of Chula Vista. SANDAG programs pertinent to the Chula Vista General Plan and land use decision-making include the Regional Comprehensive Plan (RCP), Regional Transportation Plan (RTP), Congestion Management Program (CMP), Regional Housing Program, Employment Lands Inventory, Bus Rapid Transit, including the Otay Ranch Transitway Alignment and alternatives, and Transit First studies. These programs are summarized below.

Regional Comprehensive Plan – The RCP is the long-range planning document developed to address the region's housing, economic, transportation, environmental, and overall quality-

of-life needs. Goals of the RCP are to establish a planning framework and implementation actions that increase the region's sustainability and encourage "smart growth while preserving natural resources and limiting urban sprawl." Other programs provide more focused assessment and recommendations addressing regional transportation planning, employment, and housing. Basic "smart growth" principles designed to strengthen land use and transportation integration are summarized as follows:

- Mix compatible land uses
- Take advantage of compact building design
- Create a range of housing opportunities and choices
- Create walkable neighborhoods
- Foster distinctive, attractive communities with a strong sense of place
- Preserve open space, natural beauty, and critical environmental areas
- Strengthen and direct development towards existing communities
- Provide a variety of transportation choices
- Make development decisions predictable, fair, and cost-effective
- Encourage community and stakeholder collaboration in development decisions

Regional Transportation Plan – The current Regional Transportation Plan, called MOBILITY 2030, will implement a long-range vision for highways, major bus routes, Bus Rapid Transit (BRT) the Trolley, rail lines, streets, bicycle travel, pedestrian traffic, and goods movement. MOBILITY 2030 contains an integrated set of public policies, strategies, and investments to maintain, manage, and improve the transportation system in the San Diego region.

Congestion Management Program – SANDAG is the designated congestion management agency for the San Diego region. The Congestion Management Program is a state-mandated program that helps cities and communities monitor transportation system performance, develop programs to address near- and long-term congestion, and better integrate land use and transportation planning decisions. In the short-term, the CMP serves as an element of the RTP, focusing on congestion management strategies that can be implemented in advance of the long- range transportation solutions contained within the RTP.

Regional Housing Program – The Regional Housing Program promotes strategies to increase housing supply and ensure access for all income groups, and provide a variety of housing choices for region residents.

Employment Lands Inventory – SANDAG analyzes the region's supply of non-retail land and compares it to market demand over the past five years. In 2003, there were nearly 15,000 acres of designated employment land in the region, but only 1,420 acres, located mostly in the growing commercial and residential areas of South County, were immediately available. The Employment Lands Inventory in Chula Vista includes acreage along the Bayfront, along Main Street, in the Eastern Urban Center, and surrounding the Otay Landfill.

Transit First – SANDAG's adopted *Transit First!* Strategy seeks to develop a network of transit services; integrate transit with land use planning; enhance operating speed; and improve the rider's experience. *Transit First!* projects will provide high-quality, rubber-tired vehicles offering the speed, comfort and amenities of a trolley, with the flexibility of non-fixed modes of transportation. BRT vehicles will travel in their own lanes, as well as in mixed flow lanes where they may receive priority at signalized intersections. Upgraded stations will have shelters, next bus passenger information, and other features.

City of Chula Vista Municipal Code (Title 19, Zoning and Specific Plans)

Title 19 of the City of Chula Vista Municipal Code includes descriptions and allowed uses for each of the city's zone classifications. Zone classifications provide for residential, commercial, industrial, and open space uses in conformance to the General Plan land use designations as required by law. Zoning regulations establish the minimum lot size, floor area ratio, building heights, setbacks, parking requirements, and permitted and conditional uses that may be developed within the zone. Jurisdictions are required by law to bring their zoning ordinance and subdivision procedures into conformance with their General Plan.

City of Chula Vista MSCP Subarea Plan

The City of Chula Vista MSCP Subarea Plan (Subarea Plan) is a subregional plan under the California Natural Communities Conservation Planning Act (NCCP) Act (1991) and as part of the adopted General Plan. The City adopted the Subarea Plan on May 13, 2003, as part of the General Plan. The MSCP is a comprehensive, long-term habitat conservation plan intended to protect species against the potential impacts of habitat loss associated with development of both public and private lands. The Subarea Plan is an implementation mechanism for the broader MSCP Subregional Framework Plan, which ultimately executes and enforces California natural communities conservation planning. As part of the General Plan, any projects subject to City approval must be in conformance with the Subarea Plan.

The Subarea Plan provides comprehensive long-term habitat conservation to address the needs of multiple species and the preservation of natural vegetation communities for lands within the city and sphere of influence boundaries. The Chula Vista Subarea is comprised of lands within the incorporated city limits for which Take Authorization will be granted. The larger Chula Vista MSCP Planning Area totals 57,849 acres and includes lands within both the City's General Plan boundary and unincorporated County of San Diego. The city's Preserve will eventually encompass approximately 5,000 acres of the city's most sensitive open space areas. In addition, another approximately 4,200 acres outside the city's jurisdiction will be preserved as a result of development occurring within the city's urban boundaries. Lands set aside within the Preserve will be appropriately managed while continuing to provide passive recreational opportunities consistent with the City's MSCP Subarea Plan for the public.

The goals of the Chula Vista MSCP Subarea Plan include:

- To conserve Covered Species and their habitats through the conservation of interconnected significant habitat cores and linkages.
- To delineate and assemble a Preserve using a variety of techniques including public acquisition, on- and off-site mitigation, and land use regulations.
- To provide a Preserve Management Program that, together with the federal and state management activities, will be carried out over the long term, further ensuring the conservation of Covered Species.
- To provide necessary funding for a Preserve management program and biological monitoring of the Preserve.
- To reduce or eliminate redundant Federal, State, and local natural resource regulatory and environmental review of individual projects by obtaining federal and state Authorizations for 86 species.

Additional discussion of the MSCP Subarea Plan is presented in Chapter 5.3, Biological Resources, of this EIR.

Habitat Loss and Incidental Take Ordinance (Municipal Code, Chapter 17.30)

The Habitat Loss and Incidental Take (HLIT) Ordinance is intended to implement a process that would allow the City of Chula Vista to issue permits for the limited taking (direct or indirect loss) of covered species identified under City of Chula Vista's MSCP Subarea Plan, as an alternative to the existing mandatory process prescribed under Section 10(a) of the Endangered Species Act. The HLIT Ordinance assures that development occurs in a manner that protects the overall quality of the habitat resources and preserve connectivity. Additional discussion regarding the application of this ordinance is presented in Chapter 5.3, Biological Resources, of this EIR.

Local Coastal Plan

The Chula Vista Local Coastal Program (LCP) guides continuing development within the Bayfront coastal zone area by providing a detailed plan for the orderly growth, development, redevelopment, and conservation of resources. The Bayfront Specific Plan or Local Coastal Program Implementation Program is the implementing program of the LCP and is incorporated into the Chula Vista Municipal Code Title 19, Zoning. The LCP boundary is depicted in Figure 5.1-3. The intent of the LCP is to create a water-oriented focal point for the entire city in conformance with the goals and policies of the Coastal Act. Emphasis is on public recreation activities, tourism, and conservation but preservation and enhancement of visual resources are also key components. Implementation provides for the removal of visual blight and public access improvements to allow the public to experience views from the perimeter of the Bayfront outward. More specifically, plan objectives are to preserve

wetlands, upgrade the area's existing substandard industrial image, improve the quality of the shoreline, public parkland and open space, remove (or mitigate through the use of landscaping) structures or conditions that have a blighting influence on the area and develop an improved relationship between the Bayfront and freeway, and arterial approaches. The California Coastal Commission certified the LCP and zoning in 1985 and a subsequent amendment was approved in 1993 for expansion of the Sweetwater Marsh National Wildlife Refuge.

Greenbelt Master Plan

The Greenbelt Master Plan provides guidance and continuity for planning development of a continuous 28-mile open space and park system and trails that encircle the city. The Greenbelt Master Plan was adopted by the City Council on September 16, 2003. The Plan's primary purpose is to provide goals and policies, trail design standards, and implementation tools that guide the creation of a Greenbelt system of multi-use trails through open space corridors. Implementation of the Greenbelt system creates a unique identity for the city while unifying the western and eastern areas of the city. The Greenbelt Master Plan concept for open space is contained within the Preserve areas depicted in Figure 5.1-4.

The system is intended to be compatible with future proposed uses such as a university campus in the Salt Creek area. Major components of the Chula Vista Greenbelt include Chula Vista Bayfront Park and lands extending to the Otay River; lands within the Otay River Valley including concept planning areas within the proposed Otay Valley Regional Park (OVRP); lands northerly to Mother Miguel Mountain and the Sweetwater Reservoir; and lands from the Sweetwater Reservoir and Sweetwater valley and Sweetwater Regional Park west to I-805 and Bayfront Park.

Design Review

Multifamily, commercial and industrial development and redevelopment within redevelopment project area boundaries are subject to design review. The City's Design Manual provides specific site planning, architectural, and landscaping requirements for single-lot single-family and multi-family residential and commercial and industrial development.

Otay Ranch General Development Plan (GDP)/Subregional Plan

The Otay Ranch GDP/Subregional Plan was approved jointly by the City of Chula Vista and County of San Diego for the future development of Otay Ranch and establishes general land use goals, objectives, policies, and implementation measures that apply to all portions of the overall planned community of Otay Ranch. The plan addresses future uses on a total of 22,899 acres and provides a balance of housing, shops, workplaces, schools, parks, civic

facilities, and open spaces. The majority of development is intended to be clustered in villages, with conveniently located features and well-defined edges such as the Chula Vista Greenbelt, open spaces, and wildlife corridors.

Otay Ranch Resource Management Plan (RMP)

The Otay Ranch Resource Management Plan, certified by the City of Chula Vista in October 1993, provides guidance for resource protection within Otay Ranch. An important part of the RMP is the creation of the Otay Ranch Preserve. The Otay Ranch Preserve includes approximately 11,375 acres to be set-aside as mitigation for impacts to sensitive resources resulting from Otay Ranch development that would occur both within the city and in the county of San Diego. The Otay Ranch Preserve has been designed and would be managed specifically for protection and enhancement of natural resources present within Otay Ranch, including sensitive biological resources.

The single unifying goal of the Resource Management Plan is the establishment of an open space system that would become a permanent preserve dedicated to the protection and enhancement of the biological, paleontological, cultural (archaeological and historical), floodplain, scenic resources, and visual quality of Otay Ranch, the maintenance of long-term biological diversity, and the assurance of the survival and recovery of native species and habitats within the Preserve.

Otay Valley Regional Park (OVRP) Concept Plan

The OVRP Concept Plan is a multi-jurisdictional planning effort for the Otay River valley by the County of San Diego, City of Chula Vista, and City of San Diego and represents the efforts of elected officials and a Citizen Advisory Committee for future protection and development of the planning area. The concept plan provides for the protection of environmentally sensitive areas and important cultural resources; identifies areas for active and passive recreational development; provides for a trail system with staging areas, view points, and overlooks; and envisions two interpretive centers for environmental and educational programs.

Otay River Watershed Management Plan

The Otay River Watershed Management Plan has recently been initiated by the Cities of Chula Vista, San Diego, Imperial Beach, the County of San Diego, and the Unified Port District. The purpose of this management plan is to provide a framework for guidance to improve water quality, groundwater protection, management and conservation of biological and cultural resources.

Sweetwater Regional Park/Chula Vista Municipal Golf Course

Portions of the Sweetwater Valley and Sweetwater Regional Park are incorporated into the Chula Vista Greenbelt and extend through the northern portion of the planning area from the Sweetwater River westerly to the bay.

The Chula Vista Municipal Golf Course is a public course located along the north side of Bonita Road, south of SR-54, Sweetwater Road, and Rohr Park, and between portions of the Sweetwater Regional Park, which border the course to the east and west in the Sweetwater River valley. The Sweetwater Regional Park provides natural open space along the Sweetwater River and includes a system of trails for horseback riding, hiking, scenic enjoyment, and wildlife observation. The regional park provides facilities serving the entire region, but also offers local park facilities.

Designated Historic Sites/Local Register of Historic Resources

Currently, 61 properties are included in the Chula Vista List of Designated Historic Sites. A number of properties have been designated since passage of a tax incentive program in 2001 (Mills Act Program) for owners of historic properties. The proposed General Plan policies call for protection of Chula Vista's important resources through amendments to the zoning code, updates to the inventory of historic properties, ongoing participation in the Mills Act Program, and whenever practical, providing support for rehabilitation of sound historic buildings.

Brown Field Airport Land Use Compatibility Plan

The Airport Land Use Commission is an agency that is required by state law to exist in counties in which there is a commercial and/or a general aviation airport. The purpose of the ALUC is to protect public health, safety, and welfare by ensuring the orderly development of airports and the adoption of land use measures that minimize the public's exposure to excessive noise and safety hazards within areas around public airports, to the extent that these areas are not already devoted to incompatible uses. The San Diego County Regional Airport Authority serves as the Airport Land Use Commission for the Brown Field Airport. The adopted Brown Field Airport Land Use Compatibility Plan (ALUCP) established the Airport Influence Area for this airport, which encompasses a limited area of the East Planning Area. A small portion of the General Plan area is within the Brown Field Airport Influence Area.

Sweetwater Community Plan

The Sweetwater Community Plan emphasizes the need to maintain the character of those portions of the Sweetwater Community Planning Area within the City's jurisdiction as a semi-rural community. The community plan document is a component of the City of Chula

Vista's General Plan and consideration is given for actions affecting the community's unique topographic, ecologic, historic, recreational, and cultural characteristics. Piecemeal annexation of portions of the community planning area is to be resisted and it is anticipated that new development will be consistent with County Design Review guidelines for signage, color, landscape, natural features (including street trees over 20 feet in height), scenic corridors, and sensitive to preservation of historic features. The City of Chula Vista has designated Bonita Road as a Scenic Highway consistent with County goals, which list Bonita Road, San Miguel, and Sweetwater Roads as first priority roadways in the Scenic Highway Element of the County General Plan. In addition, San Miguel Road, Quarry Road, and Proctor Valley Road are also recommended for design review, including scenic value, unique vegetation, and preservation of the rural, rustic style of structures that have long characterized the valley.

Otay Mesa-Nestor Community Plan

A portion of the City's West Fairfield District is within the Otay Mesa-Nestor Community Plan within the jurisdiction of the City of San Diego. This portion of the West Fairfield District is designated open space. River valleys, steep slopes, mesas, and hydrologic features including Nestor Creek and the salt evaporation ponds of southern San Diego Bay characterize the community. However, due to its conventional residential character, and the absence of a distinct business center, residents of the Otay Mesa-Nestor community feel the community lacks identity as a unique part of San Diego. The Otay Mesa-Nestor Community Plan's focus is to improve the community for its residents through the creation of various programs and strategies. Through a combination of revitalization and redevelopment efforts the community's older business areas will be rejuvenated into attractive, functional, and thriving centers. The San Diego Bay National Wildlife refuge is a valuable open space amenity adjacent to the West Fairfield District.

5.1.2 Thresholds of Significance

The proposed General Plan Update would result in a significant impact to land use if it would:

- Threshold 1: Physically divide or adversely affect the community character of an established community.

- Threshold 2: Conflict with any applicable land use plan, policy, or regulation or an agency with jurisdiction over the project (including but not limited to the General Plan, Specific Plan, Local Coastal Program, or Zoning Ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

- Threshold 3: Conflict with any applicable habitat conservation plan or Natural Communities Conservation Plan.

5.1.3 Impacts

5.1.3.1 Threshold 1: Community Character

Threshold 1 states that the proposed General Plan Update would result in a significant land use impact if it would physically divide or adversely affect the community character of an established community. Community character addresses two main points: (1) the degree to which proposed project objectives and policies or land use changes have the potential to divide an established neighborhood or community; and (2) whether the project would introduce changes that substantially change the community character by placing incompatible land uses together. The impact section below examines the objectives and policies that apply citywide and areas where the proposed land use designations could result in an incompatibility between existing and planned land uses.

Chula Vista has a diversity of built environments—urban, suburban, and rural areas—in addition to large natural areas that are intended to remain undeveloped. Each type of built environment has its own set of particular characteristics, such as views, landscaping, type of street and housing, commercial activity, parks, and civic buildings that combine together to create a unique community character.

For the majority of the city, the proposed General Plan Update does not propose changes to existing land uses. Figure 5.1-5 illustrates the general areas of change relative to the city and the General Plan area at large. The City's General Plan encompasses 58,422 acres. The General Plan Update leaves the land use designations for 53,096 acres of this area unaffected, and proposes land use changes on only 5,268 acres or less than 10 percent of the planning area. It is the purpose of the General Plan Update to focus land use changes on a limited area, in response to the need to retain existing designated uses in the majority of the city. Furthermore, objectives and policies were crafted for the limited areas of the City that would change in order to protect the majority of the City where land uses changes are not proposed.

The Preferred Plan and each of the scenarios seek to provide a framework that integrates the various neighborhoods of the city and preserves existing community character and valued physical attributes, including the city's older residential neighborhoods, while providing for new development. The proposed Land Use and Transportation Element (LUT) contains 97 objectives that address actions affecting land use and community character. Of these, 34 general objectives apply throughout the General Plan area. There are 11 objectives which apply specifically to the Southwest Planning Area, 15 to the Northwest Planning Area, and 37 to the East Planning Area. The 11 objectives that apply to the Southwest Planning Area are LUT 35 through LUT 45. The 15 objectives that apply to the Northwest Planning Area are LUT 46 through LUT 60. Objectives LUT 61 through LUT 97 apply to the East Planning Area.

Updated land use objectives and policies have been developed through ongoing coordination with stakeholders, including community groups and agencies, and have been formulated to, among other things: provide a better balance of residential and non-residential development throughout the city, especially with regard to the jobs/housing mix; facilitate connectivity of the older established neighborhoods of the city (generally located west of I-805) with the newer communities developing to the east; promote revitalization; and implement "smart growth" policies promulgated in regional planning documents. In promoting the objectives, the LUT element establishes policies to better balance the mix of land use types throughout the city, preserve and protect existing stable neighborhoods, improve the image of the city, and promote improved compatibility between uses. Additional policies provide for the identification and protection of important scenic and natural resources and provide for the future protection of important historic resources within the community.

The proposed citywide General Plan objectives addressing physical development patterns and character of the city are included in Table 5.1-1. Policies addressing community character are proposed throughout the General Plan Update and provide for improved connectivity between neighborhoods and open space; protection for important natural landform features and historic resources; installation of special treatments along gateways, including themed signage and landscape material; and other measures that preserve or protect community character and cohesion. Furthermore, policies regarding the proposed integration of the city's circulation, transit, and trail plans would facilitate movement between Chula Vista's employment, residential, commercial, and recreational areas, contributing to its livability and enhancing residents' and visitors' overall experience.

General Plan Area

While the land use changes proposed by the General Plan Update are restricted to limited areas within the three planning areas, several of the objectives and policies presented by the General Plan Update apply broadly to the General Plan area. It is the vision of the General Plan Update to preserve and enhance the unique features that shape the City's identity. To this end, several LUT Objectives directly address the compatibility of development within those portions of the City for which changes in land use are not proposed. Objective 3 directs the design of new development to blend with the City's character. Objective LUT 4 addresses the establishment of policies, standards, and procedures to maintain the integrity of stable residential neighborhoods. Objective LUT 6 assures that adjacent land uses are compatible with one another, Objective 7 addresses making appropriate transitions between land uses, and Objective LUT 11 ensures that buildings and site improvements are designed to be compatible with surrounding properties and districts. In addition, the following citywide objectives establish policies that would minimize impacts to adjacent neighborhoods and maintain the integrity of stable residential neighborhoods.

TABLE 5.1-1
LAND USE AND TRANSPORTATION ELEMENT CITYWIDE OBJECTIVES

Objectives
Balance of Land Uses
Objective LUT 1
Provide a balance of residential and non-residential development throughout the City that achieves a vibrant development pattern, enhances the character of the City, and meets the present and future needs of all residents and businesses.
Urban Design and Form
Objective LUT 2
Limit locations for the highest development intensities and densities, and the tallest building forms, to key urban activity centers that are also well served by transit.
Objective LUT 3
Direct the urban design and form of new development and redevelopment in a manner that blends with and enhances Chula Vista's character and qualities, both physical and social.
Preserving and Enhancing Stable Residential Neighborhoods
Objective LUT 4
Establish policies, standards and procedures to minimize blighting influences and maintain the integrity of stable residential neighborhoods.
Implementing Mixed Use Areas
Objective LUT 5
Designate opportunities for mixed-use areas with higher density housing that is near shopping, jobs, and transit in appropriate locations throughout the City.
Compatible Land Use and Edge Transitions
Objective LUT 6
Ensure adjacent land uses are compatible with one another.
Objective LUT 7
Appropriate transitions should be provided between land uses.
Enhancing Community Image
Objective LUT 8
Strengthen and sustain Chula Vista's image as a unique place by maintaining, enhancing and creating physical features that distinguish Chula Vista's neighborhoods, communities, and public spaces and enhance its image as a pedestrian-oriented and livable community.
Objective LUT 9
Create enhanced gateway features for City entry points and other important areas, such as special districts.
Objective LUT 10
Create attractive street environments that complement private and public properties, create attractive public rights-of-way, and provide visual interest for residents and visitors.
Objective LUT 11
Ensure that buildings and related site improvements for public and private development are well-designed and compatible with surrounding properties and districts.
Objective LUT 12
Protect Chula Vista's important historic resources.
Objective LUT 13
Preserve scenic resources in Chula Vista, maintain the City's open space network, and promote beautification of the city.
Linking Chula Vista Internally and to the Region
Objective LUT 14
Coordinate with appropriate regional and local agencies to create an effective regional transportation network that links Chula Vista to the surrounding region and Mexico.

TABLE 5.1-1
LAND USE AND TRANSPORTATION ELEMENT CITYWIDE OBJECTIVES
(continued)

Objectives
Objective LUT 15
Improve transportation connections within Chula Vista and between eastern and western Chula Vista, particularly transit connections between major activity centers.
Land Use and Transportation Integration
Objective LUT 16
Integrate land use and transportation planning and related facilities.
Objective LUT 17
Plan and coordinate development to be compatible and supportive of planned transit.
Improving Vehicular and Transit Mobility
Objective LUT 18
Reduce traffic demand through Transportation Demand Management (TDM) strategies, increased use of transit, bicycles, walking, and other trip reduction measures.
Objective LUT 19
Coordinate with the regional transportation planning agency, SANDAG, and transit service providers such as the Metropolitan Transit System (MTS) to develop a state-of-the-art transit system that provides excellent service to residents, workers, students and the disabled, both within the city, and with inter-regional destinations.
Objective LUT 20
Make transit-friendly roads a top consideration in land use and development design.
Objective LUT 21
Continue efforts to develop and maintain a safe and efficient transportation system with adequate roadway capacity to serve future residents, while preserving the unique character and integrity of recognized communities within the city.
Grade Separated Transit Crossings at E Street and H Street
Objective LUT 22
Encourage regional and local efforts to continue planning for enhancements to Light Rail Trolley service along the west side of the city.
Increasing Mobility Through Use of Bicycles and Walking
Objective LUT 23
Promote the use of non-polluting and renewable alternatives for mobility through a system of bicycle and pedestrian paths and trails that are safe, attractive and convenient forms of transportation.
Regional Cooperation and Coordination
Objective LUT 24
Work cooperatively with other agencies and jurisdictions to address regional issues that affect the quality of life for Chula Vista's residents, such as land use, jobs/housing balance, transportation, mobility, and economic prosperity, and advocate proactively with appropriate agencies regarding key issues.
Objective LUT 25
Address issues of concern or specific problems in areas immediately adjacent to the City's boundaries or within nearby surrounding areas and proactively work with the appropriate jurisdiction to develop solutions.
Relationship of Density/Intensity to Amenities
Objective LUT 26
Establish an Urban Core Improvements Program for the Urban Core Subarea.
Objective LUT 27
Establish a program for development to provide public amenities, and/or community services necessary to support urban development and implement the following policies.

TABLE 5.1-1
LAND USE AND TRANSPORTATION ELEMENT CITYWIDE OBJECTIVES
(continued)

Objectives
Objective LUT 28
Consider use of lot consolidation where appropriate so that projects meeting the objectives of this General Plan can be achieved, and a high level of community amenities can be provided.
Objective LUT 29
Allow for the clustering of residential development to respond to site constraints, and improve amenities for project residents.
Objective LUT 30
Use parking management to better utilize parking facilities and implement policies to reduce parking demand before considering public expenditures for additional parking facilities.
Objective LUT 31
Provide parking facilities that are appropriately integrated with land uses, maximize efficiency, accommodate alternative vehicles, and reduce parking impacts.
Objective LUT 32
Evaluate the use and applicability of various strategies to provide parking.
Objective LUT 33
Ensure that parking facilities are appropriately sited and well-designed in order to minimize adverse effects on the pedestrian-oriented environment, and to enhance aesthetic qualities.
Planning for Healthy Communities
Objective LUT 34
Support healthy lifestyles among residents through increasing opportunities for regular physical activity.

Objective LUT 3

Direct the urban design and form of new development and redevelopment in a manner that blends with and enhances Chula Vista's character and qualities, both physical and social.

Policies

LUT 3.1: Adopt urban design guidelines and/or other development regulations for all Districts or Focused Areas of Change (as presented in the Area Plans (Section LUT 8-10)), as necessary to ensure that new development or redevelopment recognizes and enhances the character and identity of adjacent areas, consistent with this General Plan's vision.

LUT 3.2: Any such urban design guidelines and/or other development regulations shall also be consistent with other, related policies and provisions in this General Plan, including Sections LUT 7.3, 7.4, 7.5 and 7.6.

Objective LUT 4

Establish policies, standards, and procedures to minimize blighting influences and maintain the integrity of stable residential neighborhoods.

Policies

LUT 4.1: Preserve and reinforce the community character of existing older, well-maintained, stable residential neighborhoods located outside of the districts or Focus Areas identified for change in this document.

LUT 4.2: Protect existing stable single-family neighborhoods through zoning or other regulations that discourage the introduction of higher density residential or other incompatible or potentially disruptive land uses and/or activities.

LUT 4.3: Require that new development or redevelopment, through consideration of site and building design, and appropriate transition and edge treatments, does not negatively affect the nature and character of nearby established neighborhoods or development.

LUT 4.4: Ensure that proposals for new construction, remodels and additions within existing stable neighborhoods are appropriately sized and

designed to be compatible with the neighborhood's character, and to minimize impacts on adjacent parcels.

LUT 4.5: Establish zoning or other regulations to ensure that non-residential uses or activities in stable residential neighborhoods occur only when the character and the quality of the neighborhood can be maintained.

LUT 4.6: Minimize to the maximum extent practicable, the use of neighborhood streets in stable residential neighborhoods for regional or cut-through traffic through circulation design and/or traffic calming features to protect those neighborhoods from adverse traffic effects.

LUT 4.7: Recognize established communities and neighborhoods within the City through signage, landscaping or other identifying features.

Objective LUT 11

Ensure that buildings and related site improvements for public and private development are well-designed and compatible with surrounding properties and districts.

Policies

LUT 11.1: Promote development that creates and enhances positive spatial attributes of major public streets, open spaces, cityscape, mountain and bay sight lines, and important gateways into the city.

LUT 11.2: Promote and place a high priority on quality architecture, landscape, and site design to enhance the image of Chula Vista, and create a vital and attractive environment for businesses, residents, and visitors.

LUT 11.3: The City shall, through the development of regulations and guidelines, ensure that good project landscape and site design creates places that are well-planned, attractive, efficient, safe and pedestrian friendly.

LUT 11.4: Actively promote architectural and design excellence in buildings, open space, and urban design.

LUT 11.5: Require a design review process for all public and private discretionary projects (which includes architectural, site plan,

landscape and signage design) to review and evaluate projects, prior to issuance of building permits, to determine their compliance with the objectives and specific requirements of the City's Design Manual, General Plan, and appropriate zone or Area Development Plans.

Objective LUT 27

Establish a program for development to provide public amenities and/or community services necessary to support urban development and implement the following policies.

Policies

LUT 27.1: Establish a program that relates the allowable floor area ratios (FARs) and residential densities of projects to the provision of the following potential public benefits or amenities and community services, as well as others not listed:

- Public plazas and pocket parks
- Water features in public open spaces
- Public art
- Streetscape improvements
- Pedestrian path improvements
- Enhanced pedestrian connections between parks, public spaces, and neighborhoods by means of paths and open space areas
- Jogging, walking, and fitness trails
- Outdoor through-block connections
- Sidewalk widening
- Arcades
- Upper-level setbacks for buildings more than 30 feet above grade
- Lower-level planting terraces or landscaping
- Underground parking and loading
- Parking concealed by occupiable space
- Additional on-site structured parking for adjacent commercial or residential uses
- Off-site park and open space contributions

- Transit station access and improvements
- Bike lockers
- Locate secure bicycle parking facilities near transit centers and major public and private buildings
- Human services programs, such as child day care or senior day care
- School or educational amenities
- Acquisition and maintenance of significant architecture or historical buildings or features
- Larger lot sizes created through lot consolidations
- Streetfront facades/windows
- Affordable housing

LUT 27.2: Require that all uses and buildings enhance pedestrian activity in accordance with the land use and community image policies in Section 7.6 of this Element, and the policies, guidelines, and standards created by existing and future Specific Plans or other master plan documents.

LUT 27.3: In accordance with the Otay Ranch GDP and any SPA Plan, Prior to, or concurrent with, approval of the first discretionary project for the Eastern Urban Center, complete necessary studies to identify appropriate urban facility and service standards, and amenities, and adopt programs to ensure provision of those facilities, services and amenities consistent with identified standards, any applicable site and design guidelines.

LUT 27.4: In the Northwest Planning Area, use the Urban Core Specific Plan to create a program in compliance with LUT 27.1.

These citywide objectives and their associated policies would stimulate revitalization in developed areas and physically enhance the existing and planned neighborhoods in which they occur. Facilitating connections between the various city neighborhoods is another important goal with the desired consequence being to attract residents from throughout the city to each area's unique attributes. These general policies are intended to protect or improve, through ultimate design and construction, those attributes that contribute to a positive city image and circulation improvements that facilitate mobility throughout the city and between the city and surrounding jurisdictions (see Policies LUT 1.1 through 34.3). Implementation of these policies would reduce the community character impact resulting from the adoption of the Preferred Plan, but do not reduce the impact to below a level of

significance. The current project is a General Plan Update and the development of design standards are a zoning and specific plan effort. Until future Specific Plans are developed and zoning specifications are implemented impacts remain significant.

Specific objectives and policies have been developed to address the needs of targeted areas within the update area boundary for the Preferred Plan and all three Scenarios and are discussed below.

Preferred Plan

Table 5.1-2 provides a comparison of the various land uses by planning subarea for each of the proposed scenarios (Preferred Plan and Scenarios 1-3).

NORTHWEST PLANNING AREA

As discussed in Section 5.1.1.1 above, the existing character of the community within the Northwest Planning Area consists of predominantly single-story, single-family homes with limited, and predominantly low-rise multi-family units along major roadways. The multi-family units consist of condominiums, townhouses, and apartments that are generally two to three stories in height. Retail uses are located primarily along Broadway from E to L Streets and along Third Avenue from E to H Streets. Designated scenic roadways, well-manicured neighborhoods, and urban amenities such as pedestrian and bicycle facilities, local parks, and open space all contribute to the character of the Northwest Planning Area. Despite having many unique and attractive characteristics, some neighborhoods have experienced decline over the years and blighted commercial and residential areas have been targeted for revitalization. The City has implemented a number of programs with specific goals addressing the needs of particular areas. Redevelopment programs are intended to revitalize older commercial, industrial, and residential areas.

The Preferred Plan generally modifies designated land uses within the Northwest Planning Area to allow for an increase of mixed-use development. Specifically, this scenario would introduce increased residential in areas currently restricted to retail use along the downtown segments of Third Avenue, along E Street in the vicinity of Third and Fourth Avenues, and increased residential and transit-oriented uses in the vicinity of major transit corridors. The acreage of land uses by District for the Urban Core Subarea is provided in Table 5.1-3 and illustrated in Chart 5.1-1. As is illustrated on this chart, the acreage of land designated for residential use would increase for the Preferred Plan compared to existing conditions. A comparison of the residential units for the Urban Core Subarea is shown in Chart 5.1-2. This chart illustrates the residential units is increased with the proposed amendments over existing conditions.

The Preferred Plan would increase the amount of dwelling units within the Urban Core at buildout from 9,499 to 16,756. This represents an increase in multi-family units within the

TABLE 5.1-2
PROPOSED LAND USES

		Subarea					
		Otay Ranch		Montgomery		Urban Core	
	Type	Acres	Units	Acres	Units	Acres	Units
Preferred Plan	Commercial	388†	4,015	231	0	295	228
	Industrial	501*	0	295	0	0	0
	Open space	86	0	124	71	17	0
	Park	384	0	54	0	20	0
	Public	732	0	46	21	82	23
	Residential	981	10,226	380	8,082	617	16,505
	Total	3,072*	14,241	1,130	8,174	1,031	16,756
Scenario 1	Commercial	424†	2,332*	243	54	299	185
	Industrial	301	0	331	0	0	0
	Open space	86	0	116	71	17	0
	Park	375	0	25	0	9	0
	Public	806	0	46	21	83	23
	Residential	1,080	9,326	369	7,533	623	16,882
	Total	3,072*	11,658	1,130	7,679	1,031	17,090
Scenario 2	Commercial	439†	2,332	162	0	302	228
	Industrial	211*	0	395	0	0	0
	Open space	11	0	113	71	17	0
	Park	382	0	25	0	9	0
	Public	651	0	46	21	89	23
	Residential	1,378	13,253	389	8,308	614	15,413
	Total	3,072*	15,585	1,130	8,400	1,031	15,664
Scenario 3	Commercial	442†	2,332	219	54	321	186
	Industrial	679	0	317	0	0	0
	Open space	75	0	113	71	17	0
	Park	323	0	25	0	9	0
	Public	847	0	46	21	89	23
	Residential	706	6,473	410	8,851	595	15,969
	Total	3,072*	8,805	1,130	8,997	1,031	16,178

NOTE: Totals may vary due to rounding.

*Includes 46 acres west of Village Two West (known as Sunbow) tat are not included in Scenario 1 and Scenario 3.

†EUC is included in commercial acreage, which includes multiple uses on 209 acres, excluding park acreage.

TABLE 5.1-3
LAND USE BY DISTRICT FOR THE URBAN CORE SUBAREA[1,2,3,4,5]
(acres)

District/Type	Scenario 1	Scenario 2	Scenario 3	Preferred	Existing
Downtown Third Avenue					
Commercial	45	22	21	25	35
Other					12
Park	9	9	9	16	9
Public	31	37	37	31	26
Residential	127	145	146	142	130
Downtown Third Avenue Total	213	213	213	213	213
I-5 Corridor					
E Street Visitor					
Commercial	54	50	63	52	41
Open space	6	6	6	6	
Other					27
Park					
Public	6	6	6	6	6
Residential	118	121	108	120	110
E Street Visitor Total	183	183	183	183	183
H Street Gateway					
Commercial	50	77	59	60	40
Open space	11	11	11	11	
Other					18
Park				4	
Public	7	7	7	7	7
Residential	144	117	135	130	147
H Street Gateway Total	212	212	212	212	212
H Street Corridor					
Commercial	93	87	95	85	89
Other					11
Public	39	39	39	39	39
Residential	82	88	80	89	75
H Street Corridor Total	214	214	214	214	214
Mid-Broadway Corridor					
Commercial	30	14	30	20	27
Other					6
Residential	78	94	78	88	76
Mid-Broadway Corridor Total	108	108	108	108	108
Mid-Third Avenue Corridor					
Commercial	27	53	53	53	39
Other					10
Residential	74	48	48	48	52
Mid-Third Avenue Corridor Total	101	101	101	101	101
TOTAL	1,031	1,031	1,031	1,031	1,031

[1]Includes existing parks that are designated public and quasi-public under the adopted General Plan and would remain designated as public and quasi-public.
[2]Mixed use designations are comprised of commercial and residential transit focus areas in some areas.
[3]Park acreage for Scenarios 1, 2, and 3 does not reflect the ultimate park acreage.
[4]Totals may vary due to rounding.
[5]Other includes vacant, easements, and right-of-way

Urban Core and a reduction in the amount of single-family homes at buildout. The multi-family residential units are proposed in several Districts of the Urban Core in locations where new growth or redevelopment can be accommodated to create mixed-use urban environments that are oriented to transit and pedestrian activity.

Adding more density and increasing the number of multi-family units within the Urban Core has the potential to cause an adverse effect on the community character of the existing residential neighborhoods adjacent to the areas of change. The General Plan Update would reduce impacts to adjacent parcels by requiring that the quality of existing, stable residential neighborhoods be maintained (Policy LUT 4.2), ensuring that development adheres to quality design standards (Policy LUT 4.4), and ensure good street design to minimize and control traffic in residential neighborhoods (Policy LUT 4.6). Additionally, Policy LUT 11.5 would lessen impacts from any private and public development by requiring multi-family, commercial, and industrial uses to go through a design review process. The design review process would promote quality architecture, landscape, and site design to enhance the character of the area. These measures would reduce the community character impact resulting from the adoption of the Preferred Plan, but do not reduce the impact to below a level of significance. The current project is a General Plan Update and the development of design standards is a zoning and specific plan effort. Until future Specific Plans are developed and zoning specifications are implemented impacts remain significant.

As discussed in Section 3.5.1.1, the Urban Core Subarea contains five districts that have proposed changes in their designated land uses. These districts include the Downtown Third Avenue District; H Street Corridor District; Interstate 5 Corridor District; Mid-Broadway District; and the Mid-Third Avenue District. Proposed land use changes would provide a more diverse mix of uses and generally increase residential density in the Urban Core to facilitate revitalization. Specific objectives and policies are proposed to preserve the character and retain the quality of the adjacent existing, residential neighborhoods within each of these districts. The following discussion analyzes the effects to community character from the adoption of the Preferred Plan within the five districts of the Urban Core Subarea.

Downtown Third Avenue District. The Downtown Third Avenue District is characterized by the traditional Third Avenue business district consisting of shops and offices and wide sidewalks along Third Avenue, as well as smaller residential housing units in surrounding streets. The Preferred Plan proposes to add mixed-use with residential units along Third Avenue between E Street and H Street within the Downtown Third Avenue District. Buildings along Third Avenue's immediate street frontage would be predominantly low-rise to maintain the traditional character, while the mid-rise apartments and condominiums behind them would be stepped back from the façade. East of Third Avenue, building heights would be stepped down to visually blend with the adjacent existing residential neighborhood. Objective LUT 50 establishes policies for the redevelopment and enhancement of the Downtown Third Avenue District as a higher density, mixed-use area,

while preserving the important elements that contribute to the charm and character of traditional Third Avenue. One of the primary policies that reflects this objective is Policy LUT 50.1 that indicates the desire to maintain the Downtown as a focal point for the city so that it continues to express the city's history, provides a venue for cultural vitality, and retains its role as a center for social, political, and other civic functions. There are 18 policies associated with Objective 50 that address allowable uses, design standards, and general development requirements. Policies LUT 50.12, 50.13, and 50.16 provide for design standards and guidelines be prepared for future development within the Downtown Third Avenue District and are described below.

LUT 50.12: Along the immediate street frontage of the Third Avenue corridor primarily between E and G Streets, buildings shall be predominantly low-rise, with mid-rise allowed, provided that upper stories are stepped back from the façade and are architecturally compatible with surrounding development.

LUT 50.13: On the east side of the Third Avenue corridor primarily between E and G Streets, building heights shall step down to create a transition to the adjacent low-rise development east of Del Mar Avenue.

LUT 50.16: As part of the Urban Core Specific Plan, development standards and guidelines in the Downtown Third Avenue District shall support the intended village character along Third Avenue and ensure compatibility with residential neighborhoods immediately adjacent to redevelopment sites.

Implementation of Policies LUT 50.12, 13, and 16 as well as Policies LUT 11.1 through 11.5 would reduce the community character impact within and adjacent to the Downtown Third Avenue District resulting from the adoption of the Preferred Plan, but not to below a level of significance. Impacts remain significant because of the lack of specific design standards. The current project is a General Plan Update and the development of design standards are a zoning and specific plan effort. Until future Specific Plans are developed and zoning specifications are implemented impacts remain significant.

H Street Corridor District. The H Street Corridor District includes the Chula Vista Center shopping mall, medical facilities, South County Regional Complex, offices, commercial businesses, and some residential. Proposed land use changes within the H Street Corridor District would affect existing land uses designated for retail, professional office, and high density residential. The existing South County Regional Government Center, an existing public/quasi-public use, would not be affected. The Preferred Plan provides for mixed-use development with offices, shopping, and multi-family housing in a high-intensity, transit-oriented development near the Third Avenue transit station. Policies associated with Objective LUT 52 address the redevelopment of the H Street Corridor District. Objective

LUT 52 encourages redevelopment of the Chula Vista Center, as well as properties north of H Street, with a mix of land uses that will reinforce H Street as a future planned transit boulevard and gateway corridor, and establishes the area as a public gathering space and vibrant mixed-use area.

Policies associated with Objectives LUT 52 and 53 establish that mixed-uses within the H Street Corridor District shall be generally distributed between retail, offices, and residential (Policies LUT 52.1, 52.3, and 53.1), and a maximum residential density of 40 to 60 dwelling units per acre (du/ac) (Policies LUT 52.5 and 53.2). Building heights on both sides of H Street would range from one to three stories, with some buildings between four and seven stories on the west, with an FAR of 1.0; and primarily mid-rise with some high-rise buildings with an average FAR of 2.0. Policy LUT 52.7 would require design standards and guidelines for future development within the H Street Corridor District on H Street between Fourth and Broadway to be prepared:

> LUT 52.7: The Urban Core Specific Plan shall include comprehensive development standards and guidelines, including provisions for building setbacks, massing, architecture and streetscape, that will establish H Street as a grand boulevard, and create an inviting and safe pedestrian experience.

Policy LUT 53.5 requires design standards to be prepared for the area between Third and Fourth Avenue.

> LUT 53.5: The Urban Core Specific Plan or other zoning regulations shall establish design standards for the H Street Office Focus Area consistent with the above vision and policies.

Implementation of Policy LUT 52.7 and 53.5 as well as Policies LUT 11.1 through 11.5 would reduce the community character impact resulting from the adoption of the Preferred Plan, but not to below a level of significance. While the policies require design standards and guidelines be prepared that include design, streetscape, and step back guidelines to visually blend with the area and establishes a pedestrian friendly environment, they cannot be developed until additional information is available. The current project is a General Plan Update and the development of design standards are a zoning and specific plan effort. Until future Specific Plans are developed and zoning specifications are implemented impacts remain significant.

LUT 52.9 addresses issues associated with mixed use commercial development. It states:

> The Urban Core Specific Plan, or other equivalent regulations, shall address design issues associated with the expanded depth of the Mixed Use Commercial designated area on the north side of H Street. Design and

landscape standards shall ensure compatibility with residential uses on the north side of Otis Street.

The General Plan Update establishes two Transit Focus Areas and an H Street Transit Corridor Special Study Area within the H Street Corridor District (Figure 5.1-6). The Mixed-Use Transit Focus Area designation is proposed at the Third Avenue/H Street transit station and includes a mix of office, retail, and residential densities planned for a gross density of up to 60 dwelling units per acre. Building heights for this Transit Focus Area will be primarily mid-rise, with some high-rise between Third and Fourth Avenues.

The purpose of the special study for the H Street Transit Corridor Special Study Area is to analyze and evaluate the appropriateness of plan changes that could result in mixed land uses, increased intensities, and potential high-rise buildings along H Street between Interstate 5 and Third Avenue. An important consideration of the study is that the area is a major activity corridor, and functions as the primary entry into the urban core. It is a major link between Broadway and the downtown area, is targeted as a major transit connection between the eastern portion of the City and the west, and currently consists primarily of community or sub-regional-serving non-residential land uses. These uses include the South County Regional Center and Superior Court, medical offices, several bank facilities, a major hospital and medical facility at Scripps, major commercial uses at the Chula Vista Center, numerous restaurants, retail businesses and professional offices. In view of these existing land uses along H Street, the future intensification planned with the two Transit Focus Areas at either end of the corridor, and the potential for future market forces to focus on H Street as a key corridor, a special study is needed that examines further potential changes in land use and intensity, building mass, the potential for taller buildings, and the relationship and appropriate transitions to adjacent stable neighborhoods. This study would be conducted subsequent to the adoption of any potential high-rise buildings along H Street between Interstate 5 and Third Avenue within the study area.

As discussed above, the Preferred Plan proposes high-rise buildings between Third and Fourth Avenue in the Mixed-Use Transit Focus Areas within the H Street Corridor District. The community character of an area has to do with the predominant use as well as its orientation and scale. While allowance for higher intensities and taller buildings, or “high-rise” structures, provides more housing, employment, and other opportunities on a smaller amount of land, the principle reason for high-rise structures is to provide landmarks and skyline recognition for key areas of the city, and punctuate them as vibrant, active, and successful community centers. The identification of these areas in the City’s Urban Core are intended to establish places where people are attracted to active pedestrian-oriented experiences, including shopping, restaurants, entertainment, and employment, and which are located along major thoroughfares and transit routes where they can be most readily accessed.

Evaluation of the potential impact of a high-rise building, and thereby its community character impact, depends upon its design and setting. Objectives LUT 2 and 3 and their associated policies and Policy LUT 53.5 would establish development standards that address the development of high-rise buildings:

Objective LUT 2

Limit locations for the highest development intensities and densities, and the tallest building forms, to key urban activity centers that are also well served by transit

LUT 2.1: Locate Mixed Use Transit Focus Areas where major transit stations exist or are planned.

LUT 2.2: Locate the highest development intensities and residential densities within Mixed Use Transit Focus Areas where strong City gateway elements exist or key urban activity areas occur.

LUT 2.3: Limit the location of high-rise structures to within these Transit Focus Areas, and the Eastern Urban Center area of Otay Ranch..

LUT 2.4: High-rise buildings will be subject to discretionary review in order to ensure they are a positive addition to the City in accordance with the following provisions:

- The building must reflect unique, signature architecture that symbolizes the City, and can be immediately recognized as a positive Chula Vista landmark.

- The building must be accompanied by clear public benefits in acceptance of the height, such as increased public areas, plazas, fountains, parks or paseos, extensive streetscape improvements, or other public venues or amenities.

- The overall building height and massing must reflect appropriate transitions to surrounding areas in accordance with the future vision for those areas, or if the building is on the periphery of an area of change, to the adjoining neighborhood. Specific Plans, General Development Plans/Sectional Planning Area Plans, or other zoning regulations will provide the basis for defining such transitions.

LUT 2.5: Require proposals for any high-rise buildings to conduct shadow studies to assess the effects on light and solar access on adjacent areas and buildings.

LUT 2.6: Conduct a special study to examine the potential for higher land use intensities and taller buildings along the H Street Transit Focus Corridor between Interstate 5 and Third Avenue, and to also address compatibility issues with adjacent stable neighborhoods. The precise boundaries will be established at the time of the study, and all land use policies contained in this General Plan shall apply until modified as a result of study findings, and any appropriate amendments to this Plan.

LUT 3.1: Adopt urban design guidelines and/or other development regulations for all Districts or Focused Areas of Change, (as presented in the Area Plans (Sections LUT 8-10)) as necessary to ensure that new development or redevelopment recognizes and enhances the character and identity of adjacent areas, consistent with this General Plan's vision.

LUT 53.5: The Urban Core Specific Plan, or other zoning regulations, shall establish design standards for the Mixed Use Transit Focus Area within the H Street Office Focus Area, consistent with the above policies and vision and policies.

These policies would reduce the community character impact resulting from the adoption of the Preferred Plan, but not to below a level of significance. While the policies require the preparation of urban design standards for such issues as building heights and massing, public view corridors, circulation linkages, and the appearance of important gateways within the Mixed-Use Transit Focus Area, development of these standards would be done as part of the Urban Core Specific Plan. The current project is a General Plan Update and the development of design standards are a zoning and specific plan effort. Until future Specific Plans are developed and zoning specifications are implemented impacts remain significant.

Interstate 5 Corridor District. The Interstate 5 Corridor District is characterized by low-rise multi-family housing extending from C to I Streets; mobile home parks between F and G Streets; three roadway connections to the Bayfront (E, F, and H Streets); a lack of accessible park facilities; and poor pedestrian connectivity crossing I-5 to the Bayfront or to Broadway. The Preferred Plan proposes a major mixed-use district, with high density mixed-use residential within a quarter mile of the E and H Street trolley stations; increased commercial, some multi-family housing on Broadway; and visitor-serving uses in select areas. The lower-density mobile home parks would be redeveloped with higher-intensity housing types.

A pedestrian-oriented F Street Promenade is proposed to link the district to the Bayfront and to the Downtown Third Avenue District. Building heights within this district would include low-, mid-, and high-rise buildings. Objectives LUT 54 through 58 and their associated policies apply to the Interstate 5 Corridor District. Policies associated with Objectives LUT 54 through 58, which address the community character within the Interstate 5 Corridor District, are listed below:

LUT 54.6: The Urban Core Specific Plan shall include specific guidelines for the development of mixed use projects on North Broadway, between C and E Streets.

LUT 55.11: The Urban Core Specific Plan, or other zoning regulations, shall establish design standards for the Mixed Use Transit Focus Area of E Street and Woodlawn Avenue, consistent with the above vision and policies.

LUT 55.12: The Urban Core Specific Plan shall provide development standards and guidelines, including the provision of building setbacks and massing diagrams to ensure the enhancement of a primary gateway to the City along E Street, and a pleasant and safe pedestrian experience.

LUT 56.7: The Urban Core Specific Plan shall prepare specific design guidelines for the development of mixed use projects on Broadway, between F and G Streets.

LUT 57.6: Encourage the upgrading of older and/or marginal retail uses along H Street and Broadway.

LUT 57.7: The Urban Core Specific Plan, or other zoning regulations, shall establish design standards for the Mixed Use Transit Focus Area, and other mixed use projects on H Street and on Broadway, consistent with the above policies and vision.

LUT 58.8: The Urban Core Specific Plan shall include specific guidelines for the development of mixed-use projects on H Street and on Broadway.

LUT 58.9: The Urban Core Specific Plan shall include development standards and guidelines, including the provision of building setbacks and massing diagrams to ensure the enhancement of a primary gateway to the City and the establishment of a grand, transit boulevard along H Street, as well as to ensure a pleasant and safe pedestrian experience.

LUT 58.11: As part of the Urban Core Specific Plan, specific guidelines for the development of mixed-use projects south of the H Street frontage shall be prepared that provide an appropriate buffer to protect existing residential neighborhoods south of I Street.

Implementation of Policies LUT 54.6, 55.11, 55.12, 56.7, 57.6, 57.7, 58.8, 58.9, and 58.11, as well as Policies LUT 11.1 through 11.5, would reduce the community character impact resulting from the adoption of the Preferred Plan within and adjacent to the Interstate 5 Corridor District, but do not reduce the impact to below a level of significance. While the policies require design standards and guidelines be prepared that allow for the provision of building setbacks and massing diagrams to ensure the enhancement of a primary gateway to the City and ensure compatibility and appropriate buffering with the existing residential neighborhoods, they cannot be developed with available information. The current project is a General Plan Update and the development of design standards are a zoning and specific plan effort. Until future Specific Plans are developed and zoning specifications are implemented impacts remain significant.

There are two areas proposed for high-rise buildings in the Mixed-Use Transit Focus Areas within the I-5 Corridor District. These buildings are proposed near the E Street and H Street Trolley Station. The Mixed-Use Transit Focus Areas are proposed to function as major transportation corridors with high-intensity transit focus mixed-uses, including higher density residential units, offices, and ground floor retail. Land uses surrounding these areas include visitor-serving uses, office buildings, and multi-family residential. As discussed above for the Mixed-Use Transit Focus Area in the H Street Corridor District, the extent to which a high-rise building results in a significant community character impact depends upon its design and setting. Objective LUT 2 and LUT 3 and their associated policies and Policy LUT 53.5 listed above would establish policies and development standards through the Urban Core Specific Plan that address the development of high-rise buildings. This policy would require the preparation of urban design standards for such issues as building heights and massing, public view corridors, circulation linkages, and the appearance of important gateways within the Mixed-Use Transit Focus Area. These standards would be developed as part of the Urban Core Specific Plan and would establish design standards for mixed-use development that achieve a pedestrian-scaled environment. Policy 53.5 would require these design standards to be done as part of the Urban Core Specific Plan or zoning regulation. The current project is a General Plan Update and the development of design standards are a zoning and specific plan effort. Until future Specific Plans are developed and zoning specifications are implemented impacts remain significant.

Mid-Broadway District. The existing Mid-Broadway District consists mainly of retail establishments. The Preferred Plan proposes the Mid-Broadway District for mixed-use, with primarily local-serving ground floor retail and higher density residential units. Building heights for the Mid-Broadway District would be primarily low-rise, with some mid-rise

buildings. Objective LUT 59 encourages redevelopment activities within the Mid-Broadway District that would establish a pedestrian-oriented commercial corridor providing housing opportunities and compatible neighborhood-serving commercial uses. Policy LUT 59.8 addresses future development within the Mid-Broadway District:

> LUT 59.8: The Urban Core Specific Plan shall establish design guidelines and/or zoning standards that provide for building heights that step down adjacent to single-family neighborhoods.

Objective 8 stresses the maintenance and enhancement of physical features that distinguish Chula Vista's neighborhoods.

> Objective LUT 8: Strengthen and sustain Chula Vista's image as a unique place by maintaining, enhancing and creating physical features that distinguish Chula Vista's neighborhoods, communities, and public spaces, and enhance its image as a pedestrian-oriented and livable community.

Implementation of Policy LUT 59.8 as well as Policies LUT 11.1 through 11.5 and Objective LUT 8 would reduce the community character impact resulting from the adoption of the Preferred Plan within and adjacent to the Mid-Broadway District, but do not reduce the impact to below a level of significance. While the policies require design guidelines be prepared that step back building heights to visually blend with the existing single-family area, they cannot be developed with available information. The current project is a General Plan Update and the development of design standards are a zoning and specific plan effort. Until future Specific Plans are developed and zoning specifications are implemented impacts remain significant.

Mid-Third Avenue District. The Mid-Third Avenue District consists primarily of professional offices north of J Street and a mix of retail and professional offices uses south of J Street. The Preferred Plan for the Mid-Third Avenue District would remain relatively stable, with primarily office uses, some housing between I and J Streets, and segregated retail and office uses between J and L Streets. Land uses on the west side of Third Avenue, south of J Street, would provide local retail services for adjoining residential neighborhoods, while the east side of Third Avenue would consist of offices. Building heights for the Mid-Third Avenue District would be primarily low-rise, with some mid-rise buildings. Objective LUT 60 reinforces the existing land use patterns of predominantly retail uses on the west side of Third Avenue, and office uses on the east side of Third Avenue between J Street and L Street. Policy LUT 60.3 addresses future development within the Mid-Third District:

> LUT 60.3: The Urban Core Specific Plan shall establish design guidelines and/or zoning standards that provide for buildings heights that step down adjacent to single family neighborhoods.

Implementation of Policy LUT 60.3 as well as Policies LUT 11.1 through 11.5 and Objective LUT 8 would reduce the community character impact resulting from the adoption of the Preferred Plan within and adjacent to the Mid-Third District, but do not reduce the impact to below a level of significance. While the policies require design guidelines be prepared that step back building heights to visually blend with the existing single-family area, they cannot be developed with available information. The current project is a General Plan Update and the development of design standards are a zoning and specific plan effort. Until future Specific Plans are developed and zoning specifications are implemented impacts remain significant.

SOUTHWEST PLANNING AREA

As discussed in Section 5.1.1.1 above, the existing character of the community within the Southwest Planning Area consists of several mature neighborhoods, including Harborside, Castle Park, Otay Town, Woodlawn Park, Broderick Acres, Whittington Subdivision and West Fairfield. The planning area has a grid street pattern and a diversity of land uses, including a mix of residential, commercial, and industrial businesses that, in some cases, have evolved over time without adequate planning, and have resulted in land use conflicts. The Southwest Planning Area has one subarea for which changes are proposed as part of the General Plan Update, the Montgomery Subarea. Within the Montgomery Subarea, the objectives and policies, as well as changes to existing land use designations, are intended to focus redevelopment efforts generally south of L Street along the South Broadway, South Third Avenue, and Main Street corridors, and on either side of I-5 in the vicinity of the Palomar Street Trolley and the West Fairfield area. Among the important goals for this area is facilitation of economic opportunities through appropriate designation of transit-oriented, industrial, commercial and higher-density residential in mixed-use or other appropriate density to facilitate smart growth planning.

The acreage of land uses by district for the Montgomery Subarea is provided in Table 5.1-4 and illustrated in Chart 5.1-3. As is shown on this chart, the acreage designated for residential use increases with the proposed amendments over the adopted General Plan and remains about the same as the existing condition. In all cases, the acreage designated for industrial use is higher than it is for the existing condition. A comparison of the residential units for the Montgomery Subarea is shown in Chart 5.1-2. This chart illustrates the residential use increases with the proposed amendments over existing conditions. An estimated 3.5 square miles of the previously adopted Montgomery Specific Plan area are located within this update area. Until that specific plan is modified, development within the Specific Plan area is subject to the regulations of the Montgomery Specific Plan, adopted by the City in 1988.

The General Plan Update would reduce impacts to adjacent parcels below a level of significance by requiring that the quality of existing, stable residential neighborhoods be maintained (Policy LUT 4.2), ensuring that development adheres to sized and designed to be

TABLE 5.1-4
LAND USE BY DISTRICT FOR THE MONTGOMERY SUBAREA[1,2,3,4,5,6]
(acres)

District/Type	Scenario 1	Scenario 2	Scenario 3	Preferred	Existing
Main Street					
Commercial	7	5	32	10	20
Industrial	279	287	257	245	174
Open space	91	91	91	102	
Other					179
Park	10	10	10	35	4
Public	16	16	16	16	16
Residential	150	144	147	144	158
Main Street Total	553	553	553	553	553
Palomar Gateway					
Commercial	62	54	52	58	53
Industrial	38	36	47	36	47
Open space	5	5	5	5	
Other					25
Park	5	5	5	9	
Public	10	10	10	10	10
Residential	72	81	73	73	57
Palomar Gateway Total	192	192	192	192	192
South Broadway					
Commercial	64	48	48	54	42
Industrial	14	14	14	14	23
Open space	8	8	8	8	
Other					6
Residential	66	83	83	77	81
South Broadway Total	152	152	152	152	152
South Third Avenue					
Commercial	52	55	73	50	60
Industrial					2
Open space	13	9	9	9	
Other					12
Park	10	10	10	10	4
Public	20	20	20	20	22
Residential	81	81	64	86	75
South Third Avenue Total	175	175	175	175	175
West Fairfield					
Commercial	58		15	58	2
Industrial		58			5
Other					46
Residential			44		5
West Fairfield Total	58	58	58	58	58
TOTAL	1,130	1,130	1,130	1,130	1,130

[1]Includes existing parks that are designated public and quasi-public under the adopted General Plan and would remain designated as public and quasi-public.
[2]Mixed use designations are comprised of commercial and residential transit focus areas in some areas.
[3]Park acreage for Scenarios 1, 2, and 3 does not reflect the ultimate park acreage.
[4]Totals may vary due to rounding.
[5]Other includes vacant, easements, and right-of-way
[6]Approximately 38 acres located outside adopted General Plan boundary are being considered for addition to the general Plan area.

compatible with the neighborhoods character (Policy LUT 4.4), and ensures good street design to minimize and control traffic in residential neighborhoods (Policy LUT 4.6). Implementation of citywide and specific policies for the Montgomery Subarea is intended to facilitate revitalization while preserving assets. The General Plan Update contains six objectives which apply specifically to the overall Montgomery Subarea (Objectives LUT 35-45). One major objective is to provide the community with its own civic and town focus along Third Avenue near Oxford Street. Policies target the need to improve circulation between this and other areas of the city, upgrade commercial activity centers, and provide for the protection and enhancement of existing residential neighborhoods by increasing residential, retail, commercial and professional services through mixed-use development. Special attention is given to the area of the Palomar Trolley Station and southerly segments of Broadway and Third Avenue. Proposed land use changes are also intended to maximize use of the existing and future transit routes along Palomar Street, Third Avenue, and Industrial Boulevard. Policies to phase out or relocate conflicting uses would enhance overall community character of the area.

Planning efforts are directed at improving transportation linkages between the area, downtown and the bay to enhance connectivity to other areas of the city. These measures are intended to preserve and enhance community character through development of a town focus and additional measures to develop architectural guidelines, improve code enforcement, upgrade infrastructure, and underground utilities.

As discussed in Section 3.5.1.2, the Montgomery Subarea contains five districts that may be subject to change over time as the city continues to mature. These districts include the South Third Avenue District, South Broadway District, Palomar Gateway District, West Fairfield District, and the Main Street District. Specific objectives and policies are proposed to preserve the character and retain the quality of the adjacent existing, residential neighborhoods within each of these districts. The following discussion analyzes the effects to community character from the adoption of the Preferred Plan within the five districts of the Montgomery Subarea.

South Third Avenue District. The South Third Avenue District consists primarily of retail and services along Third Avenue, which support adjacent residential areas. Civic uses, including a post office and Lauderbach Park, are located near the intersection with Oxford Street. The Preferred Plan proposes an area with neighborhood-serving commercial uses and good transit service for residents of the single-family and multi-family homes. The transit station is within a quarter mile of the Oxford Street/Third Avenue intersection, which would enable the Oxford Town area to extend and be redeveloped south on Third Avenue to the intersection of Palomar Street and Third Avenue. Due to proximity to transit, residential densities would be higher south of Oxford Street than north of Oxford Street. Objective LUT 41 encourages redevelopment of the South Third Avenue District to create a vibrant, mixed-use area near the intersection of Oxford Street and Third Avenue. Policies LUT 41.13

through 41.15 address the design aspects of future development within the South Third Avenue District:

LUT 41.13: Prior to or concurrent with the approval of the first specific plan or other zoning regulations in the South Third Avenue Planning District, establish a design code that reinforces the safety and serenity of the area, and seeks to establish a coherent, aesthetic, international character to the Southwest Planning Area.

LUT 41.14: The specific plan or other regulations prepared to guide development in this area shall address design issues that create a sense of place, a pedestrian-friendly environment, enhanced pedestrian linkages, and compatibility with the scale and feel of a cohesive neighborhood community.

LUT 41.15: A specific plan or other regulations in the South Third Avenue District shall require the use of wide sidewalks, through block paseos, and other appropriate design features that enhance the pedestrian environment to link high use areas, such as the post office, library, park, or a concentration of shops, with transit stations or transit stops.

Implementation of Policies LUT 41.13 through 41.15 as well as Policies LUT 11.1 through 11.5 would reduce the community character impact resulting from the adoption of the Preferred Plan within and adjacent to the South Third Avenue District, but do not reduce the impact to below a level of significance. While the policies require design standards and guidelines be prepared prior to the approval of the first specific plan or other appropriate document in the Southwest Planning Area to be compatible with the scale and feel of the surrounding neighborhood, they cannot be developed with available information. The current project is a General Plan Update and the development of design standards are a zoning and specific plan effort. Until future Specific Plans are developed and zoning specifications are implemented impacts remain significant.

South Broadway District. The South Broadway District includes automobile services, major retail stores and local-serving services for adjacent residential neighborhoods. Automobile-related/repair shops currently exist on South Broadway from L Street to Naples Street and are not compatible with surrounding uses. The Preferred Plan proposes additional residential units along South Broadway, and the phased removal of conflicting automobile-related service/repair shops from L Street to Naples Street. Automobile-related shops would be focused south of Naples Street within areas designated as light industrial areas along Main Street. This would provide a compatible location for necessary automotive services and avoid land use conflicts that currently exist on South Broadway, north of Naples Street. Objective LUT 42 addresses the revitalization of land uses along South Broadway between L

Street and Naples Street. Policies LUT 42.14 through 42.16 address the provision of guidelines for future development within the South Broadway District:

LUT 42.14: Prior to or concurrent with the approval of the first specific plan or other zoning regulations in the South Broadway District between L Street and Naples Street, prepare specific guidelines for the development of mixed use projects on South Broadway.

LUT 42.15: Concurrent with the approval of zoning for industrial uses at the northwest corner of Industrial Boulevard and Naples Street in the South Broadway District, ensure that light industrial uses on Colorado Street are designed and constructed to front on Colorado Street, provide parking and entry door access on the west side of buildings, and are appropriately buffered from residential uses.

LUT 42.16: Prior to, or concurrent with the approval of the first specific plan or other zoning regulations in the South Broadway District, develop siting guidelines and criteria for locating automobile-related service/repair shops in areas that adjoin residential neighborhoods.

Implementation of Policies LUT 42.14 through 42.16 as well as Policies LUT 11.1 through 11.5 would reduce the community character impact resulting from the adoption of the Preferred Plan within and adjacent to the South Broadway District, but do not reduce the impact to below a level of significance. While the policies act to improve upon the appearance of this major corridor and require standards and guidelines be prepared to establish buffering and siting criteria for industrial uses and automobile shops in areas adjacent to the surrounding residential neighborhoods, they cannot be developed with available information. The current project is a General Plan Update and the development of design standards are a zoning and specific plan effort. Until future Specific Plans are developed and zoning specifications are implemented impacts remain significant.

Palomar Gateway District. The Palomar Gateway District is characterized by the Palomar Trolley Station located at the southeast quadrant of Palomar Street and Industrial Boulevard. North of Palomar Street are light industrial businesses and multi-family housing. South of Palomar Street consists of a mix of single-family and multi-family housing extending south to Anita Street. The Preferred Plan proposes additional housing and support uses near a regional transit route. Adding higher density residential development within walking distance of the Palomar Trolley Station would provide additional affordable housing opportunities where few currently exist. Objective LUT 43 establishes policies for a Mixed-Use Transit Focus Area surrounding the Palomar Trolley Station. There are two policies that address community character within the Palomar Gateway District:

LUT 43.1: The City shall prepare, or cause to have prepared, a specific plan, master plan, or other regulatory document to guide the coordinated establishment of a Mixed Use Transit Focus Area within the Palomar Gateway District on properties north and south of Palomar Street within walkable distance of the Palomar Trolley Station. The specific plan or other regulatory document shall include guidelines and zoning-level standards for the arrangement of land uses that include plans for adequate pedestrian connections and support services for residents as well as those using the transit station.

The City will prepare an Implementation Program to assure establishment of the above plan/regulations, which Program will also include interim provisions for the consideration of any projects within this area prior to completion and adoption of the according plan/regulations.

LUT 43.10: The specific plan or other regulatory document for the Palomar Gateway District shall establish design and landscape guidelines for the improvement of Palomar Street as a gateway to the City.

Implementation of Policies LUT 43.1, and 43.10 as well as Policies LUT 11.1 through 11.5 would reduce the community character impact resulting from the adoption of the Preferred Plan within and adjacent to the Palomar Gateway District, but do not reduce the impact to below a level of significance. The policies would ensure that a Specific Plan be prepared for the Mixed-Use Transit Focus Area which would focuses on appropriate land uses for the area. While the policies require design standards and guidelines be prepared that include design, streetscape, and landscape guidelines to visually blend with the area and establishes a pedestrian friendly environment, they cannot be developed with available information. The current project is a General Plan Update and the development of design standards are a zoning and specific plan effort. Until future Specific Plans are developed and zoning specifications are implemented impacts remain significant.

West Fairfield District. The West Fairfield District has a mix of light industrial and office uses interspersed with older single-family homes and vacant lots. West Fairfield is separated from the rest of Chula Vista, due to Interstate 5 forming its east edge and the San Diego Wildlife Refuge to the west. Pedestrian routes across the freeway are limited and road area heavily traveled by cars and trucks. A portion of the West Fairfield District is currently within the jurisdiction of the City of San Diego and within the City of San Diego MHPA. The City of San Diego portion is approximately 38 acres and is designated within the San Diego MHPA as “developed.” Any development proposed in this area would need to be annexed to the City of Chula Vista from the City of San Diego prior to development under the proposed General Plan Update. The annexation requirements for this area are discussed

in Section 5.3.3.4 of the Biology section of this report, and requires that the City of Chula Vista reach an agreement with the City of San Diego and the wildlife agencies regarding appropriate conservation and consistency with the goals of the MSCP.

The Preferred Plan proposes a mix of retail commercial, professional office, and potentially a small amount of limited manufacturing designated as Mixed-Use Commercial. An educational facility within the West Fairfield District to serve the residents of the South Bay and take advantage of transit facilities at the Palomar Trolley Station is also proposed. Development of mixed-use commercial provides the City with an opportunity to enhance the city's image along the I-5 corridor as new uses are proposed and constructed along this highly visible segment. The introduction of mixed-use commercial could serve as a catalyst to revitalization by increasing the number of jobs and economic vitality of this area. Uses would be proximate to the Palomar Street Trolley Station and other transit-oriented development proposed in the area and would conform to smart growth objectives, serving to contribute to community cohesiveness and providing an area of focus for neighborhood activities.

Objective LUT 44 contains policies that address the redevelopment of the West Fairfield District into an employment center. Policy LUT 44.1 requires a Specific Plan to guide redevelopment within the district:

> LUT 44.1: The City shall prepare, or cause to have prepared, a specific plan,-master plan or other regulatory document to coordinate and guide the comprehensive redevelopment of the West Fairfield District.
>
> The City will prepare an Implementation Program to assure establishment of the above plan/regulations, which Program will also include interim provisions for the consideration of any projects within the West Fairfield District area prior to completion and adoption of the applicable plan/regulations.

This policy would reduce any adverse effect on the community character within and adjacent to the West Fairfield District but not to below a level of significance. While the policy addresses allowable uses, design standards, and general development requirements, these requirements cannot be developed with available information. The current project is a General Plan Update and the development of design standards are a zoning and specific plan effort. Until future Specific Plans are developed and zoning specifications are implemented impacts remain significant.

The West Fairfield District currently consists of both vacant and occupied parcels and is located immediately to the east and north of the South San Diego Bay Unit of the San Diego

Bay Wildlife Refuge. The purpose of the wildlife refuge is to protect and manage key habitats for endangered and threatened species and maintain areas of high biological diversity in San Diego County. The Preferred Plan proposes a mix of retail commercial, professional office, research and limited manufacturing designated as Mixed-Use Commercial adjacent the wildlife refuge. This designation would allow for more intensive development, which has the potential to bring more people and/or activity to the area than what is currently there. This would result in significant impacts to the adjacent protected habitat within San Diego Bay Wildlife Refuge.

Main Street District. The Main Street District is predominantly an industrial corridor. While there are relatively large commercial properties on the north side of Main Street, west of Broadway, remaining land uses on the north and south sides of Main Street consist of light industrial uses. Several storage facilities and some businesses consisting of outdoor storage areas exist in the area. The Preferred Plan proposes Limited Industrial uses on Zenith Street and within previously disturbed development areas south of Main Street to the edge of the Otay River Valley open space. Redesignation of existing residential on the south side of Zenith Street from just west of Fourth Avenue easterly to Albany Avenue to industrial use is incompatible with existing residential uses which would be maintained on the north side of Zenith Street unless suitable buffers or design guidelines are implemented**.** The proposed industrial use is compatible with existing industrial uses to the south along Main Street and with retail uses along Third Avenue. A benefit of the proposed change would be to provide increased job opportunities proximate to the future transit station at Main Street and Third Avenue and residential neighborhoods which conform to smart growth objectives.

Objective LUT 45 sets policies to provide for and enhance a strong business district along Main Street that can be balanced between meeting the community's economic needs and establishing a strong open space connection with the nearby neighborhoods. Policies 45.5, 45.13, and 45.14 address community character and future development within the Main Street District.

LUT 45.5: The City shall prepare, or cause to have prepared, a specific plan or plans, for the Main Street District that address an increase in depth of Limited Industrial designated land use on the north side of Main Street back to Zenith Street; establishes design and landscape guidelines and zoning-level standards; and addresses the interface of the Otay Valley Regional Park with land uses on or near Main Street.

The City will prepare an Implementation Program to define logical planning units within the overall Main Street District, and to assure establishment of the above plans/regulations for the overall District and the identified planning units. The Implementation Program will also include interim provisions for the consideration of any projects

within this area prior to completion and adoption of the applicable plan/regulations.

LUT 45.13: The appropriate Specific Plans for the Main Street Corridor shall include design guidelines and standards that address urban development adjacent to the Otay Valley Regional Park.

LUT 45.14: Require development adjacent to the Otay Valley Regional Park to orient buildings for maximum public access to open space and to provide compatible landscaping along the Park's edge.

Implementation of Policies LUT 45.5, 45.13, and 45.14 as well as Policies LUT 11.1 through 11.5 would reduce the community character impact resulting from the adoption of the Preferred Plan within and adjacent to the Main Street District, but do not reduce the impact to below a level of significance. While the policies require design standards and guidelines be prepared that include design, streetscape, and landscape and buffer guidelines to visually blend with the area and address the interface of the Otay Valley Regional Park with the proposed land uses, they cannot be developed with available information. The current project is a General Plan Update and the development of design standards are a zoning and specific plan effort. Until future Specific Plans are developed and zoning specifications are implemented impacts remain significant.

EAST PLANNING AREA

Proposed revisions to the City's adopted land use plan in the East Planning Area would result in adjustments to the boundaries and overall densities for residential, commercial, industrial, and public/quasi-public uses. The amount and location of open space and parklands would also be adjusted. The acreage of land uses by district for the Otay Ranch Subarea and land uses within the East Main Street Subarea is provided in Table 5.1-5. A comparison of the residential units for the Otay Ranch and East Main Street Subareas are shown in Chart 5.1-2. This chart illustrates that residential use increases slightly with the proposed amendments over the adopted General Plan within the East Main Street Subarea and decreases slightly within the Otay Ranch Subarea. Currently, the land within both of these subareas is undeveloped~~vacant~~; therefore, any proposed changes would cause an increase over the existing condition.

The Preferred Plan has the potential to cause an adverse effect on the community character of the surrounding villages within the East Planning Area adjacent to the areas of change. The proposed Land Use and Transportation Element addresses issues and presents policies that are important to the entire East Planning Area as well as issues and policies for the six subareas. There are five objectives which apply to the East Planning Area. These objectives include policies to: create balanced communities to maintain a high quality of life for its residents (Objective LUT 61); require development to consider and plan for careful use of

TABLE 5.1-5
LAND USE BY DISTRICT FOR THE OTAY RANCH SUBAREA[1,2,3]
(acres)

District/Type	Scenario 1	Scenario 2	Scenario 3	Preferred	Adopted
Central					
Commercial	32	44	14	18	19
Industrial	0	0	337	0	0
Open space	11	11	0	11	0
Park	110	115	94	101	31
Public	95	95	85	103	95
Residential	670	652	388	472	773
Central Total	918	918	918	705	918
Eastern University District (except Freeway Commercial and EUC)					
Commercial	34	34	34	51	43
Industrial	0	0	0	200	0
Open space	0	0	0	0	66
Park	22	25	15	24	0
Public	647	493	698	540	671
Residential	77	229	34	178	0
Eastern University District (except Freeway Commercial and EUC) Total	780	780	780	993	780
Eastern University District (Freeway Commercial and EUC					
Commercial	345	311	345	273	320
Industrial	0	0	0	0	0
Open Space	0	0	0	0	0
Park	20	24	20	35	45
Public	10	10	10	35	10
Residential	0	30	0	32	0
Eastern University District (Freeway Commercial and EUC Total	375	375	375	375	375
Otay Valley					
Commercial	0	29	29	0	0
Industrial	40	40	40	40	0
Open space	36	0	36	36	262
Park	209	194	180	209	0
Public	0	0	0	0	23
Residential	0	22	0	0	0
Otay Valley Total	285	285	285	285	285
Western					
Commercial	14	21	21	46	19
Industrial	261	171	302	261	261
Open space	39	0	39	39	39
Park	14	24	14	15	37
Public	54	54	54	54	54
Residential	332	445	284	299	304
Western Total	714	714	714	714	714
TOTAL	3,072	3,072	3,072	3,072	3,072

NOTE: In the Preferred Alternative, 212.1 acres immediately west of SR-125 is included in the Eastern University District. In Scenarios 1, 2, and 3, these 212.1 acres are included in the Central District. Consequently, in the Preferred Alternative, the Eastern University District's are total is 212.1 acres larger than in Scenarios 1, 2, and 3. Correspondingly, in the Preferred Alternative, the Central District's area total is 212.1 acres less than in Scenarios 1, 2, and 3.
Totals may vary due to rounding.

[1]Includes existing parks that are designated public and quasi-public under the adopted General Plan and would remain designated as public and quasi-public.

[2]Mixed use designations are comprised of commercial and residential transit focus areas in some areas.

[3]Park acreage for Scenarios 1, 2, and 3 does not reflect the ultimate park acreage.

natural and man-made resources (Objective LUT 62); provide efficient multi-modal access and connections to and between activity centers (Objective LUT 63); establish an urban center to function as the high density, mixed-use downtown and regional heart of the Otay Ranch Subarea and East Planning Area (Objective LUT 64); and promote and provide for the future location of a higher education facility in the East Planning Area (Objective LUT 65).

Unincorporated Sweetwater Subarea. The Unincorporated Sweetwater Area is composed of primarily stable, well-maintained single-family neighborhoods, limited supporting retail commercial, and substantial open space, including the Sweetwater Regional Park. The Area has been within the City's General Plan Area and Sphere of Influence for over 20 years. The Sweetwater Area and Chula Vista are tied through naturally supportive infrastructure and services, and the actions of each have an influence upon the other.

As a largely developed community, residents' and property owners' general, current desire is to remain unincorporated. At present, guiding land use and other general plan policies for the area are contained within San Diego County's General Plan and the County's Sweetwater Community Plan. The Preferred Plan does not propose any changes within the Sweetwater Subarea. The area would continue to be an area of well-maintained single-family residential neighborhoods that are compatible with and complement adjacent neighborhoods. The General Plan Update establishes Objective LUT 66 which would ensure the ongoing and future coordination with the County of San Diego to ensure existing and planned land use compatibility.

Otay Ranch Subarea. The Otay Ranch Subarea consists of a number of villages that integrate neighborhoods, shops and employment opportunities with parks, schools and other civic facilities to create a community with a shared sense of pride and place. Neighborhoods are designed to encourage community interaction. More detailed master planning through the Otay Ranch GDP and subsequent Sectional Planning Area (SPA) Plans is required prior to the development of individual villages. Village SPA Plans are based upon the objectives and policies of the General Plan, and the guiding principals as expressed in the Otay Ranch GDP. Amendments are proposed to the Otay Ranch GDP which are consistent with the proposed General Plan Update. These proposed GDP amendments consist of revisions to the GDP text and to the GDP land use maps and tables. The proposed GDP amendments are analyzed below in Section 5.1.3.2, Regulatory Plans and Policies.

The acreage of land uses by District for the Otay Ranch Subarea is provided in Table 5.1-5 and illustrated in Chart 5.1-4. As is illustrated on this chart, the acreage designated by the Preferred Plan for residential, industrial, and commercial land use is increased over existing conditions. The proposed Land Use and Transportation Element addresses issues and presents policies that are important to the Otay Ranch Subarea as well as issues and policies for the four districts within the subarea. Five objectives apply specifically to the Otay Ranch Subarea. These objectives include policies to: develop comprehensive, well-integrated and

balanced land uses within villages and town centers, compatible with the surroundings (Objective LUT 72); promote alternative modes of transportation (Objective LUT 73); accommodate land uses that diversify the economic base within Otay Ranch and the surrounding south San Diego County region (Objective LUT 74); preserve and protect Otay Ranch's significant resources and open space lands with environmentally sensitive development (Objective LUT 75) and; provide public services and facilities to meet the needs of the Otay Ranch residents (Objective LUT 76).

The proposed General Plan Update would establish a new Town Center (TC) land use designation that allows for higher density housing, office, retail and other commercial development than allowed in traditional village cores in Villages 8 and 9 (Central and Eastern University Districts respectively) within the Otay Ranch Subarea. Town centers would use a more extensive grid street system, which promotes direct access for pedestrians, cyclists, and cars from the surrounding village developments. A new street system classification ("Town Center Arterial") necessary to serve Town Centers is also proposed.

Although there could be a reduction in the total area encompassed by the quarter-mile walking radius surrounding a Town Center compared to the Village Cores, the Town Center plan increases multi-family residential densities surrounding the Town Centers to correspond with transit policies of a minimum of 18 dwelling units per acre. Additionally, the town centers would result in the extension of the transit service to as yet undeveloped villages that previously were not served by transit. Inclusion of the new Town Center designation and implementation of policies included in the General Plan Update would not result in a significant adverse affect on community character because there would be an increase in densities around community centers providing increased access to transit and improved pedestrian access to services.

The Otay Ranch Subarea has four planning districts: the Western District (Villages 2, 2 West, and 3); the Central District (Villages 4, 7, and the westerly portion of Village 8); the Eastern University District (Village 9, University Campus, Planning Area 12, and the easterly portion of Village 8); and the Otay Valley District. Specific objectives and policies are proposed to facilitate compatible land uses within and between each of the districts as well as preserve the character and retain the quality of the surrounding areas. The following discussion analyzes the effects to community character from the adoption of the Preferred Plan within the four districts of the Otay Ranch Subarea.

Western District

The Western District borders the Otay Landfill on three sides; therefore, it is important that appropriate land uses be designated within the established landfill buffer to avoid impacts to air quality, noise, hazards, and public safety. The Preferred Plan proposes industrial land uses adjacent to the Otay Landfill (see Appendix B). This plan eliminates the option for residential uses in place of industrial uses within Village Three from the Otay Ranch GDP.

Objective LUT 79 addresses the development of the Western District and would establish policies for appropriate land uses adjacent to the landfill.

Objective LUT 79

Establish appropriate land uses adjacent to the Otay Landfill and Wolf Canyon that reflect the unique land use and landform characteristics of these areas.

Policies

LUT 79.1: Prior to or concurrent with the approval of a SPA Plan for Village Two, Two West, and the Otay Ranch industrial/business park, ensure that the design of these areas reflects the unique characteristics of the landform and surrounding land use.

LUT 79.2: Preserve and protect view opportunities and provide view corridors to open space areas to the south and east from the high mesa locations of Village Two and from along the edges of Poggi and Wolf Canyons.

LUT 79.4: Prior to or concurrent with approval of a SPA Plan for Village Two West, ensure that single-family residential development in Village Two West provides appropriate open space adjacent to industrial uses that are located adjacent to the Otay Landfill.

LUT 79.5: Limit land uses adjacent to the Otay Landfill to open space and limited industrial uses or business parks.

Implementation of these policies would ensure that the Preferred Plan does not result in a significant impact associated with land uses adjacent to the landfill because the policies ensure that a transition from the landfill is provided by proposing light industrial between the landfill and the residential uses within Village Two. The policies would also ensure that the Preferred Plan does not result in a significant impact associated with land uses adjacent to Poggi and Wolf Canyon because the policies ensure that the design of these areas reflects the unique characteristics of the landform and surrounding land use as well as establish that landform grading techniques be utilized adjacent to the canyon.

Central District. The Central District of the Otay Ranch Subarea is comprised of Villages Four, Seven and Eight of the Otay Ranch GDP. The Preferred Plan for the Central District proposes a mixture of land uses and intensities that includes a large community park, a pedestrian-oriented mixed-use town center; single-family and multi-family residential uses surrounding a typical village core; and a middle school. A pedestrian-oriented Town Center,

with transit services and town center arterials in the form of "couplets" or other pedestrian-oriented arterial street design, is proposed along portions of La Media Road and Rock Mountain Roads where Villages Four, Seven, and Eight meet. As part of the Preferred Plan, the alignment of Rock Mountain Road is being revised and the extension of Main Street is being eliminated. The purpose of this realignment is to minimize road construction to MSCP Preserve land in Otay Valley and limit the environmental effects of the road in Wolf Canyon. Objective LUT 81 and associated policies address development within the Central District:

> **Objective LUT 81**
>
> Develop a higher density, mixed-use, transit-oriented town center centered on the intersection of Rock Mountain Road and La Media Road, surrounded by lower density residential use and a large community park, and preserve Rock Mountain as an important landform and visual resource.

A pedestrian-oriented Town Center and a new street system classification or arterial necessary to serve Town Centers is proposed within the Central District. Changes that include the new Town Center designation and implementation of policies included in the General Plan Update would ensure that the Preferred Plan does not result in a significant adverse impact on community character because there would be an increase in densities around community centers providing increased access to transit and improved pedestrian access to services.

Otay Valley District. Currently, the Otay Valley District is made up of primarily undeveloped and relatively level properties located on both sides of the Otay River. The District also includes a topographically constrained site, for which a portion of which has been used for industrial activities. The Preferred Plan proposes Open Space-Active Recreation, Light Industrial, and Open Space uses within the Otay Valley District (see Appendix B). This plan would redesignate approximately 209 acres from Open Space to Active Recreation in accordance with the adopted Chula Vista MSCP Subarea Plan and Otay Ranch Resource Management Plan (RMP). Only limited commercial uses/activities related to active recreation would be permitted within the area, consistent with the Chula Vista MSCP Subarea Plan and the RMP.

The Otay Valley District contains the "Bird Ranch" site and a former gun club. Because of the age and past use of Bird Ranch, the GPU requires an evaluation of the historic value of the ranch prior to any significant alteration. If Bird Ranch is determined to be an historic resource in accordance with Section 15064.5 of the State CEQA Guidelines, any impacts to the historical value of Bird Ranch resulting from development allowed under the proposed General Plan Update would be significant.

Proposed Objectives LUT 82 and 83 and associated policies would direct future development within the Otay Valley district without threatening the valuable resources:

Objective LUT 82

Designate and allow for appropriate and carefully planned land uses that provide additional recreational activities, both public and private, that do not threaten the viability of sensitive biological habitats or the Otay Valley's function as a key component of the Otay Ranch Preserve.

Policies

LUT 82.1: Limit public and private active recreational uses to the previously disturbed, non-sensitive areas deemed appropriate for active recreation development by the City's MSCP Subarea Plan and Otay Ranch Resource Management Plan. Access to these sites should be readily accessible from existing and planned public roads and should not intrude into core Preserve areas.

LUT 82.2: Prior to the approval of any project that proposes in the demolition or significant alteration of a potentially significant historic resource within the "Bird Ranch" property in Otay Valley, as defined pursuant to applicable state and federal laws, require the completion of an historic survey report to determine significance. If determined to be significant, require appropriate and feasible mitigation, pursuant to CEQA Guidelines Section 15064.5.

LUT 82.3: Active recreation uses authorized by Policy LUT 82.1, above, shall be sited to minimize the potential negative effects of these uses on adjacent Preserve areas.

LUT 82~~1~~.4: Prior to approval of any discretionary permit in the Otay Valley District ensure that the proposed project is consistent with the Otay Valley Regional Park Concept Plan, and assist implementation of the Concept Plan through project features and design that support or provide access, staging areas, trails, and appropriate buffering.

Objective LUT 83

Promote limited industrial development opportunities, where appropriate access to non-residential circulation roadways is provided and environmental impacts are minimized.

Policies

LUT 83.1: Allow limited industrial development on property east of Heritage Road and south of Otay Valley, subject to the preparation of a master development plan that addresses appropriate street improvements, vehicular access, screening from public viewsheds, development infrastructure, protection of adjacent environmentally sensitive resources, water quality, and phasing.

Implementation of Policies LUT 82.1 through 82.4 ensure that the Preferred Plan does not result in a significant land use impact adjacent to the Otay Ranch Preserve, the Otay River, and to the potentially historic structures on the Bird Ranch site by providing appropriate preservation of the historic Bird Ranch structures, limiting public and private active recreational uses to the previously disturbed, non-sensitive areas deemed appropriate for active recreation development by the City's MSCP Subarea Plan and Otay Ranch Resource Management Plan that supports or provides access, staging areas, trails, and appropriate buffering. This would minimize the negative effects of these uses on sensitive resources within the MSCP Preserve. Additionally, Policy LUT 83.1 requires limited industrial development in the "southwest corner" on properties east of Heritage Road and south of the Otay Valley to the preparation of a master development plan that addresses appropriate street improvements, vehicular access, screening from public viewsheds, development infrastructure, protection of adjacent environmentally sensitive resources, water quality, and phasing. This further ensures impacts associated with land uses adjacent to the Otay Ranch Preserve and the Otay River does not result in a significant impact.

Eastern University District. The Eastern University District is an approximately 1,400-acre area comprised of five focus areas. The five focus areas are undeveloped and are in various stages of planning. The five primary land uses for the five focus areas within the State Route 125 corridor include: (1) a region-serving urban center with the highest residential densities and an office/commercial focus; (2) a sub-regional retail/life style center; (3) higher education institution(s) that make up a multi-institutional university center or a traditional university campus; (4) town center providing university-related retail, service, cultural and entertainment centers; and (5) a research and technology oriented light industrial business park. Within this District, a "University Study Area" would be designated in the GPU on properties that surround the site of the future campus in order to maximize the opportunities resulting from the planned university campus. The University Study area includes the Eastern Urban Center, Regional Technology Park, University Campus, and University Village Focus Areas.

The Preferred Plan proposes approximately 530 acres as public and quasi-public for a university campus and deletes secondary land uses underlying the current university designation (residential alternative) from the Otay Ranch GDP that could otherwise potentially be developed. This represents a reduction in the area specifically designated for

the university from the 1,270 acres under the adopted General Plan. The Preferred Plan designates the area surrounding the campus as a new Town Center, which would establish a university-oriented town center of transit serving mixed-use and medium-high residential densities. Therefore, the secondary residential land use is effectively removed and the Town Center is being established. These changes would not result in an incompatible use because a mixed-use residential land use designation is consistent with the existing single-family residential designation.

Objectives LUT 84, 85, and 86 and their associated policies for the Eastern University District in the proposed General Plan Update focus on housing, economic, cultural, and academic factors and relationships within this area. Significant impacts to community character would occur if land uses are not planned to facilitate compatible land use. The following policies address the community character and future land uses within the Eastern University District:

LUT 85.4: As part of any SPA plan within the University Study Area, establish a coordinated system of physical elements that interconnect and unify the corridor's Focus Areas, including streets, transit, sidewalks, streetscapes, signage, lighting, building placement and form, and architectural character.

LUT 85.6: Complete preparation of a framework strategy for the University Campus, University Village, Eastern Urban Center and Regional Technology Park Focus Areas included within the "University Study Area" prior to or concurrently with any future GDP amendments and/or SPA plans for villages within the Eastern University District. This strategy shall identify and consider important land use, economic, circulation, and design elements, and relationships between these Focus Areas. The strategy shall also identify key principles or "ground rules" for development to allow subsequent SPA planning for the individual focus areas and ownerships to proceed independently.

Implementation of these policies would reduce community character impacts resulting from the adoption of the Preferred Plan within and between the focus areas in the Eastern University District, but do not reduce the impact to below a level of significance. While the policies establish a SPA Plan for the University Study Area that interconnect and unify the corridor's focus areas, including streets, transit, sidewalks, streetscapes, signage, lighting, building placement and form, and architectural character as well as intermixing uses that support and complement those contained in adjoining districts and subareas, they cannot be developed with available information. The current project is a General Plan Update and the development of design standards are a zoning and specific plan effort. Until future Specific Plans are developed and zoning specifications are implemented impacts remain significant.

Policy LUT 85.6 establishes the use of a framework strategy for the University Study Area to identify the housing, economic, cultural and academic factors to be considered with subsequent land planning documents. Implementation of these policies and requiring a framework strategy to guide future development and subsequent detailed planning would reduce any community character impacts resulting from the adoption of the Preferred Plan within and between the focus areas in the Eastern University District, but do not reduce the impact to below a level of significance. The framework strategy would focus on the development of the university site and the integration of adjacent uses, urban form, and community character within the area. Development of the framework strategy would be done prior to or concurrently with any future GDP amendments and/or SPA plans for villages within the Eastern University District. The current project is a General Plan Update and the development of the framework strategy is a specific plan effort. Until the framework strategy is developed and zoning specifications are implemented impacts remain significant.

East Main Street Subarea

The East Main Street Subarea consists of approximately 1,800 acres with varied land uses that include single-family neighborhoods along Brandywine Avenue; entertainment sites such as Coors Amphitheater and Knott's Soak City waterpark; the Otay Landfill; and several auto-wrecking yards. The Preferred Plan proposes retail commercial along Main Street and medium residential land uses on Brandywine Avenue within the East Main Street Subarea. Proposed Objective LUT 70 and associated policies establish policies that direct future development within this subarea to expand and/or establish commercial uses to serve residents and visitors; to increase city revenues; and to improve the district's appearance:

Objective LUT 70

Develop and improve the East Main Street Subarea to expand and/or establish commercial uses to serve residents and visitors; to increase City revenues; and to improve the area's appearance.

Policies

LUT 70.1: Maintain the existing stable single-family neighborhoods.

LUT 70.2: Support the existing entertainment uses and seek to expand their activities, including other compatible uses.

LUT 70.3: Phase out the auto wrecking yards by expediting the process of relocation.

LUT 70.4: Preserve and protect significant resources and open space lands with environmentally sensitive development.

LUT 70.5: Resolve any existing boundary issues between the City and other jurisdictions.

Changes to existing land uses in the East Main Street Subarea and implementation of policies associated with Objective LUT 70 would not physically divide the community or result in a significant adverse affect on community character.

The following discussion focuses on the difference between the Preferred Plan and the individual scenarios. Where the impacts are the same as the Preferred Plan listed above, they are not repeated below.

Scenario 1

NORTHWEST PLANNING AREA

As with the Preferred Plan, Scenario 1 modifies designated land uses within the Northwest Planning Area to allow for an increase of mixed-use development. This scenario would introduce increased residential density in areas currently restricted to retail use along the downtown segments of Third Avenue, along E Street in the vicinity of Third and Fourth Avenues, and increased residential and transit-oriented uses in the vicinity of major transit corridors.

The acreage of land uses by District for the Urban Core Subarea is provided in Table 5.1-3 and illustrated in Chart 5.1-1. As is illustrated on this chart, there would be more acreage of land designated for residential use with Scenario 1 as compare to either the Preferred Plan or existing conditions. There are also a greater number of units planned for this Scenario than any of the other Scenarios. A comparison of the residential units for the Urban Core Subarea is shown in Chart 5.1-2. As illustrated on Chart 5.1-1 and Chart 5.1-2, the acreage of land designated for residential use and the residential units would increase for the Scenario 1 compared to the Preferred Plan and existing conditions. In general, proposed uses would result in an increase in development density in conformance to smart growth goals which would be considered a positive effect on the urban core subarea and city as a whole.

As with the Preferred Plan, Scenario 1 would implement the objectives and policies of the General Plan Update. Implementation of the objectives and policies included in the General Plan Update would reduce any impacts associated with community character within the Northwest Planning Area for Scenario 1, but do not reduce the impact to below a level of significance. While these policies would address community character and provide for improved connectivity between neighborhoods and open space; protections for important natural landform features and historic resources; installation of special treatments along gateways, including themed signage and landscape material; and other measures that preserve or protect community character and cohesion, they cannot be developed with available information. The current project is a General Plan Update and the development of design

standards are a zoning and specific plan effort. Until future Specific Plans are developed and zoning specifications are implemented impacts remain significant.

SOUTHWEST PLANNING AREA

As compared to existing conditions and the Preferred Plan, Scenario 1 would increase the transit focus area at the Palomar Street Trolley Station, retain retail uses on Broadway south of L Street and north of Naples Street, introduce mixed-uses on Third Avenue and in the vicinity of the Palomar Trolley Station, and expand industrial use in the area south of Main Street on existing designated open space. As with the Preferred Plan, objectives and policies established for the Southwest Planning Area would apply and act to reduce impacts to community character, but not to below a level of significance. While the policies would establish design standards and guidelines that dictate future development and address community character, they cannot be developed with available information. The current project is a General Plan Update and the development of design standards are a zoning and specific plan effort. As with the Preferred Plan, until future Specific Plans are developed and zoning specifications are implemented impacts remain significant.

Proposed changes in land use under Scenario 1 could adversely affect community character in the following two districts:

Main Street District. Scenario 1 proposes industrial uses adjacent to the MSCP preserve within this district. Under Scenario 1, a reduction of designated open space would occur on lands adjacent to protected habitat within the City's MSCP Preserve in the area south of Faivre Street, east of Broadway, and north of the Otay River Valley. Development with industrial uses south of Main Street would otherwise be consistent with existing nearby and adjacent industrial and retail uses to the north and would not physically divide or adversely affect the community. However, future industrial use adjacent to protected habitat would be a significant impact. Scenario 1 avoids the potentially significant land use conflict from redesignation of residential to industrial use on the south side of Zenith Street as compared to the Preferred Plan.

West Fairfield District. The West Fairfield District currently consists of both vacant and occupied parcels and is located immediately to the east and north of the South San Diego Bay Unit of the San Diego Bay Wildlife Refuge. As with the Preferred Plan, Scenario 1 proposes a mix of retail, commercial, professional office, research, and limited manufacturing designated as Mixed-Use Commercial. An educational facility is also proposed within the West Fairfield District to serve the residents of the South Bay and take advantage of transit facilities at the Palomar Trolley Station. This designation would allow for more intensive development, which has the potential to bring more people and/or activity to the area than what is currently there. This would result in significant impacts to the adjacent protected habitat within the San Diego Bay Wildlife Refuge.

A portion of the West Fairfield District is currently within the jurisdiction of the City of San Diego and within the City of San Diego MHPA. Any development proposed in this area under this scenario would need to be annexed to the City of Chula Vista from the City of San Diego prior to development under the proposed General Plan Update. The annexation requirements for this area is discussed in Section 5.1.3.3 below.

Policy LUT 44.1 requires a Specific Plan to guide redevelopment within the West Fairfield District. This policy would reduce adverse effects on the community character within and adjacent to the West Fairfield District but does not reduce the impact to below a level of significance. While the policy ensures that a Specific Plan be prepared for the area which would address allowable uses, design standards, and general development requirements, they cannot be developed with available information. The current project is a General Plan Update and the development of design standards are a zoning and specific plan effort. As with the Preferred Plan, until future Specific Plans are developed and zoning specifications are implemented impacts remain significant.

No other impacts with the potential to disrupt or divide a neighborhood or affect community character have been identified.

EAST PLANNING AREA

As compared to existing conditions and the Preferred Plan, Scenario 1 would increase the residential densities and decrease the commercial and public uses in the Otay Ranch Subarea. Scenario 1 would retain the EUC and the Freeway Commercial areas north of Rock Mountain Road, east of SR-125 as designated under the adopted General Plan. The Regional Technology Park within the Eastern University District located west of SR-125 is not a component of this scenario.

There have been no land uses identified for Scenario 1 that conflict with adjacent land uses or impact community character within the East Planning Area over that of the Preferred Plan. Implementation of the objectives and policies of the General Plan Update would reduce community character impacts but not to below a level of significance. While the policies address community character and provide for improved connectivity between neighborhoods, focus areas, and districts; protections for important natural landform features; and other measures that preserve or protect community character and cohesion, they cannot be developed with available information. The current project is a General Plan Update and the development of design standards are a zoning and specific plan effort. As with the Preferred Plan, until future Specific Plans are developed and zoning specifications are implemented impacts remain significant.

Scenario 2

NORTHWEST PLANNING AREA

Proposed changes in land use under Scenario 2 could adversely affect community character at two locations: the Chula Vista Center, and along North Broadway. Under Scenario 2, the portion of the Chula Vista Center facing I Street would be designated for medium density residential immediately adjacent to the retail center along I Street in the vicinity of Fifth Avenue. Currently, this area is designated low-medium residential. While the placement of medium density residential would conform to nearby residential uses, the proximity to the Chula Vista Center could result in land use conflicts between the proposed use and existing retail or proposed mixed-use commercial at the Chula Vista Center.

The existing residential uses are redesignated for retail use along north Broadway under Scenario 2. The proximity of retail uses to remaining existing residential uses would be considered a significant community character impact unless specific design features are incorporated to adequately buffer residences from noise, lighting and disruptive activities associated with retail operations. There are no other proposed land use changes which would adversely divide the community or affect community character.

As with the Preferred Plan, objectives and policies established for the Northwest Planning area would apply and act to reduce impacts to community character, but not to below a level of significance. While the policies would establish design standards and guidelines that dictate future development and address community character, they cannot be developed with available information. The current project is a General Plan Update and the development of design standards are a zoning and specific plan effort. As with the Preferred Plan, until future Specific Plans are developed and zoning specifications are implemented impacts remain significant.

SOUTHWEST PLANNING AREA

As with the Preferred Plan, objectives and policies established for the Southwest Planning Area would apply and act to reduce impacts to community character, but not to below a level of significance. While the policies would establish design standards and guidelines that dictate future development and address community character, they cannot be developed with available information. The current project is a General Plan Update and the development of design standards are a zoning and specific plan effort. As with the Preferred Plan, until future Specific Plans are developed and zoning specifications are implemented impacts remain significant.

Proposed changes in land use under Scenario 2 could adversely affect community character in the following two districts over that identified for the Preferred Plan:

Main Street District. Under Scenario 2, a reduction of designated open space would occur by proposing future industrial use on lands adjacent to protected habitat within the City's MSCP Preserve in the area south of Faivre Street, east of Broadway, and north of the Otay River Valley. Development with industrial uses south of Main Street would otherwise be consistent with existing nearby and adjacent industrial and retail uses to the north and would not physically divide or adversely affect the community. However, future industrial use adjacent to protected habitat would be a significant impact.

The proposed designation of low medium density residential (3-6 du/ac) on existing lands designated for industrial use and located south of Main Street, about midway between Industrial Boulevard and Broadway, would introduce a potentially incompatible use to an area surrounded by existing and proposed industrial or existing retail uses. The site is not adjacent to an existing or future transit station or any other residential neighborhoods. Approval of the proposed residential use at this location would therefore be considered a significant direct impact, isolating a future residential use between potentially incompatible uses. This would be a significant impact.

Potentially significant direct land use impacts would also result from the proposed designation of the south side of Zenith Street for retail use**.** Future retail development at this location could impact the existing low medium density residential neighborhood unless design guidelines and other appropriate measures are identified to prevent conflicts with residential uses on the north side of the street.

West Fairfield District. Scenario 2 proposes Limited Industrial within the West Fairfield District adjacent to the San Diego Bay Wildlife Refuge. This designation would allow for more intensive development, which has the potential to bring more people and/or activity to the area than what is currently there. As with the Preferred Plan and Scenario 1, this would result in significant impacts to the adjacent protected habitat within the San Diego Bay Wildlife Refuge.

A portion of the West Fairfield District is currently within the jurisdiction of the City of San Diego and within the City of San Diego MHPA. Any development proposed in this area under this scenario would need to be annexed to the City of Chula Vista from the City of San Diego prior to development under the proposed General Plan Update. The annexation requirements for this area is discussed in Section 5.1.3.3 below.

EAST PLANNING AREA

As compared to existing conditions and the Preferred Plan, Scenario 2 would increase the residential, commercial, and park uses and decrease the public uses in the Otay Ranch Subarea. Scenario 2 would retain the EUC area north of Rock Mountain Road, east of SR-125 as designated under the adopted General Plan. A Regional Technology Park within the Eastern University District is not a proposed component of this scenario. As with the

Preferred Plan, objectives and policies established for the East Planning Area would apply and act to reduce impacts to community character, but not to below a level of significance. While the policies would establish design standards and guidelines that dictate future development and address community character, they cannot be developed with available information. The current project is a General Plan Update and the development of design standards are a zoning and specific plan effort. As with the Preferred Plan, until future Specific Plans are developed and zoning specifications are implemented impacts remain significant.

Proposed changes in land use under Scenario 2 could adversely affect community character in the following two districts over that identified for the Preferred Plan:

Otay Valley District. Within the Otay Valley District, Scenario 2 proposes to add medium high and high density residential to approximately 23 acres, add approximately 29 acres of mixed-use commercial in support of existing entertainment related land uses and planned residential uses, designate approximately 55 acres previously designated as open space to Open Space-Active Recreation, designate a neighborhood park, and designate approximately 40 acres that is currently utilized as industrial use from Open Space to Limited Industrial. According to Section 6.2.1 of the Chula Vista MSCP Subarea Plan, residential uses are not considered compatible in this area. Residential development in this area completed in conformance with Scenario 2 would therefore have a significant impact.

Western District. Scenario 2 proposes residential uses within the 1,000-foot buffer within Village Two and Sunbow Master Plan Community adjacent to the Otay landfill. The General Plan Update has policies that would limit the placement of residential use in the landfill buffer. Policies LUT 79.1 through 79.5 address land uses adjacent to the Otay Landfill. Objective LUT 79 states:

> Establish appropriate land uses adjacent to the Otay Landfill and Wolf Canyon that reflect the unique land use and landform characteristics of these areas.

Specifically, Policy 79.5 states:

> Limit land uses adjacent to the Otay Landfill to open space and limited industrial uses or business parks.

By placing residential uses next to the landfill, future residents would be exposed to potentially excessive levels of dust, odors and noise resulting from landfill activities. Implementation of LUT Policy 79.5 would ensure that development adjacent to the landfill does not result in a significant impact because the policy ensures that a transition from the landfill is provided by proposing light industrial between the landfill and the residential uses

within Village Two. Because Scenario 2 places residential uses adjacent to the landfill, it is in conflict with this proposed policy. As such, it is a significant impact.

Scenario 2 proposes to allow a portion of Wolf Canyon to be filled to accommodate development. Development under this scenario would require a Boundary Adjustment to the City of Chula Vista MSCP Preserve. This scenario would remove Preserve land in the western fork of Wolf Canyon and add Preserve in the northern portion of the main drainage of the canyon. It should be noted that the Preserve Boundary Adjustment proposal depicted in Scenario 2 is not covered by this EIR and, therefore, cannot be adopted as part of any of the proposed General Plan Update actions that rely upon this EIR.

Scenario 3

NORTHWEST PLANNING AREA

As with the Preferred Plan, Scenario 3 modifies designated land uses within the Northwest Planning Area to allow for an increase of mixed-use development. This scenario would introduce increased residential in areas currently restricted to retail use along the downtown segments of Third Avenue, along E Street in the vicinity of Third and Fourth Avenues, and increased residential and transit-oriented uses in the vicinity of major transit corridors.

The acreage of land uses by District for the Urban Core Subarea is provided in Table 5.1-3 and illustrated in Chart 5.1-1. As is illustrated on this chart, there would be more acreage of land designated for residential use with Scenario 3 as compare to either the Preferred Plan or existing conditions. A comparison of the residential units for the Urban Core Subarea is shown in Chart 5.1-2.

Similar to Scenario 2, Scenario 3 proposes replacement of existing residential along North Broadway with retail uses. Proximity to remaining residential uses would be considered an adverse effect unless specific design features are incorporated to adequately buffer residences from noise, lighting, and disruptive activities associated with retail operations.

As with the Preferred Plan, objectives and policies established for the Northwest Planning area would apply and act to reduce impacts to community character for Scenario 3, but not to below a level of significance. While the policies would establish design standards and guidelines that dictate future development and address community character, they cannot be developed with available information. The current project is a General Plan Update and the development of design standards are a zoning and specific plan effort. As with the Preferred Plan, until future Specific Plans are developed and zoning specifications are implemented impacts remain significant.

SOUTHWEST PLANNING AREA

Major differences exist between Scenario 3 and the Preferred Plan and other Scenarios for the Southwest Planning Area. These include: designation of the West Fairfield district for mixed-use with residential and a potential educational facility; redesignation of existing residential as limited industrial at the northwest intersection of Industrial Boulevard and Palomar Street/Oxford Avenue; redesignation of existing industrial use along Main Street from west of Fourth Avenue to Albany Avenue, and existing residential on the south side of Zenith Street as retail; and designation of mixed-use and/or higher density residential in the vicinity of the Palomar Trolley Station, along south Broadway and south of Naples Street on Third Avenue, east of existing retail uses. As with the Preferred Plan, objectives and policies established for the Southwest Planning Area would apply and act to reduce impacts to community character for Scenario 3, but not to below a level of significance. While the policies would establish design standards and guidelines that dictate future development and address community character, they cannot be developed with available information. The current project is a General Plan Update and the development of design standards are a zoning and specific plan effort. As with the Preferred Plan, until future Specific Plans are developed and zoning specifications are implemented impacts remain significant.

Proposed changes in land use under Scenario 3 would adversely affect community character in the following three districts:

West Fairfield. Scenario 3 proposes mixed-use development with residential uses within the West Fairfield District. This could cause significant impacts to nearby wildlife in the San Diego Bay Wildlife Refuge. Scenario 3 has the potential to have a greater impact on the adjacent habitat than the land uses proposed for the Preferred Plan and Scenario 1 and 2 because the scenario includes multi-family residential development at approximately 36 dwelling units per acre. This designation would allow for more intensive development, which has the potential to bring more people and/or activity to the area than what is currently there. This would result in significant impacts to the adjacent protected habitat within the San Diego Bay Wildlife Refuge.

A portion of the West Fairfield District is currently within the jurisdiction of the City of San Diego and within the City of San Diego MHPA. Any development proposed in this area under this scenario would need to be annexed to the City of Chula Vista from the City of San Diego prior to development under the proposed General Plan Update. The annexation requirements for this area is discussed in Section 5.1.3.3 below.

Palomar Gateway District. Scenario 3 proposes limited industrial uses in an existing residential area northwest of the Industrial Boulevard/Palomar Street intersection in the Palomar Gateway District. Surrounding uses include mixed-use residential to the north,

south, and east with limited industrial to the west. Potential significant adjacent land use impacts would result from this land use change.

Main Street District. Scenario 3 proposes industrial uses adjacent to the MSCP preserve within this district. As with Scenarios 1 and 2, a reduction of designated open space would occur under Scenario 3 on lands adjacent to protected habitat within the City's MSCP Preserve in the area south of Faivre Street, east of Broadway, and north of the Otay River Valley. Development with industrial uses south of Main Street would otherwise be consistent with existing nearby and adjacent industrial and retail uses to the north and would not physically divide or adversely affect the community. However, future industrial use adjacent to the MSCP preserve would be considered a significant impact and require mitigation.

Scenario 3 also proposes retail for the area with existing industrial uses along Main Street from west of Fourth Avenue to Albany Avenue, and existing residential on the south side of Zenith Street. This change to retail adjacent to residential and industrial would represent a significant land use adjacency impact.

East Planning Area

As compared to the Preferred Plan, Scenario 3 increases the residential, commercial, industrial, and open space uses and decreases the public uses in the Otay Ranch Subarea. Scenario 3 retains the EUC and the Freeway Commercial areas north of Rock Mountain Road, east of SR-125 as designated under the current General Plan. Proposed changes in land use under Scenario 3 would adversely affect community character in the following two districts:

Eastern University District. Within the Eastern University District, Scenario 3 designates approximately 545 acres designated as public/quasi-public for a university campus, a reduction from 1,270 acres under the adopted plan, and larger than that proposed under Scenarios 1 and 2 and slightly more than under the Preferred Plan. (Note that an undetermined amount of the 1,270 acres of land designated for the university under the adopted plan would be included in open space).

Western District. Scenario 3 also proposes residential land uses on a limited basis adjacent to the Otay Landfill. By placing residential uses next to the landfill, future residents would be exposed to potentially excessive levels of dust, odors and noise resulting from landfill activities. Because Scenario 2 places residential uses adjacent to the landfill it is in conflict with this proposed policy. As such, it is a significant impact.

As with the Preferred Plan, objectives and policies established for the East Planning Area would apply and act to reduce impacts to community character for Scenario 3, but not to below a level of significance. While the policies would establish design standards and guidelines that dictate future development and address community character, they cannot be

developed with available information. The current project is a General Plan Update and the development of design standards are a zoning and specific plan effort. As with the Preferred Plan, until future Specific Plans are developed and zoning specifications are implemented impacts remain significant.

5.1.3.2 Threshold 2: Regulatory Plans and Policies

Threshold 2 states that the proposed General Plan Update would result in a significant impact to land use if it would conflict with any applicable land use plan, policy, or regulation or an agency with jurisdiction over the project (including but not limited to the General Plan, Specific Plan, Local Coastal Program, or Zoning Ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

General Plan

The purpose of the General Plan Update is to adopt land use objectives that better balance land uses, preserve or enhance stable neighborhoods, allow mixed-use development, avoid or minimize potential conflicts between uses, enhance the community image, better integrate land use and transportation facilities, and address the specific planning needs of focus areas within each of the subareas. In promoting those objectives, policies that conform to adopted plans, policies and regulations are proposed. A comparison of the adopted General Plan and the proposed General Plan Update is discussed as part of the No Project Alternative, in Chapter 10 of this report.

Zoning Ordinance

The proposed General Plan Update policies identify the need for a subsequent update of the adopted zoning code to conform to the General Plan Update.

Regional Land Use Planning

The proposed General Plan Update objectives and policies are consistent with the various plans and policies developed to coordinate growth within the region. This includes SANDAG's RCP, RTP, and CMP which promote smart growth principles; Regional Housing Program; Employment Lands Inventory; MTDB trolley extension, including the Otay Ranch Transitway Alignment and scenarios; and MTDB's Transit First studies.

Local Coastal Program

The proposed General Plan Update does not propose any changes to the adopted Local Coastal Program (LCP) and, therefore, would have no effect on existing or future uses in the coastal zone and would conform to other adopted plans for the Bayfront area.

Brown Field Airport Land Use Compatibility Plan

The adopted Brown Field Airport Land Use Compatibility Plan (ALUCP) established the Airport Influence Area for this airport, which encompasses a limited area of the East Planning Area. A small portion of the plan area is within the Brown Field Airport Influence Area. The Preferred Plan designates a portion of the Otay Valley District area within the Airport Influence Area as Active Recreation and a limited portion for Light Industrial and Open Space. These uses are consistent with the land uses indicated in the adopted Airport Land Use Compatibility Plan.

Otay Ranch General Development Plan (GDP)/Subregional Plan

The Otay Ranch GDP/Subregional Plan was approved jointly by the City of Chula Vista and County of San Diego for the future development of Otay Ranch. The environmental review of the adopted GDP was completed in 1992. This review included impacts and mitigation measures which were presented in the Final Program EIR for the Otay Ranch General Development Plan/Sub-Regional Plan EIR (90-01). Land use changes proposed as part of the General Plan Update would not be consistent with the adopted Otay Ranch GDP and would require amendments to the Otay Ranch GDP to achieve consistency. A review of these amendments, which considers their applicability to the goals and objectives of the adopted GDP is presented below for the Preferred Plan.

1. GENERAL DEVELOPMENT PLAN MAP

Adopt a new Otay Ranch General Development Plan Land Use Diagram to provide for land use changes within focused areas as established by the proposed General Plan Update. A map illustrating the land use revisions to the Otay Ranch GDP land use diagram is included in Appendix C of this EIR. The adoption of the GPU Update will result in consistency between the GDP and the GPU.

2. TOWN CENTER DESIGNATION

This amendment would establish a new Town Center designation that allows for higher density housing, office, retail and other commercial developments than allowed in traditional village cores, utilizing a more extensive grid street system, which promotes direct access for pedestrians, cyclists and motorists from the surrounding village developments. The Town Center concept maintains the quarter-mile pedestrian-shed radius that contains the number of households needed to support viable public transit stations. A unique road arterial ("Town Center Arterial") is a major feature of the Town Center. This arterial is designed to accommodate pedestrian-oriented development based on larger dwelling unit quantities and higher densities. Transit Stations serving the future expansion of the Bus Rapid Transit technology will be the centerpiece for the Town Centers in the Otay Ranch. New Town

Center policies will require the same transit-oriented densities and permit a gradual reduction in multi-family and single-family densities farther away from the Town Center.

The existing Otay Ranch GDP contains objectives, goals and policies which provide for higher residential density organized around village cores sufficient to encourage and support the expansion of transit and promote pedestrian-oriented developments. The proposed town centers are an extension of this concept that increases residential density in the core areas of the villages sufficient to sustain even larger levels of retail and other commercial services, close to residential areas. The town centers will create an even greater sense of community in the villages and provide for more pedestrian-friendly villages. The town centers will also result in the extension of the transit service to villages that previously were not served by increasing ridership generated from the more intense town center cores. Expanding transit service and providing more opportunities for transit-oriented development further implement the goals of the General Plan Update and the adopted Otay Ranch GDP.

The villages of the Otay Ranch were originally planned to be surrounded by arterials with transit separated and traveling from village core to village core. Only Villages One, Five, Six and Nine were served by transit. The expansion of transit to the other non-transit villages of Village Two and Eight allows for the increase in multi-family densities from 14.5 to 18 dwelling units per acre as provided for in the Otay Ranch GDP. In the existing GDP, only villages served by transit are planned for a gross density of 18 dwelling units per acre within one-quarter mile of the future transit stations in the village cores. The villages that were not originally planned for transit service had a planned multi-family density of 14.5 dwelling units per gross acre in the village cores. This intensification of the non-transit villages to transit served town centers furthers the existing goals of the Otay Ranch GDP by providing additional multi-family units that will support transit. This additional density is planned within the one-quarter mile pedestrian-shed of the transit station in the center of the town.

The expansion of transit and arterial streets using pedestrian oriented systems such as the one way couplet better implements the goals and objectives of the Otay Ranch GDP by providing for a more intense transit and pedestrian oriented development. The Town Center development provides streets and buildings to complement humans rather than the automobile.

3. TOWN CENTER ARTERIAL

This amendment would create a new street system classification or arterial ("Town Center Arterial") necessary to serve Town Centers. The Town Center Arterial provides vital pedestrian, vehicular and transit opportunities in a walkable environment in and around Town Center developments. Town Center Arterials are typically a pair of two- or three-lane, one-way streets designed to provide equivalent capacity to a four- or six-lane arterial of the same classification. These pairs of one-way streets allow for better integration of pedestrian traffic by allowing for slower automobile speeds and minimizing street crossing widths

without reducing road carrying capacity. This arterial design allows for comfortable pedestrian movement through the high activity of a Town Center. The grid-like pattern of the Town Center Arterial in the Town Center also offer more frequent block intersections promoting more store-front businesses among other mixed-uses. Shorter block lengths are a feature in the Town Centers, which increase the vitality of commercial service areas, and at the same time avoid "strip commercial" development. The one-way Town Center Arterial resolves problems experienced on traditional high-volume traffic arterials requiring a wider roadway.

The new town center arterial is consistent with the goals and objectives of the General Plan Update transportation policies and the existing Otay Ranch GDP mobility goals and policies. The Town Center arterial provides for a more seamless and efficient development pattern and promotes better pedestrian access within villages and between villages and town centers which will provide for a stronger sense of community while reducing reliance on the automobile. However, vehicular carrying capacity of the arterials is maintained sufficient to accommodate anticipated traffic volumes.

The Town Center Arterial supports and further implements the existing Otay Ranch GDP goals of balancing auto and pedestrian trips by bringing the arterials into the pedestrian setting of the village core and reducing the scale of the street by splitting the six lane arterial road into two three-lane one-way streets. This split reduces the distance that pedestrians have to cross these streets. The spilt also increases the number of intersections, which slows traffic to more pedestrian friendly speeds. However, due to the elimination of left-turn waiting periods on the one-way streets, travel time through the town center is actually decreased. This decreased travel time and reduced street-crossing distance for pedestrians effectively balance auto and pedestrian travel within the town centers.

4. BUS RAPID TRANSIT (BRT) SYSTEM AND ALIGNMENT

This amendment would integrate SANDAG's adopted *Transit First!* Strategy into the Otay Ranch community. The modifications involve changing the Light Rail Transit (LRT) description to Bus Rapid Transit by incorporating new BRT vehicles into the GDP's circulation system. As Otay Ranch continues to develop, additional express or corridor transit routes and station locations were identified to directly serve people traveling to or from Otay Ranch. The BRT technology uses high quality, rubber-tired vehicles, offering the speed, comfort and amenities of a light rail trolley with the flexibility of non-fixed modes of transportation. BRT vehicles may travel in their own vehicle lanes on arterials and/or receive priority at signalized intersections. Upgraded transit stations will have shelters, passenger information and other features.

This amendment requires coordination of BRT system requirements and implementation policies with SANDAG to provide available infrastructure for transit stops and other BRT facilities for Otay Ranch. BRT involves coordinated improvements in a transit system's

infrastructure, equipment, operations and technology that provide preferential treatment to buses on roadways or through use of dedicated rights-of-way. BRT may encompass a variety of approaches, including operation in mixed flow lanes, exclusive transit ways using advanced technology such as optical readers, or managed lanes on highways. BRT vehicle and system characteristics may include: traffic signal priority and exclusive travel lanes; limited stops to provide express service; improved stations and shelters; improved boarding facilities; cleaner, quieter and more attractive vehicles; and intelligent transportation system technologies such as automated fare collection and real time "next bus" arrival information.

The change from a Light Rail Transit (LRT) to a Bus Rapid Transit system together with an expansion in service to previously unserved Villages Two and Eight of the Otay Ranch provide great opportunities for non-auto oriented trips and is therefore consistent with the goals and objectives of the General Plan Update and the mobility policies of the existing Otay Ranch General Development Plan. The BRT will provide the same type of mass transit service as the LRT. The change in transportation system to Villages One, Five, Six and Nine and expansion of service to Villages Two and Eight are consistent with the GDP Mobility policies and would not create a land use impact because the Otay Ranch policies promote the use of transit as an alternative to automobile travel.

5. MOBILITY/CIRCULATION ELEMENT REVISIONS

Revise the General Development Plan (map and text revisions) to incorporate GPU Circulation Element changes to the following roadways:

- Delete Alta Road

The deletion of Alta Road is required to plan and implement the University Campus. The realignment of Rock Mountain Road into Eastlake Parkway also eliminated the need for Alta Road. The deletion of Alta Road from the Circulation Element will eliminate an arterial road through the University campus allowing a more cohesive land use within the campus. The road is not needed for access to the campus because sufficient vehicular access is provided by existing Hunte Parkway, the planned extension of Eastlake Parkway and Otay Valley Road, and the extension of the BRT through Village Nine. In addition, the elimination of the road across the Otay Valley will reduce impacts on open space and habitat in the Otay Valley, consistent with the City's MSCP Subarea Plan and thus is consistent with the Environmental Element of the General Plan Update. The traffic study prepared for the General Plan Update indicates the road is not needed for area-wide circulation because a major portion of Otay Mesa south of the valley is now included as part of the MSCP Preserve (see Appendix E).

- Realign Rock Mountain Road/Main Street at Heritage Road

Rock Mountain Road will be realigned east of Heritage Road in order to reduce environmental impacts on Wolf Canyon and Otay River Valley and to accommodate a new Town Center Arterial circulation system through Village Four and Village Eight. East of Heritage Road, Main Street will be realigned to accommodate the Rock Mountain road alignment. The realignment of Rock Mountain Road from Otay Valley will reduce environmental impacts to both Wolf Canyon and Otay River Valley. This realignment is consistent with the City's MSCP Subarea Plan and goals, objectives, and policies of the Environmental Element of the General Plan Update. The new alignment also accommodates the new Town Center Arterial circulation system proposed through Village Four and Village Eight. The realignment of the road maintains the over all circulation system envisioned in the existing Otay Ranch GDP and results in a GDP road alignment that is consistent with the alignment proposed in the General Plan Update.

- Realign Heritage Road north of Main Street

In order to connect Heritage Road to Village Two and Three and accommodate the re-alignment of Rock Mountain Road, Heritage Road must be realigned through Village Three. The realignment of Heritage Road provides a superior design solution to the existing alignment and constitutes only relatively minor vertical and horizontal alignment revisions from that provided in the existing Otay Ranch GDP. The new alignment complies with the City's design criteria for arterial streets, minimizes topographic and other environmental impacts, and accommodates proposed land uses and densities of the General Plan Update and Otay Ranch GDP. The proposed realignment maintains the overall circulation system envisioned in the existing Otay Ranch GDP and supports the proposed General Plan Update.

- Realign Otay Valley Road

Otay Valley Road will be realigned and reduced to a four-lane major serving the southernmost portion of Village Eight, Village Nine and the University Campus. Otay Valley Road also serves as a future connection to an interchange onto SR-125. Otay Valley Road will no longer serve as a connection to Rock Mountain Road or Main Street in an east/west direction. Realigning Main Street away from Otay Valley Road at its current easterly terminus will reduce impacts to open space and habitat in the valley, consistent with policies in the adopted Chula Vista MSCP Subarea Plan. Main Street between La Media and Eastlake Parkway will be renamed Otay Valley Road and provide a connection to the SR-125 interchange for the Village Eight and Nine Town Centers, Regional Technology Park and the University. These changes are also necessary to reflect the alignment proposed in the General Plan Update for Main Street and to maintain consistency with the Environmental Element.

- Realign Rock Mountain east of the SR-125 Interchange

Rock Mountain Road north of the Town Center and south of the EUC will become a Town Center Arterial and will align to Hunte Parkway serving as the featured east/west connection in the southern part of the Otay Valley Parcel. As described above, the Town Center Arterial is designed as a three-lane, one-way fashion. This road may be offset slightly to act as a "gateway" to the University Campus. The traffic analysis for the Preferred Alternative indicates there are sufficient traffic volumes on Hunte Parkway to necessitate a direct connection to the Rock Mountain Road interchange with SR-125. Projected traffic volumes can be accommodated by the proposed Town center Arterial to be used between SR-125 and Eastlake Parkway. This change to the Rock Mountain Road alignment reflects the alignment proposed in the General Plan Update and is consistent with goals and policies within the Land Use and Transportation Element. Therefore, a change in the Otay Ranch GDP alignment is necessary to maintain consistency with the General Plan Update. However, the overall circulation system for the GDP is maintained.

6. REGIONAL TECHNOLOGY PARK (RTP)

Apply the proposed Regional Technology Park (RTP) General Plan land use designation into the Otay Ranch GDP. The RTP provides for the opportunity to develop new research institutions, industries and businesses intended to capitalize upon the research activities of the proposed University Campus. The RTP accommodates research and development, light manufacturing and supporting retail, service, professional office and finance businesses. It will pro-actively attract the development of incubator industries and research institutions that may be induced by the presence of a University Campus. The RTP designation is added to Village Eight of the Otay Ranch GDP.

The RTP will provide for a new and significant employment center within the city. Its inclusion in the GDP amendment reflects the goals, objectives and policies of the General Plan Update and existing Otay Ranch GDP policies by providing for economic development and a stronger jobs/housing balance within the city. By providing for the RTP in the Otay Ranch GDP, the resulting jobs/housing balance in Otay Ranch is enhanced and existing planning principles as expressed in the existing GDP are enhanced. These principles include creating balanced communities by providing work places in or near the residential communities; minimizing reliance on automobile use by siting employment close to residential communities; and awareness of the relationship between vibrant, healthy communities and having sufficient economic and employment opportunities located within the community.

7. OPEN SPACE-ACTIVE RECREATION LAND USE (OTAY VALLEY DISTRICT)

This amendment creates a new General Plan Open Space-Active Recreation land use designation in the Otay River Valley that provides opportunities for public and private recreational activities, including, but not limited to, outdoor campgrounds; tennis, soccer or other sports fields; spas, golf courses and golf driving ranges. The adopted Otay Ranch GDP

provides for up to 400 acres of active recreation uses in the Otay Valley but did not identify a specific area for these uses. The City's MSCP Subarea Plan defines 246 acres of land that would be suitable for active recreation uses. This amendment creates the land use designation and applies it to a portion of the land identified by the adopted MSCP Subarea Plan appropriate for this use. This new designation implements existing GDP policies which call for the establishment of an open space preserve and the provision of sufficient recreational opportunities for its residents. Vehicular access to active recreation uses will be addressed at the SPA level. Its application to land in the Otay Valley is consistent with the existing GDP because it identifies the specific area that is only generally described in the existing GDP and is consistent with policies within the Environmental Element of both the existing General Plan and the proposed General Plan Update.

8. RESOURCE MANAGEMENT PLAN (RMP) BOUNDARY AMENDMENT AT VILLAGE NINE, UNIVERSITY (VILLAGE 10) AND VILLAGE 11

The Preferred Plan includes proposed amendments to the Otay Ranch GDP and RMP preserve boundaries within Villages 4, 9, 10, 11, and the University area (refer to Figure 5.3-3). The intent of these proposed boundary modifications are to ensure that the GDP and RMP map is consistent with the adopted Chula Vista MSCP Subarea Plan. As part of the preparation and approval of the Chula Vista MSCP Subarea Plan, the proposed boundary changes were previously evaluated in the Final EIR/EIS for the MSCP Subregional Plan (City of Chula Vista 1997); the Addendum to the Final EIR/EIS for the Chula Vista MSCP Subarea Plan (City of Chula Vista 2000); and the Supplemental EIR/EA for the Revised Chula Vista MSCP Subarea Plan (City of Chula Vista 2002). These documents determined that the proposed preserve configuration would result in an overall benefit by concentrating development in select areas, while ensuring the dedication of large contiguous areas of open space. The proposed preserve boundary changes are consistent with the adopted Subarea Plan and will not result in new or greater impacts to land use than those previously identified.

9. GROWTH MANAGEMENT – DELETE ANNUAL REPORT REQUIREMENT

Delete Section D – Annual Report and Review Process from Chapter 9 – Growth Management. In the original GDP approval, an annual monitoring report was required to analyze the supply and demand for public facilities and services governed by threshold standards. The City's Growth Management Ordinance requires the same process and is reviewed by the City's Growth Management Oversight Commission (GMOC) on an annual basis. To avoid duplication of efforts, annual reporting of a fiscal analysis of the supply and demand of Otay Ranch infrastructure and services will be managed by the GMOC. The Otay Ranch GDP Growth Management Annual Report is a duplication of efforts with the City's Growth Management Program. The development of the Otay Ranch has been included in the City GMOC Report every year since the Otay Valley Parcel annexation to the City in 1995. The GMOC review reports on the same public facilities as required by the Otay Ranch GDP Annual Report. The Otay Ranch GDP does not have a review and approval process, as does

the GMOC process, which is reviewed and approved by the City Council each year prior to budget adoption. The Otay Ranch GDP will remain consistent with the General Plan Update by its continued inclusion in the City's annual GMOC review as required by General Plan Growth Management policies

10. GDP CONSISTENCY WITH GMOC POLICIES/ORDINANCE

Modify Section A, B and C of the GDP to ensure consistency with current GMOC polices and procedures. Policies shall be reviewed and modified to reflect any changes to the Growth Management Ordinance. By participating in the City annual GMOC review as required by the General Plan Growth Management, policies within the Otay Ranch GDP will remain consistent with the General Plan Update. The GMOC reporting process covers the same public facilities and service as required in the Otay Ranch Growth Management requirements.

11. RECOGNIZES UNIVERSITY STUDY AREA

The GDP Amendment recognizes the GPU policy that identifies the "University Study Area" surrounding the University Campus, Village Nine, the EUC and the Regional Technology Park. It includes a policy statement that directs a "framework strategy" should be prepared that identifies the important planning and land use elements that should be accommodated in preparation of subsequent Sectional Planning Area plans for those areas within the Study Area. This amendment reflects and incorporates policies included within the General Plan Update. The amendment recognizes the "University Study Area" and requires preparation of the "framework strategy," consistent with the General Plan Update. The requirement to prepare the framework strategy does not constitute a land use change, but rather sets in place a tool to help implement the coordinated development of the Otay Ranch in the areas that surround the planned university. This approach is consistent with policies within the existing GDP, which call for the development of balanced and mutually supportive communities within the Otay Ranch that compliment and integrate with each other and with the regional context. It is also consistent with the existing GDP because it seeks to enhance implementation of the university, which is an objective of the existing GDP.

12. VILLAGE ONE

No changes.

13. VILLAGE TWO (& TWO WEST)

Amend Village Two in the GDP to designate it as a new "transit village" in the Otay Ranch served by the future extension of the BRT. The amendment will integrate SANDAG's adopted *Transit First!* Strategy into the Otay Ranch and locate a station within Village Two. The station location in Village Two will serve as a vital stop for travel to other Otay Ranch

and regional destinations. Transit village policies described in the GDP require higher densities in the village core area including a minimum of 18 dwelling units per acre within a quarter-mile radius of the transit station. As a result, Village Two will contain a larger village core area than anticipated in the original GDP with higher multi-family densities (consistent with GDP policies for transit villages) as well as a modest increase in single-family densities outside the village core. The transit village policies and other pedestrian-oriented GDP policies applied to Village Two require increasing the dwelling units from 1,719 to a maximum of 2,510 and creating a larger, more intensive village core with expanded mixed-use and commercial activities.

The amendment also includes a modest increase in Low-Medium residential density and development area in Village Two, west of Heritage Road. In addition, the plan includes relocating the 25-acre Community Park from Village Two to Village Four and replacing the Community Park designation with Low-Medium village densities and adjacent open space. The existing Landfill Buffer in Village Two West and Village Three adjacent to Village Two will be maintained and continue to permit Industrial land uses. The plan also amends the village boundary to reflect the boundary of Preserve open space identified in the RMP and MSCP Subarea Plan. The development envelope is consistent with the current adopted MSCP Subarea Plan.

The amendments to the GDP take Village Two from a non-transit served village to a Transit Village consistent with mobility and other land use policies of the Western District in the General Plan Update and consistent with existing GDP policies that identify transit villages. The affect of this amendment is to apply transit village policies to other villages in the Otay Ranch GDP and enhancing public transit opportunities in Otay Ranch, consistent with existing policies. Transit village policies described in the GDP require higher densities in the village core area including a minimum of 18 dwelling units per acre within a one-quarter - mile radius of the transit station. The increase in intensity and density of uses proposed are necessary to support transit service to Village Two, consistent with existing policies and providing alternatives to the automobile for even more village residents. Therefore, the increases in number of units and intensity of uses are consistent with the General Plan Update and existing GDP policies.

14. VILLAGE THREE (INCLUDES FORMER PLANNING AREA 18B)

The amendments to the GDP eliminate the secondary residential urban village scenario that the County of San Diego identified as its primary land use in the County SRP and the City of Chula Vista identified as the alternative land use to Industrial. Pursuant to the 1998 Tax Sharing Agreement between the City and County of San Diego, a 1,000-foot nuisance easement was established to surround the Otay Landfill and prohibited any residential uses within that area. In addition, the location and size of the village limited its function and viability as an urban village in the Otay Ranch. The spatial relationship with existing

adjacent and planned industrial development around Village Three provides complimentary Light Industrial/Business Park land uses.

Delete the term "Planning Area 18B" (PA 18B) in the GDP. Consolidate Industrial land area identified in Planning Area 18B into Village Three by moving all policy and land use data to Village Three. As a result of Village Three remaining an Industrial land use, it is more practical to include the land in Planning Area 18B into Village Three. Planning Area 18A, located south of the Otay River, will now become "Planning Area 18."

Heritage Road and Rock Mountain Road will be realigned within Village Three to accommodate road alignments that create the least impacts to the Otay Ranch Preserve and MSCP Preserve boundaries.

The proposed GDP amendments to eliminate the County residential village alternative in Village Three are consistent with existing General Plan policies as well policies within the Western District of the General Plan Update. The land was annexed to the City in 1995 and the County no longer has land use jurisdiction over the property. The Preferred Plan designates Village Three for Industrial land uses. The County's alternative is no longer applicable to the property. The amendments are consistent with the City's Landfill Agreement with the County which specifies restricting residential land uses within the 1,000- foot landfill buffer.

15. VILLAGE FOUR

Village Four designates approximately 82 gross acres (70 acres net usable) on the north side of the village, west of La Media Road, for a major Community Park facility, accommodating a relocation of park acreage from Village Two and other villages' community park obligation pursuant to the City's Park Land Dedication Ordinance (PLDO). On the north side of the village, the 82-gross acre Community Park highlights this section of the village.

The balance of Village Four contains single-family residential areas on the north and south side of Rock Mountain Road, and surrounding Rock Mountain itself. The amendment includes a small increase in residential densities because of its adjacency to the new Town Center in nearby Village Eight. The density increase has changed from Low to Low-Medium resulting in an increase in units from 131 to 432 single-family units. The amendment also provides for increased densities in the western portion of the Village Four area currently designated low density residential. As a result of the Town Center in nearby Village Eight, the village boundaries between Village Four and Village Eight were modified, which moved approximately 87 acres of Village Four land area into Village Eight. As a result, the village core in Village Four has been deleted.

The amendment applies Low Density Residential Designation to the Rock Mountain area, but encourages (or directs) the ridge line to be preserved by allowing transfer of the qualified

density to surrounding property, increasing allowable density for designated Low Density Residential properties.

The creation of a Community Park and increase in density of single family housing in Village Four reflect policies and land use designations proposed in Central District of the General Plan Update. The proposed GDP amendment maintains land use policies within the existing GDP meant to preserve and protect sensitive viewshed and topographic resources in the area of the ridgeline area along Rock Mountain Road, while allowing for a transition to higher residential density closer to the town center area of Village 8. Thus policies that are intended to preserve sensitive resources while providing for balanced, complementary, and integrated uses within Otay Ranch are maintained and supported. The designation of an enlarged the community park in the Central District maintains policies in the adopted GDP and General Plan that promote the provision of adequate parks to meet the recreation needs of the residents of Otay Ranch and all of eastern Chula Vista.

16. VILLAGE FIVE

No changes.

17. VILLAGE SIX

No changes.

18. VILLAGE SEVEN

Village Seven decreases in land area as a result of locating a new Town Center in nearby Village Eight. The boundary for Village Seven will be modified to accommodate the Village Eight Town Center. The 25-acre Middle School is the main feature of the boundary adjustment and will be a part of Village Eight. A small portion of the residential densities adjacent to the Middle School will also be moved from Village Seven to Village Eight. Overall, the unit count for Village Seven decreases from 1,501 to 1,476 dwelling units. The amendments to Village Seven are proposed to facilitate implementation the larger Town Center in Village Eight as indicated in the General Plan Update for the Central District. Consolidating land in one village under a single ownership is consistent with existing segmenting policies of the GDP, which allow development in a village to be planned by ownership. This amendment will consolidate the ownership within Village Eight allowing the comprehensive planning of Village Eight under one Sectional Planning Area Plan.

19. VILLAGE EIGHT

The amendment to Village Eight includes locating a new high density Town Center at the intersection of La Media Road and Rock Mountain Road and eliminating the prior Village Core designation for Village Eight. The Town Center in Village Eight will contain a new

Transit Station designed for the BRT and, therefore, incorporates transit oriented village policies. The Town Center increases multi-family residential densities accommodating intensified mixed-use commercial activities including retail, office and residential. Densities in the Town Center will correspond with transit policies to a minimum of 18 dwelling units per acre, totaling 1, 017 dwelling units. The main features of the pedestrian-oriented Town Center include increased commercial land uses and a Town Center Arterial over a portion of Rock Mountain Road and La Media Road. The design of the Town Center Arterial promotes pedestrian orientation and provides an extensive grid-like street pattern to the village. As a result of the village boundary adjustments, approximately 30 acres of Low Medium Village residential (25 acres of it is the Middle School) is transferred from Village Seven to Village Eight. In addition, approximately 87 acres of Low density residential is transferred from Village Four to Village Eight. Densities for single-family residential will vary from 3.5 to 4.8 dwelling units per acre outside of the Town Center area in the village.

Another major feature of Village Eight will be the location of a Regional Technology Park (RTP) to the east of the Town Center, south of Rock Mountain Road. The RTP will enable the accommodation of a major employment and research center to provide, in part, an even jobs/housing balance in Otay Ranch. The amendment designates the RTP on approximately 200 acres west of Future SR-125, south of Rock Mountain Road. The RTP area will compliment the adjacent research institutes planned for the University Village in Village Nine as well as other employment and business opportunities is the Eastern Urban Center.

The amendment also establishes a development envelope consistent with the City's MSCP Subarea Plan. It preserves Rock Mountain as open space as well. The plan also modifies 11 acres of Residential Low Density west of planned community park to open space recreation.

These amendments are necessary to reflect land use policies proposed in the General Plan Update. As with Village Two, transit service is planned for Village Eight. The creation of Town Center based on transit service and the couplet system is consistent with and implement the existing mobility policies of the adopted GDP as well as Town Center policies of the General Plan Update. These policies are intended to promote the extension of transit services and reduce dependency on the automobile. The Town Center is based on the intersection of Rock Mountain Road and La Media Road where the transit station will be located. The Town Center is designation has a one-quarter mile pedestrian-shed from the transit station located at the Rock Mountain Road/La Media Road intersection. The transit service to Village Eight allows for the increase in intensity of land uses to support the transit line. The increase in retail land uses are intended to meet the daily needs of the residences to reduce automobile trips out of the village. The designation of Village Eight as a Town Center is consistent with the General Plan policies and current GDP policies on transit densities and service. The Town Center Arterial will be implemented within the Town Center creating a superior pedestrian/roadway system and therefore is consistent with the General Plan Updated and new GDP policies for Town Centers.

20. VILLAGE NINE – UNIVERSITY TOWN CENTER/VILLAGE

The amendment to the GDP eliminates the secondary residential development scenarios provided for in the original GDP for Villages Nine and Ten in the event the university campus was not realized in a specified time frame. In exchange, the GPU provides development opportunities to each of the land areas independent of and in conjunction with development of the university campus.

In the proposed GDP Amendment, Village Nine serves an important role as the main "gateway" for the University Campus. Village Nine establishes itself as the University Town Center with its own policies intended to foster Village Nine's relationship to the University Campus and provide housing, retail, and other services required by the university. The amendment applies a new Town Center designation south of Rock Mountain Road and east of the SR-125 interchange, which would establish a University-oriented Town Center featuring a Transit Station for the future BRT serving mixed-use and medium-high residential densities. The Town Center will incorporate the development of mixed-uses featuring commercial retail shops, office uses, high-density multi-family housing and other community supporting land uses and services. The Town Center Arterial will serve as the main road arterial and incorporate a dynamic grid-street system that the University Campus and other university related uses will feed from. In Village Nine, Rock Mountain Road will also serve as a Town Center Arterial roadway east of SR-125 and connects into Hunte Parkway and Eastlake Parkway. The arterial will be designed as a "gateway" into the University Campus providing synergy between the Village Nine Town Center/University Campus and the Eastern urban Center to the north.

The Town Center policies will include an increase in densities and units in Village Nine. Because this Town Center lends major support to the nearby University Campus, the development will also include land uses dedicated to research institutes and a cultural arts center. Village Nine will include 52 acres of dedicated University land uses including a "Campus Core" featuring, among other things, a large 10-acre cultural arts center, 10 acres of research institute facilities, as well as opportunities for faculty and student housing. The relationship with the faculty/student housing and the Town Center increases the units to a total of 3,659 in the Village, most of which is multi-family in the high density Town Center.

The amendment also includes modifications to the Otay Ranch Preserve ensuring that the open space and development envelope is consistent with the MSCP Subarea Plan and Resource Management Plan at south and east edges of Village Nine, Village 11, and the University.

The proposed designation of the Town Center on Village Nine in support of the university is consistent with the Land Use and Transportation Element policies of General Plan Update and the existing GDP that promote pedestrian-orientated development, encourage public transportation, and establish communities that are conveniently located close to necessary

services. Existing GDP policies that envision and promote a University and supporting land uses for Village Nine are continued and further refined. As indicated with Village Two, establishing Village Nine as a pedestrian-oriented village further advances policies within the existing GDP intended to enhance transit service to villages, reduce reliance on the automobile, and create more balanced communities with housing, shops, work places, schools, parks and civic facilities located all nearby. The amendment eliminates the secondary village land use thereby identifying one land use plan for the property, which emphasizes the university and related land uses in support of the university as the preferred development in the Village Nine area.

21. UNIVERSITY CAMPUS

The amendment to Village Ten formally deletes the urban village alternative in the GDP as an option for Village Ten. The Village Ten designation in the GDP is also replaced with University Campus as the name for the "village." New policies for a new University Campus are identified for this area as necessary to reflect the characteristics of the new university and its relationship to surrounding land uses.

The plan designates approximately 530 acres as public/quasi-public for a university campus and its related facilities. In addition, the new University Campus concept establishes a "University Study Area" to the GDP, recognizing that a framework strategy be developed to further define future detailed land use and land use relationships between areas within the Study Area. The framework strategy for the University Study Area will identify the housing, economic, cultural and academic factors to be considered with subsequent land planning documents and to take advantage of opportunities and stimulus to be created by the presence of the University Campus.

The amended GDP also establishes the open space/development envelope consistent with the MSCP Subarea Plan and Resource Management Plan at the south and east edges of the University. Alta Road, which previously bisected the University, is deleted from the GDP circulation system by virtue of revised alignments for Hunte Parkway and Rock Mountain Road.

The proposed GDP amendments reflect policies added to the General Plan Update intended to strengthen development of the university in the Village Ten area. The policies that are added to the GDP further characterize the type, nature, and size of the university. These policies therefore enhance and strengthen existing GDP policies intended to implement the City's vision for a University on the Otay Ranch. Refer to Village Nine for the discussion on the elimination of the secondary land uses.

22. VILLAGE ELEVEN

No changes.

23. PLANNING AREA 12 (EUC & FC)

Freeway Commercial. The amended GDP will add a Mixed-Use designation with a strong residential component to approximately 34 acres at the northern portion of the Freeway Commercial site, adjacent to Olympic Parkway. The amendment will allow 475 multi-family units with approximately 5 acres of retail along the frontage of a spine road that connects Olympic Parkway with the southern 86 areas of the Freeway Commercial site. The amendment would provide for residential units over ground floor commercial. The implementation of a mixed-use project will further the goals for pedestrian oriented projects on the Otay Ranch. While isolated from schools and parks, the project will be within the ¼ mile pedestrian shed of the Freeway Commercial Park and Ride facility and the commercial uses in the regional center in the Freeway Commercial. The amendment can be considered consistent with the General Plan and GDP goals, objectives, and policies.

Eastern Urban Center. The amended GDP would make revisions to the land use table for the Eastern Urban Center (EUC). With the proposed changes, the EUC will reflect a greater residential and retail land use character than the adopted GDP. However, other aspects of the EUC would remain, including its character as the vital commercial and services activity node for the east Chula Vista Area, providing regional services not available in other villages of Otay Ranch. Specific changes include a change in the boundary of the EUC with Village 9, reducing the acreage of the EUC by approximately 49 acres, a significant increase in the number of higher density residential units; an increase in the acreage allocated to retail commercial; a significant reduction in low-rise office acreage; and a slight reduction in visitor commercial acreage. A fire station, previously planned for Village Nine would be located in the EUC.

The amendments are necessary for the GDP to remain consistent with the goals of the General Plan Update. The existing GDP already identifies the EUC as the urban hub for Otay Ranch and eastern Chula Vista. This planned use is maintained in the revised GDP policies for the EUC, but refinements are provided. As amended, the GDP would maintain the same variety and character of land uses, although the amount or area of some land uses would be changed to accommodate or reflect changes occurring in surrounding villages. These changes maintain the intent of the EUC as a vibrant, urban hub, providing a mix of higher density residential, retail, business, entertainment, cultural, and civic and other public uses.

24. VILLAGE 13, 14, 15, 16, 17

No changes.

25. PLANNING AREA 18

The amended GDP eliminates the designation of "Planning Area 18B" for the area located west of Village Three. This area, along with the land use policies, are incorporated into Village Three, and continue to reflect the Industrial land use planned for in the adopted GDP. Planning Area 18A is revised to Planning Area 18 and its land use designations and policies remain unchanged.

The amendments constitute only a reorganization of the subject planning area as discussed in the General Development Plan in to Village Three and do not reflect a change in land use designations or policies. Since the County alternative for a residential village in Village Three is proposed to be eliminated under the General Plan Update and GDP amendments, all industrial land uses in Village Three and Planning Area 18B can be consolidated into one village, which will allow for a more comprehensive planning of the industrial land uses. Therefore, the proposed amendment is consistent with the goals of the GDP.

The amendments are necessary for the GDP to remain consistent with the goals of the General Plan Update. The existing GDP already identifies the EUC as the urban hub for Otay Ranch and eastern Chula Vista. This planned use is maintained in the revised GDP policies for the EUC, but refinements are provided. As amended, the GDP would maintain the same variety and character of land uses, although the amount or area of some land uses would be changed to accommodate or reflect changes occurring in surrounding villages. These changes maintain the intent of the EUC as a vibrant, urban hub, providing a mix of higher density residential, retail, business, entertainment, cultural, and civic and other public uses consistent with the adopted Otay Ranch GDP and the General Plan Update.

26. PLANNING AREA 19

No changes.

27. PLANNING AREA 20 (OTAY VALLEY) IN GDP

The GDP is amended to add a new "Planning Area 20." This area, previously unidentified in the adopted plan, constitutes an area previously shown in the GDP as open space. Under the amended GDP, approximately 209 acres of land previously identified as open space would be designated for open space-active recreational uses. Active recreation uses, both public and private, would be limited by the siting criteria contained in the City's MSCP Subarea Plan and the Otay Ranch RMP.

An alternative recommendation for this area includes a GDP map and text amendment to add a mixed-use designation to 15 acres for southwesterly end of Otay Valley. This recommendation would add policies and objectives for a mixed-use area limited to retail and

office commercial uses intended to support adjacent active recreation and entertainment amenities including the existing amphitheater and water park to the west.

The MSCP Subarea Plan designates up to 246 acres of land for active recreational uses in the Otay River Valley. The proposed GDP amendment for PA 20 brings this area into consistency with the MSCP Subarea Plan and the Environmental Element of the General Plan Update. It will allow for low intensity uses to be established in certain areas of the MSCP Open Space Preserve that were previously found to be suitable to support such uses.

5.1.3.3 Threshold 3: MSCP Subregional Plan and Chula Vista MSCP Subarea Plan

Threshold 3 states that the proposed General Plan Update would result in a significant impact to land use if it would conflict with any applicable habitat conservation plan or Natural Communities Conservation Plan.

Northwest Planning Area

Proposed land use changes in the Northwest Planning Area would not affect lands designated for preservation under the City's MSCP Subarea Plan.

Southwest Planning Area

A portion of the West Fairfield District is currently within the jurisdiction of the City of San Diego and within the City of San Diego MHPA and is designated a Special Study Area in the City of San Diego's Otay Mesa-Nestor Community Plan. Any development proposed in this area would need to be annexed to the City of Chula Vista from the City of San Diego prior to development under the proposed General Plan Update in accordance with the City of Chula Vista General Plan and the MSCP Subarea Plan. An MSCP Annexation Agreement would be required between the City, the City of San Diego, and the wildlife agencies as part of the annexation process, to ensure that any development of the annexed land proceeds in accordance with the conservation goals of the MSCP. Section 5.3.1.1 of the Chula Vista MSCP Subarea Plan lists the requirements when property is annexed into the City from another jurisdiction which has an approved Subarea Plan. These requirements are detailed in Section 5.3, Biological Resources, of this EIR. Implementation of Section 5.3.1.1 of the City of Chula Vista MSCP would avoid significant biological impacts associated with annexation of City of San Diego MHPA land and any proposed development.

East Planning Area

The proposed General Plan Update includes modifications to the General Plan Land Use Diagram to ensure that the map is consistent with the adopted City of Chula Vista MSCP Subarea Plan for Villages 4, 9, 10, 11, and the University area. The proposed mapping changes also include a minor map correction and an added note for clarification purposes

that would bring the General Plan map into consistency with the MSCP Subarea Plan, thereby eliminating conflict between the components of the General Plan. As part of the preparation and approval of the Chula Vista MSCP Subarea Plan, the proposed boundary changes were previously evaluated in the Final EIR/EIS for the MSCP Subregional Plan (City of San Diego 1997); the Addendum to the Final EIR/EIS for the Chula Vista MSCP Subarea Plan (City of Chula Vista 2000); and the Supplemental EIR/EA for the Revised Chula Vista MSCP Subarea Plan (City of Chula Vista 2002a). These documents determined that the proposed preserve configuration would retain the overall integrity of the preserve design while maintaining or improving the conservation of covered species. The proposed preserve boundary changes are consistent with the adopted Subarea Plan and will not result in new or greater impacts to sensitive biological resources than those previously identified.

Scenario 2 places residential land use in a portion of the area identified for preservation in the MSCP Subarea Plan. This land use occurs in a finger canyon off of Wolf Canyon in Village 2 and would require a boundary amendment to the MSCP Preserve. This is a significant land use impact.

Impacts associated with implementation of the proposed scenarios are discussed in detail in the Biological Resources section in Chapter 5.3.

5.1.4 Level of Significance Prior to Mitigation

A summary of the land use impacts within each planning area is provided below.

5.1.4.1 Northwest Planning Area

The Preferred Plan and all three Scenarios modify designated land uses to allow for an increase of mixed-use development and focus on redevelopment efforts in the Urban Core, along gateways and major transit corridors. Changes to increase density and allow for a greater mix of uses facilitates transit goals and would be consistent with smart growth objectives. Adding more density and increasing the number of multi-family units within the Urban Core has the potential to cause an adverse effect on the community character of the existing residential neighborhoods adjacent to the areas of change.

Implementation of the objectives and policies of the General Plan Update would lessen the impact that would result from the adoption of the plan. By requiring that the quality of existing, stable residential neighborhoods be maintained (Policy LUT 4.2), ensuring that development is sized and designed to be compatible with surrounding neighborhoods (Policy LUT 4.4), and ensure good street design to minimize and control traffic in residential neighborhoods (Policy LUT 4.6) impacts of the Preferred Plan on community character would be limited. Additionally, Policy LUT 11.5 would require that development in accordance with the Preferred Plan would have a reduced impact on community character by requiring multi-family, commercial, and industrial development to go through a design

review process. The design review process would promote quality architecture, landscape, and site design to enhance the character of the area.

LUT 2 and 3 further control impacts to community character of the Northwest Planning Area. LUT 2 requires the establishment a program for development to provide public amenities and/or community services necessary to support urban development and implement the following policies, and LUT 3 focuses on the urban design and form of new development and redevelopment in a manner that blends with and enhances Chula Vista's character and qualities, both physical and social.

While the adoption of the objectives and polices discussed above would limit the community character impacts associated with the adoption of the Preferred Plan or any of the Scenarios, the impacts would be reduced but not eliminated. The objectives and policies do not completely mitigate the impact because development standards have not been developed. Specific development standards are developed through subsequent planning and zoning actions. As illustrated in Chart 5.1-5, there are a series of steps in the implementation of land uses that are established by the General Plan Update. The needed standards for development occur at the time Redevelopment Plans or Specific Plans are prepared and zoning is established and applied. Without those standards and these actions, impacts remain significant.

Specific objectives and policies are proposed to preserve the character and retain the quality of the adjacent existing, residential neighborhoods within each of the districts. The following policies would limit the community character impacts of the Preferred Plan and all three Scenarios within the five districts of the Urban Core Subarea.

- Downtown Third Avenue District –Policies LUT 50.12, 50.13, and 50.16
- H Street Corridor District –Policy LUT 2.4, 3.1, 52.7, and 53.4
- Interstate 5 Corridor District –Policies LUT 54.6, 55.11, 55.12, 56.7, 57.6, 58.8, 58.9, and 58.11
- Mid-Broadway District –Policies LUT 59.7 and 59.8
- Mid-Third District –Policies LUT 60.2 and 60.3

These policies would reduce impacts to community character within the five districts of the Urban Core Subarea from the implementation of the Preferred Plan and all three Scenarios, but not to below a level of significance. While the policies require design standards and guidelines be prepared that incorporate and preserve the traditional character of the districts and ensure compatibility with the existing residential neighborhoods by including design and step back guidelines to visually blend with the adjacent existing residential neighborhood, they cannot be developed with available information. The current project is a General Plan Update and the development of design standards are a zoning and specific plan effort. Until future Specific Plans are developed and zoning specifications are implemented impacts remain significant.

The General Plan Update establishes two Transit Focus Areas and an H Street Transit Corridor Special Study Area within the H Street Corridor District. The purpose of the special study for the H Street Transit Corridor Special Study Area is to analyze and evaluate the appropriateness of plan changes that could result in mixed land uses, increased intensities, and potential high-rise buildings along H Street between Interstate 5 and Third Avenue. In view of existing land uses along H Street, the future intensification planned with the two Transit Focus Areas at either end of the corridor, and the potential for future market forces to focus on H Street as a key corridor, a special study is needed that examines further potential changes in land use and intensity, building mass, the potential for taller buildings, and the relationship and appropriate transitions to adjacent stable neighborhoods. This study would be conducted subsequent to the adoption of any potential high-rise buildings along H Street between Interstate 5 and Third Avenue within the study area.

The Preferred Plan proposes high-rise buildings in the Mixed-Use Transit Focus Areas within the H Street Corridor District and the I-5 Corridor District. The extent to which a high-rise building results in a significant community character impact depends upon its design and setting. Policies associated with Objective LUT 2 and Policies LUT 49.16 and LUT 53.4 listed above establish policies and development standards through the Urban Core Specific Plan that address the development of high-rise buildings. These policies reduce impacts to community character from the development of high-rise buildings resulting from development of the Preferred Plan and all three Scenarios, but not to below a level of significance. While the policies require the preparation of urban design standards for such issues as building heights and massing, public view corridors, circulation linkages, and the appearance of important gateways within the Mixed-Use Transit Focus Area, development of these standards will be done as part of the Urban Core Specific Plan and cannot be developed with current available information. The current project is a General Plan Update and the development of design standards are a zoning and specific plan effort. Until future Specific Plans are developed and zoning specifications are implemented impacts remain significant.

5.1.4.2 Southwest Planning Area

Within the Montgomery Subarea, the objectives and policies, as well as changes to existing land use designations, are intended to focus redevelopment efforts generally south of L Street along the South Broadway, South Third Avenue and Main Street corridors, and on either side of I-5 in the vicinity of the Palomar Street Trolley and the West Fairfield area. Among the important goals for this area is facilitation of economic opportunities through appropriate designation of transit-oriented, industrial, commercial and higher density residential in mixed-use or other appropriate density to facilitate smart growth planning. As with the Northwest Planning Area, the General Plan Update would reduce impacts to adjacent parcels by requiring that the quality of existing, stable residential neighborhoods be maintained (Policies LUT 4.2, 4.3), ensuring that development adheres to quality design standards (Policy LUT 4.4), and ensure good street design to minimize and control traffic in

residential neighborhoods (Policy LUT 4.6). Implementation of citywide and specific policies for the Montgomery Subarea is intended to facilitate revitalization while preserving assets.

Specific objectives and policies are proposed to preserve the character and retain the quality of the adjacent existing, residential neighborhoods within each of the districts. The following policies would reduce impacts to adjacent land uses within the 5 districts of the Montgomery Subarea from the adoption of the Preferred Plan.

- South Third Avenue District–Policies LUT 41.13, 41.14, 41.15
- South Broadway District–Policies LUT 42.14, 42.15, 42.16
- Palomar Gateway District–Policies LUT 43.1, 43.10
- West Fairfield District–Policy LUT 44.1 and 44.11
- Main Street District–Policies LUT 45.5, 45.13, and 45.14

These policies would reduce community character impacts by requiring that design guidelines and zoning standards be prepared for future development, improving circulation between this and other areas of the city, upgrading commercial activity centers and providing for the protection and enhancement of existing residential neighborhoods by increasing residential, retail, commercial and professional services through mixed-use development. These policies as well as Policies LUT 3.1, 3.2, 4.2, 4.4, 4.6, and 11.1 through 11.5 would lessen the effect that the Preferred Plan and each of the Scenarios have on community character.

While the adoption of the objectives and policies discussed above would limit the community character impacts in the Southwest Planning Area associated with the adoption of the Preferred Plan or any of the Scenarios would be reduced but not eliminated. The objectives and policies do not completely mitigate the impact because development standards have not been developed. The current project is a General Plan Update and the development of design standards are a zoning and specific plan effort. Until future Specific Plans are developed and zoning specifications are implemented impacts remain significant.

Significant impacts to nearby wildlife in the San Diego Wildlife Refuge would result from development within the West Fairfield District under the Preferred Plan and all three Scenarios. The designation of existing land uses for more intensive development adjacent to the Wildlife Refuge is a significant impact because more intensive land uses could affect sensitive species.

For Scenarios 1, 2, and 3, significant impacts to neighborhood community character have been identified due to redesignation of land uses in the Montgomery Subarea from open space to an industrial designation on lands adjacent to protected habitat within the City's MSCP Preserve in the area south of Faivre Street, east of Broadway, and north of the Otay River Valley. Development with industrial uses south of Main Street would otherwise be

consistent with existing nearby and adjacent industrial and retail uses to the north and would not physically divide or adversely affect the community. However, future industrial use adjacent to protected habitat is a significant impact and requires mitigation.

5.1.4.3 East Planning Area

Proposed revisions to the City's adopted land use plan in the East Planning Area would result in adjustments to the boundaries and overall densities for residential, commercial, industrial, and public/quasi-public uses. The amount and location of open space and parklands would also be adjusted. Currently, the land within the areas of change within the East Planning Area is undeveloped~~vacant~~, therefore, any proposed changes would cause an increase over the existing condition. Surrounding development in this area has occurred over the last several years and is progressing pursuant to the adopted Otay Ranch GDP. The Preferred Plan and the three Scenarios have the potential to cause an adverse effect on the community character of the surrounding villages within the East Planning Area. Specific objectives and policies are proposed to facilitate compatible land uses within and between each of the districts as well as preserve the character and retain the quality of the surrounding areas. The following policies would reduce community character impacts from implementation of the Preferred Plan within the East Planning Area:

- Unincorporated Sweetwater Subarea –Policy LUT 66.1
- Western District –Policies LUT 77.2, 77.5 79.1, 79.4, 79.5
- Central District –Policy LUT 81.3
- Otay Valley District –Policies LUT 82.1, 82.2, 82.3, 83.1
- Eastern University District –Policies LUT 85.4, 85.6
- East Main Street Subarea –Policies LUT 70.1, 70.3, and 70.4

These policies reduce the impact to community character within and between the Districts in the East Planning Area but not to below a level of significance. The policies interconnect and unify the districts, including streets, transit, sidewalks, streetscapes, signage, lighting, building placement and form, and architectural character as well as intermixing uses that support and complement those contained in adjoining subareas. The objectives and policies do not completely mitigate the impact because development standards have not been developed. The current project is a General Plan Update and the development of design standards are a zoning and specific plan effort. Until future Specific Plans are developed and zoning specifications are implemented impacts remain significant.

Scenarios 2 and 3 propose residential uses within the 1,000-foot buffer within Village Two around the Otay landfill. Residential land uses within the landfill buffer is a significant land use adjacency impact and would require mitigation.

The General Plan Update has policies that would limit the placement of residential use in the landfill buffer. Policies LUT 79.1 through 79.5 address land uses adjacent to the Otay Landfill. Objective LUT 79 states:

> Establish appropriate land uses adjacent to the Otay Landfill and Wolf Canyon that reflect the unique land use and landform characteristics of these areas.

Specifically, Policy 79.5 states:

> Limit land uses adjacent to the Otay Landfill to open space and limited industrial uses or business parks.

Scenarios 2 and 3 place residential uses adjacent to the landfill and are, therefore, in conflict with this policy. This is a significant impact.

Implementation of Scenario 2 would require a portion of Wolf Canyon to be filled to accommodate development. Development under this scenario would require a Boundary Adjustment to the City of Chula Vista Subarea Plan. The scenario would remove Preserve in the western fork of Wolf Canyon and add Preserve in the northern portion of the main drainage of the canyon. Absent a demonstration of functional equivalency, this is considered a significant, unmitigated impact.

5.1.5 Mitigation Measures

5.1.5.1 Land Use Adjacency Impacts (Divide or Affect Community Character)

5.1-1 To mitigate the impacts of establishing planned industrial uses along the Otay River Valley, future projects for this area shall be evaluated and required to incorporate sufficient buffers, source water protection devices, setbacks, and design features to avoid edge effects to sensitive biological resources to the satisfaction of the Environmental Review Coordinator.

5.1-2 At the time projects are proposed within the West Fairfield District, a detailed land use assessment shall be performed showing, to the satisfaction of the Environmental Review Coordinator, that the proposed project is compatible with adjacent land uses. Any development adjacent to the San Diego Wildlife Refuge shall adhere to the land use adjacency guidelines defined in the Chula Vista Subarea Plan, Section 7.5.2. These include, but are not limited to: sufficient buffers and design features, barriers (rocks/boulders, signage, and appropriate vegetation) where necessary, lighting directed away from the refuge, and berms or walls adjacent to commercial areas and any other use that may introduce noises that could impact or interfere with wildlife utilization.

5.1.5.2 MSCP Subregional Plan and Chula Vista MSCP Subarea Plan

Impacts resulting from development associated with Scenario 2 would be significant. Scenario 2 proposes to allow a portion of Wolf Canyon to be filled to accommodate development. The following mitigation measure would be required for Scenario 2.

5.1-3 Prior to approval of a discretionary action allowing a portion of Wolf Canyon to be filled to accommodate development, the City shall complete a boundary adjustment in accordance with the adopted procedures of the Subarea Plan. These procedures are provided in Section 5.4.2 of the MSCP Subarea Plan and are summarized below.

- A preliminary determination of the biological value of a proposed boundary adjustment shall be made by the Director of Planning and Building in accordance with Section 5.4.2 of the MSCP Subarea Plan.

- The City shall notify the Wildlife Agencies in writing of the boundary adjustment including written findings of equivalency made by the Director of Planning and Building.

- The adjusted boundary shall become the adjusted boundary upon project approval unless the Wildlife Agencies object to the adjusted boundary within 30 days of receipt of City's written notice to the Wildlife Agencies. Objections by the Wildlife Agencies to boundary adjustments shall be made in writing and shall state the rationale in support of objection.

- If the City receives written objection to a determination of a boundary adjustment by the Wildlife Agencies within 30 days of receipt of City's written notice to the Wildlife Agencies, the City and Wildlife Agencies shall have 60 days to meet, confer, and reach agreement upon final Preserve boundaries. The boundary adjustment as proposed shall not be approved if an agreement is not reached.

- If the Wildlife Agencies fail to respond to the City's notice within 30 days of receipt of the City's determination, the decision by the Director of Planning and Building shall be deemed accepted.

A significant land use impact would occur from application of residential land use designation to this portion of Wolf Canyon as proposed by Scenario 2 because a boundary adjustment is required prior to the adoption of the designation of residential use in this area, and since that determination has not yet been made, specific mitigation is unavailable at this time. The impacts to land use as a result of Scenario 2 remain significant and unavoidable.

Impacts from Scenarios 2 and 3 would remain significant because they retain residential uses adjacent to the Otay Landfill in conflict with Objective LUT 79.

5.1.6 Level of Significance After Mitigation

Conformance with the above mitigation measures and compliance with the objectives and policies of the proposed General Plan Update would reduce the land use adjacency/community character and planning conformance impacts from implementation of the Preferred Plan and each of the Scenarios but not to below a level of significance. Because implementation of the objectives and policies require subsequent planning and design standards that are not available at this stage in the planning process, impacts remain significant and unmitigable. At such time that specific development standards are developed through subsequent planning and zoning actions, these effects will be avoided.

A significant land use impact would occur from application of residential land use designation to a portion of Wolf Canyon as proposed by Scenario 2 because a boundary adjustment is required prior to the adoption of the designation of residential use in this area, and since that determination has not yet been made, specific mitigation is unavailable at this time. The impacts to land use as a result of Scenario 2 remain significant and unmitigated.

Impacts resulting from the adoption of Scenarios 2 and 3 remain significant and unavoidable because of conflicts resulting from land uses proposed for areas adjacent to the Otay Landfill.

5.2 Landform Alteration/Aesthetics

5.2.1 Existing Conditions

5.2.1.1 Regulatory Plans and Policies

In addition to the General Plan, the City has a Design Review program and a Local Coastal Program which address landform alteration and aesthetics.

Chula Vista Local Coastal Program

The Chula Vista Local Coastal Program (LCP) provides a detailed plan for the orderly growth, development, redevelopment, and conservation of the Chula Vista Local Coastal Zone. The LCP boundary is depicted in Figure 5.1-3 of the Land Use section of this EIR.

The preservation and enhancement of visual resources is a key component of the LCP, which provides for the removal of visual blight and improvements for public access to allow the public to experience the views from the perimeter of the Bayfront outward. Chapter III.C.1-6 of the LCP identifies the specific policies for the treatment of gateways, architectural edges, views, and landscaping. Implementation of these policies are intended to preserve wetlands, upgrade the area's existing substandard industrial image, improve the visual quality of the shoreline, improve public parkland and open space, remove (or mitigate through the use of landscaping) structures or conditions that have a blighting influence on the area and develop an improved relationship between the Bayfront and freeway, and arterial approaches.

Design Review

Multi-family, commercial, and industrial development and redevelopment within redevelopment project area boundaries are subject to design review. The City's Design Manual provides specific site planning, architectural, and landscaping guidelines for single-lot single-family and multi-family residential, commercial, and industrial development. Additional sign guidelines apply to commercial and industrial development. Architectural guidelines require that a proposed project address the compatibility of a site for a proposed use and other considerations such as the building scale, articulation, color, and exterior lighting.

5.2.1.2 Existing Citywide Conditions

Landforms and Open Space

Figure 5.2-1 shows the major landform features depicted in the adopted General Plan. The coastal plain defines the area generally west of I-805 while mesas and canyons are the dominant landforms east of I-805. Landmarks such as the San Miguel, Jamul, and San

Ysidro Mountains are located at the eastern fringe or beyond the northern or eastern boundary of the Plan area, but provide an important backdrop for the community. Urban canyons provide visual relief for many of the communities located east of I-805.

Another major feature identified in the adopted General Plan is the Chula Vista Greenbelt, identified as the backbone of the city's open space and park system. The Greenbelt incorporates developed and undeveloped open space and potential new open space linkages to form a continuous 28-mile open space and park system around the perimeter of the city as shown in Figure 5.1-4. At the north end of the city, the Greenbelt extends easterly through the Sweetwater Valley and Sweetwater Regional Park and from Interstate 5 (I-5) westerly to the bay. From there it parallels Marina Parkway south to the Chula Vista Bayfront Park, incorporating the adjacent open space, wetlands, natural reserves, the Nature Center, and developed parks. To the south, the Greenbelt is an enhancement of the Bay Boulevard corridor from the Chula Vista Bayfront Park, south to the Otay River from where it extends easterly through the Otay Valley Regional Park to the Lower Otay Lake. The Chula Vista Greenbelt extends southerly into the neighboring jurisdictions of San Diego County and the city of San Diego, encompassing the entire Otay River valley and the defining slopes and bluffs. Bluffs along the southern perimeter of the valley, south of the city's jurisdictional boundary and in the vicinity of Beyer Way, afford long distance views overlooking Chula Vista. Developed parks in the system are linked by a hiking and bicycle trail system.

Scenic Vistas

The mountains and foothills to the east and the bay and ocean to the west are visible from a number of viewpoints within the city, especially those occupying the mesa tops. The Sweetwater and Otay Reservoirs and associated regional parks also offer scenic vistas. Rural landscapes dominate views at the eastern terminus of Otay Lakes Road. Newer residential development, including areas such as the park and walking trail in Rice Canyon along Rancho del Rey Parkway, also contribute to the aesthetic appeal of this area.

Some neighborhood or corridor views are negatively influenced by their proximity to industrial or commercial areas, including power-generating facilities and substations. Such uses obscure or diminish views of San Diego Bay, bayfront parkland, the marina, and other prominent views. Additionally, views of older neighborhoods are affected by the presence of numerous overhead power lines which detract from neighborhood aesthetics, as compared to newer developments where lines have been located underground.

The adopted General Plan identifies two types of scenic highways – urban and rural. Urban routes are those "that traverse an urban area with the scenic corridor offering a view of attractive and exciting urban scenes." Rural scenic highways provide for an enriched experience of natural scenic resources and aesthetic values and may include large preserved canyons or natural areas, or areas within the Chula Vista Greenbelt.

Gateways

Access to Chula Vista is provided from six main city gateways (entryways) identified in the adopted General Plan, located generally at the intersections of I-5, I-805, and the future SR-125 with the northern city limits and SR-54 and at the intersections of the I-5, I-805, and SR-125 alignments with the southern city limits (Figure 5.2-2). These gateways correspond to the locations of regional transit stations and intra-city bus routes and a potential future urban core to bayfront shuttle bus route.

In addition, the following are also gateways because they facilitate movement through and establish linkage within the city: J Street between I-5 and the Bayfront; Palomar Street within the Montgomery community, which also corresponds to the Palomar Transit Station; Bonita Road east of I-805; and the F Street and Fourth Avenue intersection.

5.2.1.3 Update Areas

Urban Core Subarea

The Urban Core Subarea in the Northwest Planning Area is urbanized and developed with a mixture of public and private land uses, including the South San Diego County Superior Court complex, Norman Park Senior Center, Memorial Park, Friendship Park, the Chula Vista Center, the 60,000-square-foot Park Plaza commercial center, the Chula Vista Civic Center (including Main Branch Library and Central Police Station), and a variety of other office, retail, and residential uses.

Along segments of Broadway in the Urban Core Subarea, current assets, such as the palm-lined streets, accessibility to I-5 and trolley stations, proximity to downtown, and views to the bay, are often overshadowed by negative influences such as deteriorating streetscapes and signage, along the corridor segments.

Views occur in many settings and include aesthetically pleasing downtown streetscapes as represented in Photographs 5.2-1 and 5.2-2. Photographs 5.2-3 and 5.2-4 compare the visual effect along F Street in the older urban area of the city with newer development areas. F Street is a designated scenic highway and gateway.

Residential areas west of Second Avenue and north of I Street are in transition with portions of these areas zoned and developed with large- and small-scale multi-family residential. Areas of commercial, industrial, and institutional lands (including parks) establish the remaining areas. Streets and freeways account for an estimated 30 percent of the area.

Two designated main gateways provide access to the Urban Core Subarea: SR-54 and I-5 to the northwest and SR-54 and I-805 to the northeast. In addition, two gateways to the Urban

PHOTOGRAPH 5.2-1

Panoramic View Looking North on 3rd and F Street

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PHOTOGRAPH 5.2-2
Looking East from the Intersection of Fourth Avenue/F Street

PHOTOGRAPH 5.2-3
F Street Looking ~~West~~ East-Effect of Overhead Power Lines
on Typical Older Residential Neighborhood

PHOTOGRAPH 5.2-4
700 Block of East J Street Looking West - Aesthetic Benefit of
Underground Power Lines in a Typical Residential Neighborhood

Core and three other gateways within the Northwest Update Area facilitate movement and provide access to the city including:

E and H Streets. These principal roadways provide access to the Urban Core from I-5 and I–805. The character of both roadways is influenced by the residential and public facilities that predominate and their access to the two freeways.

Marina Parkway. This principal roadway provides access along the Bayfront redevelopment area. Between the National City boundary and E Street, Marina Parkway runs adjacent to the Sweetwater Marsh, a unit of the San Diego Bay National Wildlife Refuge. The segment of the roadway between E Street and J Street is expected to change character with a more urban landscaping consistent with the urban development of the Bayfront area. The intersection of F Street, a designated scenic roadway and Gateway, with Marina Parkway forms a major connection between the Bayfront and the Chula Vista Urban Core.

F Street Gateway. F Street is a greenspace corridor with wider setbacks for new development and a consistent landscape theme emphasizing its linear, connecting character through the urban core.

Fourth Avenue. This major north-south connector passes through the Northwest Update Area to the Southwest Update Area. Its character is influenced by the residential and public facilities that predominate and its location between two commercial streets, Broadway and Third Avenue, provides opportunities for ongoing enhancement as a scenic route. It is the north-south complement to F Street, which is also a residential and public facilities oriented route located between two commercial streets. Fourth Avenue's intersection with the F Street scenic route occurs at the location of the Civic Center, Central Library/Friendship Park, and new police station. Fourth Avenue is planned to retain its existing primarily residential/public facilities focus.

Montgomery Subarea

As with the Northwest Planning Area, current assets along segments of Broadway in the Southwest Planning Area such as palm-lined streets, accessibility to I-5 and trolley stations, proximity to downtown, and views to the bay, are often overshadowed by negative influences such as deteriorating streetscapes and signage along the corridor segments.

The Montgomery Subarea is characterized by industrial, commercial, thoroughfare, and residential uses. The visual character of the area is dominated by the built environment, which in numerous instances has suffered from a lack of conformance to minimum design standards and unified, integrated developments. Consequently, the City Council has identified code enforcement as a top priority for this area and redevelopment efforts are

beginning to be more evident. Important redevelopment projects such as the city's new animal shelter serve to upgrade the visual character of the area.

Two main gateways provide access to the Southwest Planning Area: I-5 in the south-westernmost portion of the Update Area and I-805 in the southeast portion. Main Street is also a gateway and traverses the Southwest Planning Area:

Main Street. Main Street is the southernmost major east/west connector between I-805 and areas to the east. Main Street currently terminates at Heritage Road. The designated scenic portion passes near or through the Chula Vista Greenbelt, and includes existing and future segments from Heritage Road to Hunte Parkway. Scenic resources include the Otay Valley Regional Park and major visitor attractions.

Otay Ranch Subarea

A significant portion of the Otay Ranch Subarea is undeveloped. The Otay Landfill is located adjacent and west of the Otay Ranch Subarea. Rock Mountain is located within the Otay Ranch Subarea. Future reclamation of mined portions of Rock Mountain, the city's only active mining operation, is intended to complement uses in the adjacent Otay Valley Regional Park and minimize impacts on future recreation, preserve natural resources, and provide other open space compatible with the Otay Valley. The Otay Valley Regional Park, part of the city's Greenbelt, runs along the southern boundary of the East Planning Area.

Two main city gateways, SR-125 southern and northern alignments, provide access to the East Update Area. Additionally, two gateways, as discussed in the Gateways section above, are in the Otay Ranch Subarea, one gateway segment within the Unincorporated Sweetwater Subarea, and one gateway segment within the Other Miscellaneous Areas Subarea of the East Planning Area:

Olympic Parkway. Between I-805 and SR-125, Olympic Parkway is similar to Telegraph Canyon Road with views of adjacent land uses on the mesas and natural slopes of Poggi Canyon.

Main Street. Main Street is the southernmost major east/west connector between I-805 and areas to the east. Main Street currently terminates at Heritage Road. The designated scenic portion passes near or through the Chula Vista Greenbelt, and includes existing and future segments from Heritage Road to Hunte Parkway. Scenic resources include the Otay Valley Regional Park and major visitor attractions.

Telegraph Canyon Road/Otay Lakes Road. This principal roadway provides access between I-805 and SR-125. The character of Telegraph Canyon Road is influenced by adjacent residential land uses.

Bonita Road. This principal roadway provides access to the Sweetwater and Bonita area. The character of Bonita Road is influenced by adjacent residential, commercial, and open space/park land uses.

5.2.2 Thresholds of Significance

The proposed project would result in a significant impact to landform alteration/aesthetics if it would:

Threshold 1: Have a substantial adverse effect on a scenic vista, or substantially damage scenic resources, including, but not limited to, trees, and rock outcroppings.

Threshold 2: Substantially degrade the existing visual character or quality of Chula Vista.

5.2.3 Impacts

The proposed General Plan Update would result in increased density in all Update areas of the city as compared to the baseline setting. In areas of the built environment, direct impacts would occur if, as a result of plan implementation, development substantially alters existing scenic resources. In open areas, there is the potential that future development, as permitted by the plan, would impact important scenic resources. Because the development footprint and relative intensity of land uses for each of the scenarios is similar, impacts resulting from implementation of any of the scenarios (Preferred Plan and Scenarios 1, 2, or 3) would be the same regardless of which is ultimately selected. The proposed Land Use and Transportation Element contains objectives and polices that address scenic resources and visual character for the General Plan Area.

5.2.3.1 Threshold 1: Scenic Resources and Vistas

Threshold 1 states that the proposed project would result in a significant impact to landform alteration/aesthetics if it would have a substantial adverse effect on a scenic vista, or substantially damage scenic resources, including, but not limited to, trees, and rock outcroppings. Chula Vista has several designated Scenic Roadways, where views of unique natural features and roadway characteristics, including enhanced landscaping, adjoining natural slopes, or special design features make traveling a pleasant visual experience. Fundamental to the preservation of scenic resources is development of the city's greenbelt and open space network and development of major gateways to incorporate views of the Otay and Sweetwater River Valleys, Upper and Lower Otay Lakes, Sweetwater Reservoir, San Miguel and Mother Miguel Mountains, and the high mountain peaks to the east. The proposed Preferred Plan and all three Scenarios would result in increased density in all Update areas of the city as compared to the existing conditions. Select policies associated with Objectives LUT 13 and LUT 9 address scenic resources.

Objective LUT 13

Preserve scenic resources in Chula Vista, maintain the city's open space network, and promote beautification of the city.

Policies

LUT 13.1: Identify and protect important public viewpoints and viewsheds throughout the planning area, including features within and outside the planning area, such as mountains, native habitat areas, San Diego Bay, and historic resources.

LUT 13.2: Continue to implement the city's planned open space network.

LUT 13.4: Any discretionary projects proposed adjacent to scenic routes, with the exception of individual single-family dwellings, shall be subject to design review to ensure that the design of the development proposal will enhance the scenic quality of the route. Review should include site design, architectural design, height, landscaping, signage, and utilities. Development adjacent to designated scenic routes should be designed to:

- Create substantial open areas adjacent to scenic routes through clustering development;
- Create a pleasing streetscape through landscaping and varied building setbacks, and
- Coordinate signage, graphics and/or signage requirements, and standards.

Objective LUT 9

Create enhanced gateway features for city entry points and important other entries, such as to special districts.

Policies

LUT 9.2: The City will prepare, or cause to have prepared, entryway/gateway master plans for each of the identified entryways/gateways within the City to appropriately guide development within these areas (see LUT section 3.2 and Figure 5-6). These master plans will provide design guidelines and standards for public improvements, as well as for

private or public development within these designated areas. Examples may include enhanced pavement and/or sidewalk standards, enhanced landscape standards, thematic sign standards, and special architectural standards for buildings or other structures.

The City will prepare a General Plan Implementation Program to assure establishment of these gateway master plans, which Program will also include interim provisions for the processing of any projects within these areas prior to completion and adoption of the according entryway/gateway master plan.

LUT 9.3: As part of the approval process for projects within designated city entryway/gateway areas, the City shall confirm that the design conforms to applicable entryway/gateway design guidelines and standards.

Implementation of these policies ensure that the Preferred Plan and all three Scenarios do not result in a significant impact to scenic resources because the policies provide opportunities to improve the City's appearance, establish a stronger community image, maintain the city's open space network, and promote the beautification of the city. Policy 13.4 specifically requires that all new development adjacent to scenic routes will be subject to design review to ensure that it will enhance scenic quality of the route. Additionally, these policies promote the use of special design treatments, which may include themed signage, landscape and architectural design enhancements, and other elements to signify arrival into the City and progression to key destinations along gateway streets. Therefore, impacts to scenic vistas or resources would not be significant.

5.2.3.2 Threshold 2: Visual Character

Threshold 2 states that the proposed project would result in a significant impact to landform alteration/aesthetics if it would substantially degrade the existing visual character or quality of Chula Vista. The General Plan Update affects visual resources through the designation of land use types and land management practices. Land use patterns established by the General Plan Update define the city's visual appearance. As land uses are introduced into the landscape they become part of the visual environment. Like other physical resources, the visual environment can be subject to fragmentation and integrity loss, especially when under the stress of competing uses. The intensification of urban and rural land uses, or activities that impact components of the physical environment, can result in significant impacts on citywide visual resources. For these reasons, the visual environment, like other resources, often warrants management through protective policies. Future growth has the potential to impact the visual environment through fundamental changes in land use and/or impacts to components of the landscape that contribute to visual quality.

Adoption of the proposed Preferred Plan and all three Scenarios would result in substantial changes to landforms and visual quality in currently undeveloped portions of the city. Increased density within the Urban Core and Montgomery Subareas would result in increased building heights and mass. In the east, currently undeveloped areas characterized by mesas, canyons, and hills would be developed with urban uses. Objectives LUT 8, 9, 10, and 11 contain policies that address the maintenance and preservation of the existing visual quality of the General Plan Area:

Objective LUT 8

Strengthen and sustain Chula Vista's image as a unique place by maintaining, enhancing and creating physical features that distinguish Chula Vista's neighborhoods, communities, and public spaces, and enhance its image as a pedestrian-oriented and livable community.

Policies

UT 678.1: Develop a program to enhance the identity of special districts and neighborhoods to create variety and interest in the built environment, including such items as signage, monuments, landscaping and street improvements.

LUT 8.2: Emphasize certain land uses and activities, such as cultural arts, entertainment, specialty retail, or commercial recreation, to enhance or create the identity of specialized districts or Focus Areas in the City.

LUT 8.3: Ensure that buildings are appropriate to their context and designed to be compatible with surrounding uses and enhance the desired character of their district.

LUT 8.4: Encourage and require, where feasible, the incorporation of publicly accessible urban open spaces, including parks, courtyards, water features, gardens, passageways, paseos, and plazas, into public improvements and private projects.

LUT 8.5: Prepare urban design guidelines that help to create pedestrian-oriented development by providing:

- Pedestrian circulation among parcels, uses, transit stops, and public or publicly accessible spaces;
- Human scale design elements;

- Varied and articulated building facades;
- Visual (first floor clear glass windows) and physical access for pedestrians;
- Ground floor residential and commercial entries that face and engage the street; and
- Pedestrian-oriented streetscape amenities.

LUT 8.6: Develop a master plan for artwork in public places that would identify the types of art desired and establish appropriate settings for the display of art, including within public rights-of-way and landscape medians.

LUT 8.7: Ensure that vacant parcels and parcels with unsightly storage uses, such as auto salvage yards, are appropriately screened from the street to reduce their negative visual effects.

LUT 8.8: Encourage the upgrading, beautification, and revitalization of existing strip commercial areas and shopping centers.

Objective LUT 10

Create attractive street environments that complement private and public properties, create attractive public rights-of-way, and provide visual interest for residents and visitors.

Policies

LUT 10.1: The City shall create unique landscape designs and standards for medians for each major thoroughfare to distinguish each from the other and to provide a special identity for districts and neighborhoods.

LUT 10.2: The landscape designs and standards shall include a coordinated street furniture palette including waste containers and benches, to be implemented throughout the community at appropriate locations.

LUT 10.3: Provide a well-designed, comfortable bus stop for use throughout the city.

LUT 10.4: Prior to the approval of projects that include walls that back onto roadways, the City shall require that the design achieves a uniform appearance from the street. The walls shall be uniform in height, use of materials and color, but also incorporate elements that add visual interest, such as pilasters.

LUT 10.5: Require undergrounding of utilities on private property and develop a priority-based program of utility undergrounding along public rights-of-way.

LUT 10.6: Study the locational requirements of utility, traffic control and other cabinets and hardware located in the public right-of-way to determine alternative locations for these items in less obtrusive areas of the street environment.

LUT 10.7: Work with utility providers to coordinate the design of utility facilities (e.g., substations, pump stations, switching buildings, etc.) to ensure that the facilities fit within the context of their surroundings and do not cause negative visual impacts.

Objective LUT 11

Ensure that buildings and related site improvements for public and private development are well-designed and compatible with surrounding properties and districts.

Policies

LUT 11.1: Promote development that creates and enhances positive spatial attributes of major public streets, open spaces, cityscape, mountain and bay sight lines, and important gateways into the city.

LUT 11.2: Promote and place a high priority on quality architecture, landscape, and site design to enhance the image of Chula Vista, and create a vital and attractive environment for businesses, residents and visitors.

LUT 11.3: The City shall, through the development of regulations and guidelines, ensure that good project landscape and site design creates places that are well-planned, attractive, efficient, safe and pedestrian friendly.

LUT 11.4: Actively promote architectural and design excellence in buildings, open space, and urban design.

LUT 11.5: Require a design review process for all public and private discretionary projects (which includes architectural, site plan, landscape and signage design) to review and evaluate projects prior to issuance of building permits to determine their compliance with the objectives and specific requirements of the City's Design Manual, General Plan, and appropriate zone or Area Development Plans.

These policies promote and place a high priority on quality architecture, landscape, and site design to enhance the image of Chula Vista. This would be done by using the design review process for all developments to review and evaluate projects prior to issuance of building permits to determine their compliance with the objectives and specific requirements of the City's Design Manual, General Plan, and appropriate zone or Area Development Plans.

Northwest Planning Area

The Urban Core Subarea encompasses the downtown area of Chula Vista. As the city continues to mature, there will be more infill development and redevelopment of existing properties within the Urban Core. As discussed in Section 5.1, Land Use, of this EIR, the Northwest Planning area consists predominantly of single-story, single-family homes with limited multi-family units along major roadways. The multi-family units consist of condominiums, townhouses, and apartments that are generally two to three stories in height. Retail uses are located primarily along Broadway from E to L Streets and along Third Avenue from E to H Streets. Despite having many unique and attractive characteristics, some neighborhoods have experienced decline over the years and blighted commercial and residential areas have been targeted for revitalization.

Redevelopment programs are intended to revitalize older commercial, industrial, and residential areas. Multi-family residential units are proposed in several districts of the Urban Core in locations where new growth or redevelopment can best be accommodated to create mixed-use urban environments that are oriented to transit and pedestrian activity. Adding more density and increasing the multi-family units within the Urban Core has the potential to cause an adverse effect on the visual character of the Urban Core.

The following policies are proposed in the General Plan Update that address the maintenance and preservation of the existing visual quality of the Urban Core Subarea:

LUT 49.10: Support the development of public and private recreation and urban parks that include pedestrian-oriented plazas, benches, other streetscape amenities and, where appropriate, landscaped play areas.

LUT 49.11: Establish locations within focus areas where the permitted heights and densities are greater than in locations adjacent to single-family areas.

LUT 49.12: Establish standards for transitions in building height that respond to public view corridors and proximity to single-family areas.

LUT 49.13: Limit high-rise development to the three transit-oriented mixed use areas near the E Street, H Street and Third Avenue/H Street transit stations, subject to the provisions of LUT Section 7.2.

LUT 49.14: Conduct a special study to examine the potential for higher land use intensities and taller buildings along the H Street Transit Focus Corridor between Interstate 5 and Third Avenue, and which will also address compatibility issues with adjacent stable neighborhoods. The precise boundaries will be established at the time of the study, and all land use policies contained in this General Plan shall apply until modified as a result of study findings and appropriate amendments to this Plan. (see also LUT 2.6).

LUT 49.15: Recognize that different portions of the Urban Core Subarea have a desirable character, and develop specific plans and programs to strengthen and reinforce their uniqueness. Develop land use, density, special design features, and building guidelines for appropriate Focus Areas.

LUT 49.16: Prepare urban form guidelines and standards for development as part of the Urban Core Specific Plan.

LUT 49.17: With the adoption of the Urban Core Specific Plan, establish policies, development standards, and/or design guidelines in the Urban Core Specific Plan to address where high-rise buildings should be concentrated, how to establish and/or reinforce pedestrian-scaled development, and how site and building design should respond to public view corridors.

LUT 49.18: With the adoption of the Urban Core Specific Plan, establish design standards for mixed use development that achieves a high quality pedestrian-scaled environment and promotes side or rear located parking areas, streetfront windows and entries, and public and private open space.

LUT 49.19: With the adoption of the Urban Core Specific Plan, create a pedestrian-oriented realm by requiring retail or public uses at the ground floor of buildings.

LUT 49.20: Encourage the linkage and integration of new development with existing neighborhoods by means of open space areas, parks, and pathways as a means of enhancing pedestrian connections.

LUT 49.21: Where a park, natural open space, or urban open space exists adjacent to or near a transit-oriented development, these features should be incorporated into the development as open space amenities.

LUT 49.23: Specific Plans should identify building and site design guidelines for commercial or mixed use areas to include the height above which buildings must step back; the location of the building's horizontal articulation; and other design elements.

LUT 49.24: Reinforce or encourage the establishment of a strong pedestrian orientation in designated districts, activity centers, and pedestrian-oriented focus areas, so that these areas may serve as a focus of activity for the surrounding community and a focus for investment in the community.

These policies require the preparation of urban design standards such as building heights and massing, public view corridors, circulation linkages, and the appearance of important gateways within the Urban Core. The Urban Core Specific Plan will establish design standards for mixed-use development that achieves a high-quality pedestrian-scaled environment and promotes side or rear located parking areas, streetfront windows and entries, and public and private open space. Requirements for the Urban Core Specific Plan include building and site design guidelines as specified in Policies LUT 49.15, 49.16, 49.17, and 49.23. Implementation of these policies as well as compliance with the policies associated with Objectives LUT 2, 3, and 11 reduce visual quality impacts within the Urban Core Subarea resulting from the adoption of the Preferred Plan and all three Scenarios, but not to below a level of significance. Impacts remain significant because of the lack of specific design standards at this time. The current project is a General Plan Update and the development of design standards are a zoning and specific plan effort. Until future Specific Plans are developed and zoning specifications are implemented, impacts remain significant.

In addition, Policy LUT 11.5 provides the mechanism to review design specifications for individual projects prior to issuance of building permits.

Within the Urban Core Subarea, the Preferred Plan and all three Scenarios propose high-rise buildings between Third and Fourth Avenues and near the E Street and H Street Trolley

Stations in the Mixed Use Transit Focus Areas. These designations are proposed at the Third Avenue/H Street, E Street, and H Street transit stations and include a mix of office, retail, and residential densities planned for a gross density of up to 60 dwelling units per acre. The extent to which a high-rise building results in a significant impact depends upon its design setting. Visually, it has to do with architectural design and with pedestrian orientation and scale. Policies associated with Objective LUT 2 and LUT 49.16 as well as Policies LUT 49.11 through 49.24 require the establishment of policies, development standards and/or design guidelines in the Urban Core Specific Plan that address where high-rise buildings should be concentrated, how to establish and/or reinforce pedestrian-scaled development, and how site and building design shall respond to public view corridors. Implementation of these policies as well as compliance with the policies associated with Objectives LUT 2, 3, and 11 reduce visual quality impacts from the development of high-rise buildings within the Urban Core Subarea resulting from the adoption of the Preferred Plan and all three Scenarios, but not to below a level of significance. Impacts remain significant because of the lack of specific design standards at this time. The current project is a General Plan Update and the development of design standards are a zoning and specific plan effort. Until future Specific Plans are developed and zoning specifications are implemented impacts remain significant.

In addition to the Transit Focus Areas, the Preferred Plan and all three Scenarios proposes an H Street Transit Corridor Special Study Area within the H Street Corridor District (see Figure 5.1-6). The purpose of the special study for the H Street Transit Corridor Special Study Area is to analyze and evaluate the appropriateness of plan changes that could result in mixed land uses, increased intensities, and potential high-rise buildings along H Street between Interstate 5 and Third Avenue. In view of existing land uses along H Street, the future intensification planned with the two Transit Focus Areas at either end of the corridor, and the potential for future market forces to focus on H Street as a key corridor, a special study is needed that examines further potential changes in land use and intensity, building mass, the potential for taller buildings, and the relationship and appropriate transitions to adjacent stable neighborhoods. This study would be conducted subsequent to the adoption of any potential high-rise buildings along H Street between Interstate 5 and Third Avenue within the study area.

Southwest Planning Area

Development within the Montgomery Subarea would include redevelopment as well as new development. This would have the potential to impact the existing visual quality of the area. Several polices have been established which pertain to aesthetics and design within the Montgomery Subarea. The policies associated with Objectives LUT 41, 42, and 43 address mix use areas and design considerations such as building heights and massing, public view corridors, circulation linkages, and the appearance of important gateways within the Montgomery Subarea:

LUT 41.13: Prior to or concurrent with the approval of the first specific plan or other zoning regulations in the South Third Avenue District, establish a design code that reinforces the area, and which establishes a coherent, aesthetic character to the Southwest Planning Area.

LUT 41.14: The specific plan or other regulations prepared to guide development in this area shall address design issues that create a sense of place, a pedestrian-friendly environment, enhanced pedestrian linkages, and compatibility with the scale and feel of a cohesive neighborhood community.

LUT 41.15: A specific plan or other regulations in the South Third Avenue District shall require the use of wide sidewalks, through block paseos, and other appropriate design features that enhance the pedestrian environment to link high use areas, such as the post office, library, park, or a concentration of shops, with transit stations or transit stops.

LUT 42.13: Encourage the upgrading of older and/or marginal retail uses along the South Broadway District.

LUT 42.14: Prior to or concurrent with the approval of the first specific plan or other zoning regulations for the South, Broadway District between L Street and Naples Street, prepare specific guidelines for the development of mixed use projects on South Broadway.

LUT 42.15: Concurrent with the approval of zoning for industrial uses at the northwest corner of Industrial Blvd. and Naples Street in the South Broadway District

LUT 43.7A: Building heights in the Palomar Gateway District Mixed Use Transit Focus Area shall be low-rise with some mid-rise buildings.

LUT 43.10: The specific plan or other regulatory document for the Palomar Gateway District shall establish design and landscape guidelines for the improvement of Palomar Street as a gateway to the city.

LUT 43.11: Provide for safe, effective and aesthetic pedestrian crossings and improvements to Palomar Street and Industrial Blvd.

These policies establish a design code that reinforces the safety and serenity of the area, and seeks to establish a coherent, aesthetic, international character to the Southwest Planning Area. Additionally they require the specific plan or other appropriate document prepared to guide development in this area to address design issues to create a sense of place, a

pedestrian-friendly environment, enhanced pedestrian linkages, and compatibility with the scale and feel of a cohesive neighborhood community. Implementation of these policies as well as compliance with the policies associated with Objectives LUT 8, 9, 10, and 11 reduce visual quality impacts within the Montgomery Subarea resulting from the adoption of the Preferred Plan and all three Scenarios, but not to below a level of significance. Impacts remain significant because of the lack of specific design standards at this time. The current project is a General Plan Update and the development of design standards are a zoning and specific plan effort. Until future Specific Plans are developed and zoning specifications are implemented impacts remain significant.

East Planning Area

Adoption of the Preferred Plan and all Scenarios would result in substantial changes to landforms and visual quality in currently undeveloped portions of the East Planning Area. In the east, currently undeveloped areas characterized by mesas, canyons, and hills would be developed with urban uses. Development completed in conformance with the proposed General Plan Update would result in grading of mesatops and hillsides representing a visual impact to the area. Views of mesas and hillsides would be replaced by an urban landscape. This would have the potential to impact the existing visual quality of the area. Several polices have been established which pertain to aesthetics and design within the Otay Ranch Subarea. The policies associated with Objectives LUT 75, 80, 81, 83, 85, 89, and 94 address mixed-use areas and urban design considerations such as building heights and massing, public view corridors, circulation linkages, and the appearance of important gateways within the East Planning Area:

Objective LUT 75

Preserve and protect Otay Ranch's significant natural resources and open space lands with environmentally sensitive development.

Objective LUT 80

Protect the natural features of the Otay Ranch Preserve located in Wolf Canyon.

Objective LUT 81

Develop a higher density, mixed use, transit-oriented town center centered on the intersection of Rock Mountain Road and La Media Road, surrounded by lower density residential use and a large community park, and preserve Rock Mountain as an important landform and visual resource.

Objective LUT 83

Promote limited industrial development opportunities, where appropriate access to non-residential circulation roadways is provided and environmental impacts are minimized.

Policies

LUT 83.1: Allow limited industrial development on property east of Heritage Road and south of the Otay Valley, subject to the preparation of a master development plan that addresses appropriate street improvements, vehicular access, screening from public viewsheds, development infrastructure, protection of adjacent environmentally sensitive resources, water quality, and phasing.

Objective LUT 85

Establish a distinctly identifiable corridor that creates a unique sense of place through its integration of diverse uses and land use focus areas into a cohesive development pattern and its linkages between the district's focus areas, and with the subregion, adjoining communities, and open spaces.

LUT 85.2: Locate and design buildings, public spaces, and landscapes to create a distinct character and identity for each focus area, emphasizing development patterns that foster pedestrian activity and enhance community livability.

LUT 85.3: Connect the corridor's uses to surrounding open spaces with pedestrian paths and greenbelts.

LUT 85.4: As part of any SPA plan within the University Study Area, establish a coordinated system of physical elements that interconnect and unify the corridor's Focus Areas including streets, transit, sidewalks, streetscapes, signage, lighting, building placement and form, and architectural character.

LUT 89.1: Prior to the adoption of a SPA involving the University site or area supporting the campus, locate and design the development of university and supporting uses to achieve a cohesive and integrated campus environment, in consideration of the following principles:

- Development of a campus "core" as the highest intensity of use, which concentrates classrooms, offices, libraries, and other

academic uses that is surrounded by housing, athletic fields, and other complementary uses.

- The campus "core" shall be located in proximity and linked to the Town Center, establishing continuity of urban form, density, street network, pedestrian sidewalks, paths, and landscape. Uses that may be shared by the university and surrounding community should be concentrated along the campus/Town Center edge, such as art galleries, cultural facilities, retail, food service, and similar uses. A "permeable" edge between the campus and Town Center shall be established.

- The campus "core" shall be linked with the transit center established within the Town Center.

- Individual research institutes that may be developed with a Multi-Institutional Teaching Center (MITC) may be distributed throughout the university site and/or as an interface with the Town Center or Eastern Urban Center (EUC). In either case, there should be direct physical linkages with the campus "core."

- The university's uses and buildings shall be linked and unified through a system of plazas/quads, pathways, transportation corridors, recreational areas, and open spaces.

- Greenway linkages shall be established between the university campus and surrounding open spaces.

- Buildings shall be sited along common sidewalks, pathways, and plazas to stimulate a high level of pedestrian activity.

- Parking shall be located on the periphery of the campus "core" and university campus, to the extent feasible.

LUT 94.4: Develop the EUC as an "intense urban form," with mid- and high-rise buildings typically located in the central core and near transit.

LUT 94.5: Apply the Design Review process for discretionary projects to ensure that building facades are designed and oriented to accentuate and enhance the pedestrian experience and urban street scene. Buildings fronting on pedestrian spaces shall be designed to support and enhance dining, entertainment, and art and cultural activities.

LUT 94.6: As part of to the approval of a SPA, provide pedestrian-oriented plazas, through-block paseos, and landscaped squares to add interest and provide contrast to the buildings, which shall generally be built to the sidewalk's edge.

These policies would reduce visual quality impacts from implementation of the Preferred Plan and all three Scenarios within the East Planning Area because they establish a common system of elements that interconnect and unify streets, transit, sidewalks, streetscapes, signage, lighting, building placement and form, and architectural character. These policies would also connect the corridor's uses to surrounding open spaces with pedestrian paths and greenbelts. Impacts remain significant, however, because of the lack of specific design standards at this time. The current project is a General Plan Update and the development of design standards are a zoning and specific plan effort. Until future Specific Plans are developed and zoning specifications are implemented impacts remain significant. Additionally, the open, rolling hills would be permanently altered by development and the change from open areas to developed areas in the east is a significant adverse visual quality impact of the Preferred Plan, as it is under all three Scenarios.

5.2.4 Level of Significance Prior to Mitigation

Because the development footprint and relative intensity of land uses for each of the scenarios is similar, impacts resulting from implementation of any of the scenarios (Preferred Plan and Scenarios 1, 2, or 3) would be the same regardless of which is ultimately selected.

5.2.4.1 Threshold 1: Scenic Resources and Vistas

Threshold 1 states that the proposed project would result in a significant impact to landform alteration/aesthetics if it would have a substantial adverse effect on a scenic vista, or substantially damage scenic resources, including, but not limited to, trees, and rock outcroppings. There are several scenic vistas located throughout the city. The intensification of urban land uses, or activities that impact components of the physical environment, can result in significant impacts on scenic resources throughout the city. Compliance with Objectives LUT 9 and 13 and their associated policies as required by Policy LUT 13.4 would ensure that the Preferred Plan and Scenarios 1, 2, or 3 do not result in significant impacts to scenic resources and vistas because they would maintain the city's open space network, create enhanced gateway features for city entry points and important other entries, such as to special districts, and promote beautification of the city. Policy LUT 13.4 requires development adjacent to designated scenic routes to be designed to create substantial open areas, create pleasing streetscapes and coordinate sign standards. It further requires that this condition be met through the design review process for all development adjacent to scenic roadways. Therefore, impacts to scenic vistas or resources would not be significant.

5.2.4.2 Threshold 2: Visual Character

Threshold 2 states that the proposed project would result in a significant impact to landform alteration/aesthetics if it would substantially degrade the existing visual character or quality of Chula Vista. Future growth has the potential to impact the visual environment through fundamental changes in land use and/or impacts to components of the landscape that contribute to visual quality. Adoption of the Preferred Plan and all three Scenarios would result in substantial changes to landforms and visual quality throughout the General Plan area. Increased density within the Urban Core and Montgomery Subareas would result in increased building heights and mass. In the east, currently undeveloped areas characterized by mesas, canyons, and hills would be developed with urban uses. Objectives LUT 2, 3, 4, 6, 10, and 11 promote and place a high priority on quality architecture, landscape, and site design to enhance the image of Chula Vista. The design review process would occur for multi-family, commercial and industrial development, and redevelopment within redevelopment project area boundaries to determine their compliance with the objectives and specific requirements of the City's Design Manual, General Plan, and appropriate zone or Area Development Plans.

Northwest Planning Area

The Northwest Planning Area has been previously developed with commercial, residential, and industrial uses. Implementation of any of the scenarios would allow for greater land use intensity within the Urban Core compared to existing conditions. Adding more density and increasing the number of multi-family units within the Urban Core has the potential to cause an adverse effect on the visual character of the Urban Core. Policies LUT 49.11 through 49.24, as well as the policies associated with Objectives LUT 2, 3, 4, 6, 10, and 11 require the preparation of urban design standards such as building heights and massing, public view corridors, circulation linkages, and the appearance of important gateways within the Urban Core. This would be done as part of the Urban Core Specific Plan and would establish design standards for mixed-use development that achieves a high quality pedestrian-scaled environment and promotes side or rear located parking areas, streetfront windows and entries, and public and private open space. Implementation of Policies LUT 49.11 through 49.24, as well as compliance with the policies associated with Objectives LUT 10 and 11 reduce visual quality impacts within the Urban Core Subarea resulting from the adoption of the Preferred Plan and all three Scenarios, but not to below a level of significance. Impacts remain significant because of the lack of specific design standards at this time. The current project is a General Plan Update and the development of design standards are a zoning and specific plan effort. Until future Specific Plans are developed and zoning specifications are implemented impacts remain significant.

Within the Urban Core Subarea, the Preferred Plan and all three Scenarios propose high-rise buildings between Third and Fourth Avenues in the Mixed Use Transit Focus Area. The extent to which a high-rise building results in a significant impact depends upon its design

setting. Visually, it has to do with architectural design and with pedestrian orientation and scale. Policies associated with Objective 2, and Policy LUT 49.17 listed above, as well as Policies LUT 49.11 through 49.24 require the establishment of policies, development standards and/or design guidelines in the Urban Core Specific Plan that address where high-rise buildings should be concentrated, how to establish and/or reinforce pedestrian-scaled development, and how site and building design shall respond to public view corridors. Implementation of these policies as well as compliance with the policies associated with Objectives LUT 2, 3, 10, and 11 reduce visual quality impacts from the development of high-rise buildings within the Urban Core Subarea resulting from the adoption of the Preferred Plan and all three Scenarios, but not to below a level of significance. Impacts remain significant because of the lack of specific design standards at this time. The current project is a General Plan Update and the development of design standards are a zoning and specific plan effort. Until future Specific Plans are developed and zoning specifications are implemented impacts remain significant.

Southwest Planning Area

Development completed in conformance with any of the scenarios within the Montgomery Subarea would result in greater land use intensity which would, necessarily, result in increased building heights and mass. This would have the potential to impact the existing visual quality of the area. Policies LUT 41.13 through 41.15, 43.7A, and LUT 43.10 and 43.11 establish a design code that reinforces the safety and serenity of the area, and seeks to establish a coherent, aesthetic, international character to the Southwest Planning Area. Implementation of these policies as well as compliance with the policies associated with Objectives LUT 3, 4, 6, 10, and 11 reduce visual quality impacts within the Southwest Planning Area resulting from the adoption of the Preferred Plan and all three Scenarios, but not to below a level of significance. Impacts remain significant because of the lack of specific design standards at this time. The current project is a General Plan Update and the development of design standards are a zoning and specific plan effort. Until future Specific Plans are developed and zoning specifications are implemented impacts remain significant.

East Planning Area

Development in accordance with the Preferred Plan and all three Scenarios would significantly change the visual character of the area. The existing character within the East Update Area would be changed from an undeveloped area to an urban area, which would affect the aesthetic character and consequently the views of the project site from surrounding areas. This would have the potential to impact the existing visual quality of the area. Compliance with policies established in Objectives LUT 75, 80, 81, 83, 85, 89, and 94 as well as Objectives LUT 3, 10, and 11 would reduce visual quality impacts within the East Planning Area because they establish a common system of elements that interconnect and unify streets, transit, sidewalks, streetscapes, signage, lighting, building placement and form, and architectural character. These policies would also connect the area's uses to surrounding

open spaces with pedestrian paths and greenbelts. Impacts remain significant, however, because of the lack of specific design standards at this time. The current project is a General Plan Update and the development of design standards are a zoning and specific plan effort. Until future Specific Plans are developed and zoning specifications are implemented impacts remain significant. Additionally, the existing open, rolling hills would be permanently altered by development and the change from open areas to developed areas in the east is a significant adverse visual quality impact of the Preferred Plan, as it is under all three Scenarios.

5.2.5 Mitigation Measures

5.2.5.1 Threshold 1: Scenic Resources and Vistas

No mitigation is required.

5.2.5.2 Threshold 2: Visual Character

In the East Planning Area, the conversion of open, rolling hills to a developed condition was identified as a significant adverse impact. The following mitigation is designed to reduce the aesthetic impacts.

5.2-1 Within the East Planning Area, prior to approval of grading plans, the applicant shall prepare grading and building plans that conform to the landform grading guidelines contained in the grading ordinance, Otay Ranch GDP, and General Plan. The plans shall be prepared to the satisfaction of the Director of Planning and Building and the City Engineer. These plans and guidelines shall provide the following that serve to reduce the aesthetic impacts:

- A Landscape Design that addresses streetscapes, provides landscape intensity zones, greenbelt edge treatments, and slope treatment for erosion control.
- Grading Concepts that ensure manufactured slopes that are contoured and blend and mimic with adjacent natural slopes.
- Landscaping Concepts that provide for a transition from the manicured appearance of developed areas to the natural landscape in open space areas.
- Landscaping Concepts that include plantings selected to frame and maintain views. Landscaping should not block views created through grading and/or site design.

5.2.6 Level of Significance After Mitigation

Conformance with the proposed General Plan Update objectives and policies reduce visual quality impacts within the General Plan Update Area resulting from the adoption of the Preferred Plan and all three Scenarios, but not to below a level of significance. Impacts remain significant because of the lack of specific design standards at this time. The current project is a General Plan Update and the development of design standards are a zoning and specific plan effort. Until future Specific Plans are developed and zoning specifications are implemented, impacts remain significant. Additionally, within the East Planning Area, the conversion of open, rolling hills to a developed condition was identified as a significant adverse impact. Implementation of mitigation measure 5.2-1 reduces the significant landform alteration and aesthetics impacts; however, the open, rolling hills would be permanently altered by development and the impact due to the change from open areas to developed areas remains significant and unmitigated.

5.3 Biological Resources

5.3.1 Existing Conditions

5.3.1.1 Regulatory Plans and Policies

City of Chula Vista Multiple Species Conservation Program (MSCP)

The City of Chula Vista Multiple Species Conservation Program Subarea Plan (Subarea Plan), which has been incorporated by reference in Section 1.4 of this EIR and summarized below, is a subregional plan under the California Natural Communities Conservation Planning Act (NCCP). The City adopted the Subarea Plan on May 13, 2003, as a new element of the General Plan. The MSCP is a comprehensive, long-term habitat conservation program intended to protect species against the potential impacts of habitat loss associated with development of both public and private lands. The Subarea Plan is an implementation mechanism for the broader MSCP Subregional Framework Plan, which ultimately executes and enforces the NCCP. Once implemented, any projects subject to City approval must be in conformance with the Subregional Plan, as well as the Chula Vista MSCP Subarea Plan.

The Subarea Plan is a comprehensive long-term habitat conservation plan that addresses the needs of multiple species and the preservation of natural vegetation communities for lands within the City's jurisdiction. The Chula Vista Subarea is comprised of lands within the incorporated city limits for which Take Authorization through the resource agencies will be granted. Until Take Authorization is granted to the City, projects impacting listed species must obtain their own individual permits through the resource agencies.

The larger Chula Vista MSCP Planning Area totals 57,849 acres and includes lands within both the City's General Plan boundary and unincorporated County of San Diego. The City's Preserve will eventually encompass approximately 5,000 acres of the City's most sensitive open space areas. In addition, another approximately 4,200 acres outside the City's jurisdiction would be preserved as a result of development occurring within the City's urban boundaries. Lands set aside within the Preserve would be managed while continuing to provide passive recreational opportunities consistent with the MSCP Subarea Plan for the public.

The goals of the Chula Vista MSCP Subarea Plan are as follows:

- To conserve Covered Species and their habitats through the conservation of interconnected significant habitat cores and linkages.
- To delineate and assemble a Preserve using a variety of techniques including public acquisition, on- and off-site mitigation, and land use regulations.

- To provide a Preserve Management Program that, together with the federal and state management activities, will be carried out over the long term, further ensuring the conservation of Covered Species.
- To provide necessary funding for a Preserve management program and biological monitoring of the Preserve.
- To reduce or eliminate redundant federal, state, and local natural resource regulatory and environmental review of individual projects by obtaining federal and state authorizations for 86 covered species.

The Subarea Plan provides the framework for habitat planning and establishes areas of conservation and development within the Chula Vista MSCP Subarea. The provisions of the Subarea Plan and Implementing Agreement (the instrument that enforces the provisions of the plan) are intended to supercede those of other elements of the General Plan in the event of conflicts.

The Subarea Plan provides for the conservation and management of key sensitive species and habitats while ensuring a contiguous preserve design. The Subarea Plan identifies areas designated for development for which hard-line Preserve boundaries have been established. Covered Projects contain specific areas delineated for development, as well as 100 percent conservation. Covered Projects include Rolling Hills Ranch (Salt Creek Ranch), San Miguel Ranch, Bella Lago, and Otay Ranch (including the University site). Preserve boundaries have been established in these areas on an individual project basis after evaluation of biological data and consultation with the wildlife agencies.

For those areas outside of covered projects, impacts to sensitive biological resources are regulated under the Habitat Loss and Incidental Take (HLIT) Ordinance. The purpose of the HLIT Ordinance is to protect and conserve native habitat within the city of Chula Vista and the viability of the species supported by those habitats. The HLIT provisions are intended to implement the Subarea Plan by placing priority on the preservation of biological resources within the planned and protected preserve.

As discussed in the Final EIR/EIS for the MSCP Subregional Plan (City of San Diego 1997), which has been incorporated by reference in Section 1.4 of this EIR and summarized below, impacts to narrow endemic species must be avoided to the maximum extent possible. If impacts are unavoidable, the Subarea Plan limits encroachment of narrow endemic species habitat based the on the project's location within the Chula Vista Subarea. The Subarea Plan requires implementation of conservation measures to ensure long-term survival of narrow endemic species.

Incorporated in the Subarea Plan is the Wetlands Protection Program, which provides wetlands protection through project entitlement reviews and the CEQA process. This process will provide an evaluation of wetlands avoidance and minimization and will ensure

compensatory mitigation for unavoidable impacts to wetlands in order to achieve a no net loss of wetland functions or values. Impacts to wetlands will be avoided or minimized to the maximum extent practicable pursuant to the Wetlands Protection Program, Section 5.2.4 of the Subarea Plan.

The Subarea Plan also provides guidelines to address Adjacency Management Issues in order to address indirect impacts associated with development adjacent to the Preserve. All new development must adhere to these guidelines which address potential drainage issues, overspill of lighting and noise into the Preserve, use of non-invasives, and limiting of public access in order to preserve the habitat integrity.

Federal Endangered Species Act (FESA)

The General Plan does not specifically address existing state and federal regulations related to biological resources. However, the Subarea Plan includes the conservation requirements for covered species under FESA and provides for wetland protections that are consistent with Section 404 of the Clean Water Act and Section 1600 of the California Fish and Game Code.

Section 7 of the FESA stipulates that a federal action such as issuance of a permit under the Clean Water Act by the U.S. Army Corps of Engineers (USACE) requires the federal agency (e.g., USACE) to enter into consultation with the U.S. Fish and Wildlife Service (USFWS) to ensure that the federal action is not likely to jeopardize the continued existence of any federally listed endangered or threatened species or result in the destruction or adverse modification of habitat of such species which is determined to be critical (Section 7[a][2]).

Section 9 of the FESA prohibits the taking of species listed by the USFWS as threatened or endangered. As defined by the FESA, “taking” means “to harass, harm, pursue, hunt, shoot, wound, kill, trap, or capture or collect, or attempt to engage in such conduct.” With respect to threatened and endangered plants, the FESA makes it unlawful to remove, damage, or destroy any such species in knowing violation of the law.

Section 10(a) of the FESA provides for takings that are incidental to, but not the purpose of, otherwise lawful activities. Similar provisions also are found under Section 7 for actions by federal agencies. FESA protection for threatened plants is substantially the same as that given to endangered plants, except that the seeds of threatened plants may be collected.

California Endangered Species Act (CESA)

Section 2080 of the California Endangered Species Act prohibits the import, export, take, possession, purchase, or sale of listed species unless explicitly authorized by other provisions of the law. Section 2053 of the CESA states that “. . . it is the policy of the state that state

agencies should not approve projects as proposed which would jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available with conserving the species or its habitats which would prevent jeopardy."

California Fish and Game Code

Sections 1600-1603 of the California Fish and Game Code regulate all diversions, obstructions, or changes to the natural flow of bed, channel, or bank of any river, stream, or lake in California that supports fish or wildlife. Under state law, California Department of Fish and Game (CDFG) must be contacted for a streambed alteration agreement for any activity that may impact a streambed or wetland. CDFG has maintained a "no net loss" policy regarding potential impacts and traditionally has required replacement of wetlands on at least an acre-for-acre (1:1) basis. In practice, replacement ratios are typically higher than 1:1 to compensate for the immediate loss, replacement time, and inherent failures of mitigation attempts.

Clean Water Act

Wetlands protection is provided throughout the city through individual project entitlement reviews, MSCP compliance, the CEQA process, and the federal and/or state wetland permitting process. Section 404 of the Clean Water Act, which is administered by the USACE, regulates the discharge of dredged and/or fill material into "waters of the United States." Wetlands are further defined in 33 CFR 328.3(b) as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support . . . a prevalence of vegetation typically adapted for life in saturated soil conditions." The permitting process entails consultation with federal agencies, public notice, and preparation of a project alternatives analysis in accordance with guidelines issued by the U.S. Environmental Protection Agency (EPA). In accordance with the provisions of Section 404, Fish and Wildlife Coordination Act, and, if federally listed species are present, Section 7 of the FESA, USACE is required to consult with the USFWS prior to acting on the permit. Development projects which contain wetlands would be required to demonstrate that impacts to wetlands have been avoided to the greatest extent practicable and, where impacts are nonetheless proposed, that such impacts have been minimized.

California Coastal Commission

The California Coastal Commission (CCC) is charged with the regulation of development in California's coastal zone as stipulated in the California Coastal Act. Sections 30230, 30231, 30233, 30236, and 30240 of the Coastal Act are directly applicable to the preservation and

protection of wetlands and other environmentally sensitive areas. Section 30233(a) lists the types of development for which diking, filling, or dredging may be permitted in open coastal waters, wetlands, estuaries, and lakes occurring in the coastal zone. This section also stipulates the criteria under which development is permitted (i.e., least environmentally damaging alternative and existence of feasible mitigation measures).

5.3.1.2 Local Plans and Policies

Greenbelt Master Plan

The Greenbelt Master Plan was adopted by the City Council on September 16, 2003 and provides guidance and continuity for planning open space and constructing and maintaining trails that encircle the city. The Plan's primary purpose is to provide goals and policies, trail design standards, and implementation tools that guide the creation of a Greenbelt System of multi-use trails through open space corridors. Implementation of the Greenbelt System creates a unique identity for the city while unifying the western and eastern areas of the city. The Greenbelt Master Plan concept for open space is contained within the Preserve areas depicted in Figure 5.1-4 in the Land Use section of this EIR. That figure also shows the proposed trail system that is part of the Greenbelt Master Plan.

Section 7 of the Land Use Element of the adopted General Plan under the subheading of Chula Vista Greenbelt discusses uses that are compatible with the open space character of the Greenbelt including commercial recreational uses and recreational activities. This section of the General Plan also specifies that trails through the Greenbelt may need to be paved, and may be up to 11 feet wide to ensure continuous access for maintenance and security. However, Section 7.5.3 of the MSCP Subarea Plan contains specific trail and construction guidelines for trails within preserve lands. These guidelines supersede those found in the Greenbelt Master Plan wherever there is overlap.

Otay Valley Regional Park (OVRP) Concept Plan

The Otay Valley Regional Park Concept Plan was adopted in July 1997 by the City of San Diego and the County of San Diego, and in May 2001 by the City of Chula Vista through a Joint Exercise of Powers Authority (JEPA). The Concept Plan area encompasses a large area of sensitive resources, including areas that are currently undergoing, or are proposed for restoration and enhancement along the Otay River, as depicted in Figure 5.3-1. To ensure that the Otay Valley Regional Park meets the diverse goals of a Regional Park, policies focus on providing recreation facilities, protecting resources, and coordinating the park's development with adjacent land uses to ensure compatible development, buffering, and linkages with other regional resources.

Active recreation areas are identified in the OVRP Concept Plan and the MSCP Subarea Plan. These areas are not a part of the Preserve, and include both existing and proposed active and passive recreation sites. Active recreation uses are identified in the Otay Ranch GDP as allowed uses in the Otay Ranch Preserve and are not subject to the 100-foot Edge Plan requirements. Within the Otay Ranch portion of the OVRP, the GDP and the RMP include policies and criteria for siting and design of active recreational uses.

Otay Ranch Resource Management Plan (RMP)

The Otay Ranch Resource Management Plan was adopted by the City of Chula Vista in October 1993, provides guidance for resource protection within Otay Ranch. An important part of the RMP is the creation of the Otay Ranch Preserve. The Otay Ranch Preserve includes approximately 11,375 acres to be set-aside as mitigation for impacts to sensitive resources resulting from Otay Ranch development that would occur both within the city and in the county of San Diego. According to the RMP, of this 11,375 acres, 400 acres (206 acres by the Subarea Plan) can be used for active recreation land uses. The Otay Ranch Preserve has been designed and would be managed specifically for protection and enhancement of natural resources present within Otay Ranch, including sensitive biological resources.

The single unifying goal of the Resource Management Plan is the establishment of an open space system that would become a permanent preserve dedicated to the protection and enhancement of the biological, paleontological, cultural (archaeological and historical), floodplain, scenic resources, and visual quality of Otay Ranch, the maintenance of long-term biological diversity, and the assurance of the survival and recovery of native species and habitats within the Preserve.

5.3.1.3 Existing Citywide Conditions

The majority of the natural biological resources within the city consist of native upland habitats including coastal sage scrub (3,815 acres), grasslands (3,125 acres), and small areas of maritime succulent scrub (293 acres). Approximately 15 percent of the natural vegetation communities within the city also consist of wetland resources including southern coastal salt marsh (204 acres) and riparian/tamarisk scrub (604 acres) and natural flood channels (159 acres) (City of Chula Vista MSCP Subarea Plan, February 2003). Table 5.3-1 provides an estimate of existing natural vegetation communities within the city. Table 5.3-1 summarizes the vegetation mapping that was performed for the MSCP Subregional Planning efforts. The MSCP vegetation mapping is depicted in Figure 5.3-2 (City of Chula Vista 2004c).

In total, implementation of the Chula Vista MSCP Subarea Plan ensures conservation and management of approximately 9,243 acres. An estimated 4,993 of the 9,243 acres would be

TABLE 5.3-1
EXISTING VEGETATION COMMUNITIES ESTIMATES
FOR CITY OF CHULA VISTA

Vegetation Communities	Acreage within City Boundaries
Upland Habitats	
Coastal Sage Scrub	3,815
Maritime Succulent Scrub	293
Chaparral	28
Coastal Sage Scrub/Chaparral Scrub	0
Grassland (all types)	3,125
Oak Woodland	2
Tecate Cypress Forest	0
Eucalyptus Woodland	43
Upland Subtotals	7,306
Wetlands	
Southern Coastal Salt Marsh	204
Freshwater/Alkali Marsh	16
Riparian Forest	10
Oak Riparian Forest	0
Riparian Woodland	0
Riparian/Tamarisk Scrub	604
Open Water/Freshwater	59
Disturbed Wetlands	28
Natural Flood Channel	159
Wetland Subtotals	1,080
TOTAL ALL VEGETATION	8,386

SOURCE: Chula Vista MSCP Subarea Plan, February 2003.

located within the city boundaries and would result in a Preserve that is managed by the City and/or designated Appropriate Managing Entities. In addition, approximately 4,250 acres would be conserved outside the city's current corporate boundaries but within the General Plan Area. Through the combined, cooperative planning efforts of both the City and the County (primarily associated with the Otay Ranch), new urban-level development within the Chula Vista General Plan Area has been directed into the existing incorporated area of the city, adjacent to existing and planned infrastructure, while substantial habitat conservation has been directed into both the incorporated and unincorporated areas.

The USFWS has established the San Diego National Wildlife Refuge (NWR) for purposes of protecting and managing key habitats for endangered and threatened species and maintaining areas of high biological diversity in San Diego County. The Otay/Sweetwater Unit of the San Diego NWR study area encompasses approximately 43,860 acres located in southwestern San Diego County, including portions of the San Miguel Ranch located within the city.

This USFWS also manages ~~has designated~~ approximately 2,620 ~~3,940~~ acres of land and water in South San Diego Bay as the ~~South~~ San Diego Bay ~~Unit of the San Diego~~ NWR, which is partly located within the jurisdictional boundaries of Chula Vista. Within the refuge boundaries, USFWS ~~will~~ protects and manages native fish and ~~the remaining~~ wildlife habitat in and around the southern end of San Diego Bay. ~~using a variety of habitat protection methods.~~ Coordinating with landowners, ~~local~~ local, state, and federal agencies, and the ~~U.S. Navy,~~public, USFWS is currently ~~will be~~ developing a management plan that will describe the desired future conditions of the San Diego Bay MWR and provide long-range guidance and management direction for ~~to~~ conserving ~~e~~ wildlife and habitat resources within the Refuge. ~~through land acquisition, protection through interagency agreements with the Navy, and cooperative agreements, coordinated planning and shared resources with local, federal, and state agencies.~~

Designated by the USFWS, the Sweetwater Marsh NWR includes 316 acres of salt marsh and coastal uplands located on the east side of South San Diego Bay. The Sweetwater Marsh NWR supports populations of light-footed clapper rail, California least terns, Belding's savannah sparrows, and two federally listed plants, salt marsh bird's beak and Palmer's frankenia.

5.3.1.4 Update Areas

Overview

A comprehensive list of sensitive species that occur within the Chula Vista Subarea is included in the Final EIR/EIS prepared for the MSCP Subregional Plan and the Chula Vista MSCP Subarea Plan. Representative plant and animal species for each planning area are

discussed within this biological resources section. Additional details and description of biological resources can be reviewed in the Subregional Plan and the Chula Vista Subarea Plan.

Biological Resources

The majority of the land area within the Northwest and Southwest Planning Areas has been previously developed with residential, commercial, and industrial uses. The potential for significant biological resources to be present in the Northwest Planning Area and the northern portion of the Southwest Planning Area is low.

The Otay/Sweetwater Unit of the San Diego NWR and the South San Diego Bay Unit of the San Diego Bay NWR are adjacent to the Southwest Planning Area. Wildlife species known to occur in these ~~is~~ areas include ~~gull-billed tern, egrets, elegant terns,~~ least Bell's vireo, California gnatcatcher, the quino checkerspot butterfly, San Diego horned lizard, ~~and~~ arroyo toads, California lest tern, western snowy plover, gull billed tern, and elegant tern, among many others. In addition, the Otay River valley extends roughly east-west along the southern boundary of the Southwest Planning Area. There are very small patches of coastal sage scrub and riparian scrub along this segment. Additionally, portions of this segment within the Southwest Planning Area are within both the Greenbelt and MSCP Preserve area (see Figure 5.1-4 in the Land Use section of this EIR). It should be noted that while the General Plan Update does not propose any changes in land use designation for the Bayfront Planning Area, the southernmost portion of this planning area, south of Palomar Street, is proposed to become part of the Southwest Planning Area. This area contains important wetland resources and will not be impacted by adoption of the proposed General Plan.

The East Planning Area is largely undeveloped, former ranching and grazing land. Portions of the East Planning Area are within both the Greenbelt and MSCP Preserve area (see Figure 5.1-4 in the Land Use section of this EIR). The majority of this planning area is covered by grasslands and agricultural lands, with small patches of maritime succulent scrub and coastal sage scrub. Representative wildlife species occurring in the East Planning Area includes least Bell's vireo, coastal California gnatcatchers, Thorne's hairstreak butterfly, Hermes copper butterfly, red-diamond rattlesnake, San Diego black-tailed jack rabbit, orange-throated whiptail lizard, California horned lark, Bell's sage sparrow, southern California rufous-crowned sparrow, San Diego horned lizard, cactus wren, burrowing owl, northern harrier, and Cooper's hawk.

5.3.2 Thresholds of Significance

The proposed General Plan Update would result in a significant impact to biological resources if it would:

- Threshold 1: Have a substantial adverse effect on any species identified as a candidate, sensitive, or special status species or any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

- Threshold 2: Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

- Threshold 3: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

- Threshold 4: Conflict with any local policies or ordinances protecting biological resources or conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

5.3.3 Impacts

5.3.3.1 Threshold 1: Sensitive Species/Habitats

Threshold 1 states that the General Plan Update would result in a significant impact if adoption of the plan would have a substantial adverse effect on any species identified as a candidate, sensitive, or special status species or any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service.

Implementation of the Preferred Plan or any of the scenarios has the potential to impact existing sensitive habitat and wildlife species found within the city. Portions of the Otay River valley within the Southwest Planning Area and portions of the East Planning Area are within both the Greenbelt and MSCP Preserve area. The Otay River valley along the southern boundary of the Southwest Planning Area contains very small patches of coastal sage scrub and riparian scrub. The Otay/Sweetwater Unit and South San Diego Bay Unit of the San Diego NWR are adjacent to the Southwest Planning Area. Wildlife species known to occur in this area include gull billed tern, egrets, elegant tern, least Bell's vireo, coastal California gnatcatcher, quino checkerspot butterfly, San Diego horned lizard, and arroyo toad. Impacts to sensitive habitats and species would be significant.

The East Planning Area is largely undeveloped, former ranching and grazing land with the majority of the planning area covered by grasslands and agricultural lands, with small patches of maritime succulent scrub and coastal sage scrub. The adoption of the Preferred Plan or any of the Scenarios for the East Planning Area has the potential to impact the state

and federally listed least Bell's vireo. In addition, several CDFG species of special concern that are known to occur in this planning area could be impacted, including yellow-breasted chat, Cooper's hawk, burrowing owl, and yellow warbler. Species that are locally sensitive that could be impacted include great blue heron, blue-gray gnatcatcher, black-crowned night heron, grasshopper sparrow, and red-shouldered hawk. Impacts to these species would be significant.

In order to reduce impacts to these sensitive biological resources, the City adopted the MSCP Subarea Plan in February 2003. The Subarea Plan is intended to implement habitat and species conservation goals and requirements consistent with the MSCP Subregional Plan. Impacts to covered species and other sensitive resources are regulated through the implementation of appropriate policies and ordinances such as the HLIT Ordinance, protection provisions for narrow endemic species, the Wetlands Protection Program, and guidelines for Adjacency Management issues. In addition, the Subarea Plan also provides measures to ensure long-term management of the Preserve consistent with the MSCP Subregional Plan.

Impacts to sensitive biological resources would be reduced to below a level of significance with the implementation of proposed Objective EE 1 and Policy EE 1.1, which address sensitive biological resources.

Objective EE 1

Conserve Chula Vista's sensitive biological resources.

Policy

EE 1.1: Implement the City of Chula Vista MSCP Subarea Plan.

Implementation of this policy ensures that the Preferred Plan and all three Scenarios would not result in a significant impact to sensitive biological resources because the policies ensure conservation of core biological resource areas and associated habitat linkages identified in the MSCP Subregional Plan. This plan addresses the guidelines and regulations established in the FESA, CESA, the State Fish and Game Code, Section 404 of the Clean Water Act, the Chula Vista MSCP Subarea Plan, and the Otay Ranch RMP.

5.3.3.2 Threshold 2: Wetlands

Threshold 2 states that the General Plan Update would result in a significant impact if adoption of the plan would result in a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

The adoption of the General Plan Update has the potential to result in a substantial adverse effect on federally protected wetlands. The proposed General Plan contains Policy EE 1.1, which implements the Chula Vista MSCP Subarea Plan. The Subarea Plan contains a Wetlands Protection Program (Section 5.2.4), which requires development projects to demonstrate that impacts to wetlands have been avoided or minimized to the greatest extent practicable. In addition, this program would provide wetland protection throughout the Subarea through individual project entitlement reviews and the associated CEQA process. The process involves an evaluation of wetlands, avoidance, and minimization and would ensure compensatory mitigation (at ratios identified in Table 5-6 of the Subarea Plan) within the Chula Vista Subarea for unavoidable impacts to wetlands, thereby achieving no overall net loss of wetlands. In addition, impacts to wetlands and riparian habitat are regulated by existing state and federal regulations (USACE, CDFG, and California Coastal Commission [CCC]). Projects subject to state and federal regulations must also demonstrate compliance with applicable policies of these agencies. Implementation of Policy EE 1.1 ensures that the Preferred Plan or any of the three proposed Scenarios would not result in a significant impact to wetland resources because the policy in the proposed General Plan Update provides for wetland protection.

Because the development footprint and relative intensity of land uses for the Preferred Plan or Scenarios 1, 2, or 3 are similar, impacts resulting from implementation of any of the scenarios would be the same regardless of which is ultimately selected. Potential impacts to wetland resources resulting from adoption of the proposed General Plan Update are self-mitigated by implementation of Objective EE 1 and Policy EE 1.1.

5.3.3.3 Threshold 3: Wildlife Corridors

Threshold 3 states that the General Plan Update would result in a significant impact if adoption of the plan would interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

The adoption of the General Plan Update has the potential to interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or to impede the use of native wildlife nursery sites. One of the goals of the Subarea Plan is to conserve covered species and their habitats through the conservation of interconnected significant habitat cores and linkages. Areas targeted for preservation within Chula Vista represent large, interconnected locks of habitat, which follow natural topography and include areas with varying biodiversity and land with “high” and “very high” biological values. The Preferred Plan would apply Objective EE 1 and Policy EE 1.1, which implement the City of Chula MSCP Subarea Plan. This would ensure conservation of core biological resource areas and associated habitat linkages.

Because the development footprint and relative intensity of land uses for the Preferred Plan and Scenarios 1, 2, or 3 is similar, impacts resulting from implementation of any of the scenarios (Preferred Plan, Scenarios 1, 2, or 3) would be the same regardless of which is ultimately selected. The movement of any native resident or migratory fish or wildlife species or established native resident or migratory wildlife corridors would be protected through the implementation of the Subarea Plan. Therefore, impacts are self-mitigated.

5.3.3.4 Threshold 4: Local Policies and Ordinances

Threshold 4 states that the General Plan Update would result in a significant impact if adoption of the plan would conflict with any local policies or ordinances protecting biological resources or conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

As discussed above, the proposed General Plan Update contains Policy EE 1.1, which is to implement the Chula Vista MSCP Subarea Plan. Implementation of the Subarea Plan would ensure conservation of core biological resource areas and associated habitat linkages identified in the MSCP Subregional Plan located within the incorporated boundaries of the Chula Vista Subarea. In addition, implementation of the Subarea Plan would contribute significant conservation outside the Chula Vista Subarea within the Chula Vista MSCP Planning Area in the unincorporated County Multi-Habitat Planning Area (MHPA). The Subarea Plan is intended to implement all relevant sections of the MSCP Subregional Plan, including the habitat and species conservation goals and requirements found in Table 3-5 of the Subregional Plan. Any project approved by the City must be in conformance with the Subarea Plan. The General Plan Update contains policies that ensure development does not conflict with the provisions of adopted local policies and ordinances.

Preferred Plan

The Preferred Plan includes amendments to the General Plan text, the General Plan land use and circulation diagrams, as well as proposed modifications to portions of the Otay Ranch GDP and RMP preserve boundaries in order to reflect the adopted Subarea Plan. A brief description of the proposed changes is provided below:

(1) Adopt a new General Plan text, comprised of five new elements consisting of revisions to the elements comprising the current General Plan, with the exception of the current Housing Element. The proposed new elements consist of the following: Land Use and Transportation Element; Economic Development Element; Public Facilities and Services Element; Growth Management Element; and Environmental Element. The proposed General Plan text also contains additional chapters, including an implementation chapter.

(2) Adopt a new General Plan Land Use Diagram to provide for land use changes within focused areas as described in the preceding pages and to establish the following new land use designations: mixed-use residential, mixed-use commercial, mixed-use transit focus area, and urban core residential (28–60 dwelling units/acre). This component of the General Plan amendment includes the redesignation of areas currently designated as open space throughout the General Plan area to open space, open space preserve, open space recreation, and active recreation in accordance with the definition of these proposed land use categories in the proposed Land Use and Transportation Element. For example, the land use designation of all areas within the Chula Vista MSCP Preserve are proposed to be changed to open space preserve.

(3) Adopt a new Circulation Diagram and Transit System.

(4) Amend the Otay Ranch GDP and RMP preserve boundaries in order to generally reflect the approved and adopted Subarea Plan within Villages 4, 9, 10, 11, and the University area. An illustrative depiction of these proposed changes is shown in Figure 5.3-3.

(5) Amend changes to the General Plan Land Use Diagram and GDP land use maps to add a note of clarification denoting the planned development areas within a portion of the Inverted "L" property of Village 14, and portions within Village 15 and 16 that have been recently acquired for conservation purposes. In addition, the proposed General Plan update also includes an amendment to the GDP and RMP to implement a mapping correction to change approximately 45 acres of land designated for active recreation uses within the Otay River valley to Preserve.

The Preferred Plan includes proposed amendments to the Otay Ranch GDP and RMP preserve boundaries within Villages 4, 9, 10, 11, and the University area (refer to Figure 5.3-3). The intent of these proposed boundary modifications are to ensure that the GDP and RMP map is consistent with the adopted Chula Vista MSCP Subarea Plan. As part of the preparation and approval of the Chula Vista MSCP Subarea Plan, the proposed boundary changes were previously evaluated in the Final EIR/EIS for the MSCP Subregional Plan (City of San Diego 1997); the Addendum to the Final EIR/EIS for the Chula Vista MSCP Subarea Plan (City of Chula Vista 2000); and the Supplemental EIR/EA for the Revised Chula Vista MSCP Subarea Plan (City of Chula Vista 2002a). These documents determined that the proposed preserve configuration would retain the overall integrity of the preserve design while maintaining or improving the conservation of covered species. The proposed preserve boundary changes are consistent with the adopted Subarea Plan and will not result in new or greater impacts to sensitive biological resources than those previously identified.

As a part of the Preferred Plan, the proposed amendment includes changes to the General Plan Land Use Diagram and GDP land use maps to add a note of clarification denoting the

planned development areas within a portion of the Inverted "L" property of Village 14, and portions within Villages 15 and 16 that have been recently acquired for conservation purposes. In addition, the proposed General Plan update also includes an amendment to the GDP and RMP to implement a mapping correction to change approximately 45 acres of land designated for active recreation uses within the Otay River valley to Preserve. The proposed map notation and correction will identify where additional areas have been conserved for open space purposes (see Figure 5.3-3). No significant impacts to biological resources would result because these proposed changes result in an overall benefit to the preservation of biological resources.

Under the Preferred Plan, a mixed-use commercial land use designation for the West Fairfield District is proposed within the Southwest Planning Area, which is currently in a portion of the City of San Diego MHPA. If development is proposed in this area, the land will need to be annexed from the City of San Diego. Section 5.3.1.1 of the Chula Vista MSCP Subarea Plan states that when property is annexed into the City from another jurisdiction which has an approved Subarea Plan, the following applies:

1. An MSCP Annexation Agreement shall be reached between the City, the detaching jurisdiction, and the wildlife agencies as part of the annexation process, to ensure that any development of the annexed land proceeds in accordance with the conservation goals of the MSCP. If plans for development of the annexing area are consistent with this Subarea Plan and the detaching jurisdiction's approved Subarea Plan, the wildlife agencies will not withhold approval of the MSCP Annexation Agreement.

2. Take Authorization for the annexed territory will be transferred from the detaching jurisdiction to the City upon approval of the wildlife agencies, in accordance with applicable permit transfer requirements.

3. The City's Implementing Agreement (IA) shall apply to the annexed territory upon recordation of the annexation in the County's Assessor's Office, without the need for amendment of the IA.

4. The MSCP Annexation Agreement will be automatically incorporated by reference into the Subarea Plan. If necessary, the Subarea Plan will be amended by administrative approval to incorporate the annexed territory, including estimated Take and conservation acreage as reflected in the MSCP Annexation Agreement. Revisions to the Subarea Plan, if needed, will not be required to be completed prior to the transfer of Take Authority.

Implementation of Section 5.3.1.1 of the City of Chula Vista MSCP would avoid significant biological impacts associated with annexation of City of San Diego MHPA land and any proposed development.

In the East Planning Area, the Preferred Plan specifies active recreation land use designation for currently designated open space land within the Otay Valley District. According to Section 6.3.4 of the Chula Vista MSCP, active recreation areas are identified in the OVRP Concept Plan and in the Subarea Plan. These areas are not part of the Preserve, and include both existing and proposed active and passive recreation sites. Within the OVRP, active recreation areas were sited according to the criteria contained in RMP1 Policy 6.2 listed below:

1. Active recreation areas should be located in previously disturbed, non-sensitive areas.

2. Active recreation uses should be readily accessible from existing and planned public roads and should not intrude into areas within the Preserve.

3. Active recreation uses should be clustered to minimize the extent of the edge between active recreation uses and sensitive resources within the Preserve.

4. Limited commercial uses/activities related to active recreation may be allowed within the 400 acres designated for active recreation.

5. Public parks and recreation facilities may be operated commercially by private operators within active recreation areas.

6. Emphasis shall be placed on providing the majority of the active recreation in the Otay River Valley to the extent that this is consistent with OVRP Concept Plan, as may be adopted.

There is one objective in the proposed Land Use and Transportation Element that addresses sensitive biological resources within the Otay Valley District of the East Planning Area. In promoting this objective, policies addressing the protection of important resources are proposed. This proposed objective and policies are:

Objective LUT 82

Designate and allow for appropriate and carefully planned land uses that provide additional recreational activities, both public and private, that do not threaten the viability of sensitive biological habitats or the Otay Valley's function as a key component of the Otay Ranch Preserve.

Policies

LUT 82.1: Limit public and private active recreational uses to the previously disturbed, non-sensitive areas deemed appropriate for active

recreation development by the City's MSCP Subarea Plan and Otay Ranch Resource Management Plan. Access to these sites should be readily accessible from existing and planned public roads and should not intrude into core Preserve areas.

LUT 82.3: Active recreation uses authorized by Policy LUT 81.1, above, shall be sited pursuant to the MSCP Subarea Plan to minimize the potential negative effects of these uses on adjacent Preserve areas.

LUT 82.4: Prior to approval of any discretionary permit in the Otay Valley District ensure that the proposed project is consistent with the Otay Valley Regional Park Concept Plan, and assist implementation of the Concept Plan through project features and design that support or provide access, staging areas, trails, and appropriate buffering.

Application of Policy LUT 82.1 limits public and private active recreational uses to the previously disturbed, non-sensitive areas deemed appropriate for active recreation development by the City's MSCP Subarea Plan and Otay Ranch Resource Management Plan. Policies LUT 82.3 and 82.4 requires that any limited commercial or active recreational use be sited to minimize any affect on sensitive resources in the MSCP Open Space Preserve and ensures that development would be consistent with the Otay Valley Regional Park Concept Plan. This includes assisting implementation of the Concept Plan through project features and design that support or provide access, staging areas, trails, and appropriate buffering. Additionally, all development adjacent to the Preserve would be required to adhere to the MSCP adjacency guidelines as described in Section 7.2.5, Adjacency Management Issues of the Subarea Plan. These guidelines include provisions for drainage requirements (applicable NPDES Best Management Practices), toxic substances, lighting, noise, invasives, and appropriate buffers adjacent to the Preserve. Any active recreation development or limited commercial uses/activities related to active recreation allowed within the Otay Valley District would be required to adhere to the adjacency guidelines. Therefore, implementation of the Preferred Plan within the Otay Valley District would avoid any significant biological impacts with any local policies or ordinances protecting biological resources or conflict with other approved local, regional, or state habitat conservation plan.

Scenarios 1 and 3

As with the Preferred Plan, the proposed land use changes for Scenarios 1 and 3 would not affect lands designated for preservation within the MSCP Subarea. The proposed discretionary actions for Scenarios 1 and 3 would include a modification of the General Plan map to ensure that the general map corresponds to the boundaries of the adopted MSCP Subarea Plan. The action covered by this EIR addresses the modification of the Otay Ranch RMP preserve boundaries in order to reflect the approved and adopted Subarea Plan. The proposed boundary modifications would occur along the eastern and southern boundaries of

Villages 9, 10, and 11 and along a portion of the Preserve area within Village 4, which is consistent with the adopted Chula Vista MSCP Subarea Plan. This action would bring the adopted General Plan map into consistency with the Subarea Plan, thereby eliminating boundary conflicts and ensuring that a conflict with the Subarea Plan does not rise to a level of significance.

Scenarios 1 and 3 would designate currently open space lands for active recreation and mixed-use commercial for portions of the Otay Valley District. The proposed mixed-use commercial would be related to active recreation as required in Section 6.3.4 of the Chula Vista MSCP. As discussed above for the Preferred Plan, compliance with Policies LUT 82.1 through 82.4 would ensure that impacts resulting from currently designated open space for active recreation and mixed-use commercial for portions of the Otay Valley District would be avoided because the policies limit public and private active recreational uses to the previously disturbed, non-sensitive areas deemed appropriate for active recreation development by the City's MSCP Subarea Plan and Otay Ranch Resource Management Plan as well as requires that any limited commercial or active recreational use be sited to minimize any affect on sensitive resources in the MSCP Open Space Preserve and ensures that development would be consistent with the Otay Valley Regional Park Concept Plan. Additionally, all development adjacent to the Preserve would be required to adhere to the MSCP adjacency guidelines as described in Section 7.2.5, Adjacency Management Issues of the Subarea Plan. These guidelines include provisions for drainage, toxic substances, lighting, noise, invasives, and appropriate buffers adjacent to the Preserve. Any active recreation development or limited commercial uses/activities related to active recreation allowed within the Otay Valley District would be required to adhere to the adjacency guidelines. Therefore, Scenarios 1 and 3 would avoid any significant biological impacts with any local policies or ordinances protecting biological resources or conflict with other approved local, regional, or state habitat conservation plan.

Scenario 2

Scenario 2 proposes to designate portions of the Otay Valley District as residential medium-high. According to Section 6.3.4 of the Chula Vista MSCP, active and passive recreation uses and limited commercial uses/activities related to active recreation is allowed within the 400 acres designated for active recreation. Residential development in this area completed in conformance with Scenario 2 would conflict with the uses allowed for in the Chula Vista MSCP and would therefore be a significant impact.

Scenario 2 proposes to allow a portion of Wolf Canyon to be filled to accommodate development. Development under this scenario would require a Boundary Adjustment to the City of Chula Vista MSCP Subarea Plan. This scenario would remove Preserve in the western fork of Wolf Canyon and add Preserve in the northern portion of the main drainage of the canyon. The Preserve Boundary Adjustment proposal depicted in Scenario 2 is not covered by this EIR and, therefore, cannot be adopted as part of any of the proposed General

Plan Update actions that relies upon this EIR. If this scenario is proposed, a separate environmental analysis would be required.

5.3.4 Level of Significance Prior to Mitigation

5.3.4.1 Threshold 1: Sensitive Species/Habitats

Impacts of future development on sensitive species or their habitats may occur as a result of the implementation of the Preferred Plan or Scenarios 1, 2, or 3. Development has the potential to remove or degrade natural habitats, including sensitive plant communities and habitats supportive of unique, rare, and endangered species. The General Plan Update contains Objective EE 1 and Policy EE 1.1, which implement the City of Chula MSCP Subarea Plan. The Subarea Plan addresses regulations such as FESA, CESA, the state Fish and Game Code, and Section 404 of the Clean Water Act. Compliance with Objective EE 1 and Policy EE 1.1 would ensure that impacts to sensitive biological resources resulting from development associated with the General Plan Update would be avoided because the policies in the proposed plan ensure conservation of core biological resource areas and associated habitat linkages. In addition, implementation of the Subarea Plan would contribute significant conservation outside the Chula Vista Subarea within the Chula Vista MSCP Planning Area in the unincorporated County of San Diego MHPA. Impacts to sensitive biological resources are self-mitigated.

5.3.4.2 Threshold 2: Wetlands

Threshold 2 states that the General Plan Update would result in a significant impact if adoption of the plan would result in a substantial adverse effect on federally protected wetlands. Compliance with Objective EE 1 and Policy EE 1.1 would ensure that impacts to wetland resources are avoided because application of Policy EE 1.1 includes a Wetlands Protection Program (Section 5.2.4 of the Chula Vista MSCP), which would provide wetland protection that would be provided throughout the subarea through individual project entitlement reviews and the associated CEQA process. The process would provide an evaluation of wetlands avoidance and minimization and would ensure compensatory mitigation within the Chula Vista Subarea for unavoidable impacts to wetlands, thereby achieving no overall net loss of wetlands. Impacts to wetland resources are self-mitigated.

5.3.4.3 Threshold 3: Wildlife Corridor

Threshold 3 states that the General Plan Update would result in a significant impact if adoption of the plan would interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors. Development completed in conformance with the proposed Preferred Plan or Scenarios 1, 2, or 3 has the potential to impede wildlife movement between significant habitat areas, to the detriment of wildlife populations. The movement of any native resident

or migratory fish species which use established wildlife corridors would be protected through the implementation of the Subarea Plan. Compliance with Objective EE 1 and Policy EE 1.1 ensures that impacts to the movement of any native resident or migratory fish or wildlife species are avoided because the plan contains policies that provide for habitat protection. Application of Policy EE 1.1 ensures the conservation of covered species and their habitats through the conservation of interconnected significant habitat cores and linkages identified in the MSCP Subregional Plan located within the boundaries of the Chula Vista Subarea, comprised of the land area within the incorporated boundary of the City. Impacts to wildlife corridors are self-mitigated.

5.3.4.4 Threshold 4: Local Plans and Policies

Threshold 4 states that General Plan Update would result in a significant impact if adoption of the plan would conflict with any local policies or ordinances. Compliance with Objective EE 1 and Policy EE 1.1 ensures that impacts to sensitive biological resources are avoided. Policy EE 1.1 implements the Chula Vista MSCP Subarea Plan and ensures development does not conflict the provisions of adopted local policies and ordinances. The Subarea Plan is intended to implement all relevant sections of the MSCP Subregional Plan, including the habitat and species conservation goals and requirements found in Table 3-5 of the Subregional Plan. Any project approved by the City must be in conformance with the Subarea Plan.

For Threshold 4, impacts resulting from development associated with Scenario 2 would be significant. Scenario 2 proposes to allow a portion of Wolf Canyon to be filled to accommodate development. Development under this scenario would require a boundary adjustment to the City of Chula Vista MSCP Subarea Plan. This scenario would remove Preserve in the western fork of Wolf Canyon and add Preserve in the northern portion of the main drainage of the canyon. This is a significant impact in two areas. It does not conform to the Subarea Plan, requiring a boundary adjustment and equivalency analysis, and it potentially represents an impact to biological resources. This determination requires approval by the City and concurrence by the resource agencies. While it may be possible to demonstrate functional equivalency for a boundary adjustment, that process has not been completed at this time. Without that determination, availability and adequacy of measures to lessen the effect cannot be determined.

Scenario 2 proposes to designate portions of the Otay Valley District for commercial and residential use in an area specified for active recreation. These uses are not compatible with the MSCP and the RMP. As such, impacts for Threshold 4 are significant for Scenario 2.

5.3.5 Mitigation Measures

There are no significant impacts to biological resources under the Preferred Plan and Scenarios 1 and 3. Therefore, no mitigation for these plans is required.

Impacts resulting from development associated with Scenario 2 would be significant. Scenario 2 proposes to allow a portion of Wolf Canyon to be filled to accommodate development. The following mitigation measure would be required for Scenario 2.

5.3-1 Prior to approval of a discretionary action allowing a portion of Wolf Canyon to be filled to accommodate development, the City shall complete a boundary adjustment in accordance with the adopted procedures of the Subarea Plan. These procedures are provided in Section 5.4.2 of the MSCP Subarea Plan and are summarized below.

- A preliminary determination of the biological value of a proposed boundary adjustment shall be made by the Director of Planning and Building in accordance with Section 5.4.2 of the MSCP Subarea Plan.

- The City shall notify the Wildlife Agencies in writing of the boundary adjustment including written findings of equivalency made by the Director of Planning and Building.

- The adjusted boundary shall become the adjusted boundary upon project approval unless the Wildlife Agencies object to the adjusted boundary within 30 days of receipt of City's written notice to the Wildlife Agencies. Objections by the Wildlife Agencies to boundary adjustments shall be made in writing and shall state the rationale in support of objection.

- If the City receives written objection to a determination of a boundary adjustment by the Wildlife Agencies within 30 days of receipt of City's written notice to the Wildlife Agencies, the City and Wildlife Agencies shall have 60 days to meet, confer, and reach agreement upon final Preserve boundaries. The boundary adjustment as proposed shall not be approved if an agreement is not reached.

- If the Wildlife Agencies fail to respond to the City's notice within 30 days of receipt of the City's determination, the decision by the Director of Planning and Building shall be deemed accepted.

A significant biological resources impact would occur from application of residential land use designation to this portion of Wolf Canyon as proposed by Scenario 2 because a boundary adjustment is required prior to the adoption of the designation of residential use in this area, and since that determination has not yet been made, specific mitigation is unavailable at this time. The impacts to biological resources as a result of Scenario 2 remain significant and unavoidable.

5.3.6 Level of Significance After Mitigation

There are no significant impacts to biological resources under the Preferred Plan and Scenarios 1 and 3. Impacts resulting from the adoption of Scenario 2 remain significant and unmitigated.

5.4 Cultural Resources

Cultural resources consist of buildings, structures, objects, archaeological sites, districts, landscapes, places, traditional cultural properties, manuscripts, and other resources deemed to be historically significant or significant from an architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural standpoint at the local, state, or national level. A cultural resource may: be the location of a prehistoric or historic occupation or activity; be a locale which has been, and often continues to be of religious, mythological, cultural, economic, and/or social importance to an identifiable ethnic group; be associated with events that have made a significant contribution to history or cultural heritage; be associated with the lives of important persons; embody the distinctive characteristics of a type, period, region, or method of construction; represent the work of an important creative individual; possess high artistic values; or yield information important in prehistory or history.

5.4.1 Existing Conditions

5.4.1.1 Regulatory Plans and Policies

Historic preservation is not addressed in the adopted Chula Vista General Plan nor does the City have an historic preservation ordinance. The legislative basis for historic preservation in Chula Vista is compliance with CEQA and the Chula Vista Municipal Code (Chapter 2.32, Sections 2.32.030 (J), 2.32.070, and 2.32.090), which falls under the purview of the City's Resource Conservation Commission (RCC).

The RCC advises the City Council on ways to safeguard the city's historic, aesthetic, social, economic, political, and architectural past. As part of this responsibility, the commission recommends to the City Council the designation of any site which it has found to meet the criteria as an historical site. The City adopted the Mills Act Program in 2001, which is a tax-incentive program for owners of historic properties. The historic designation process identified above and the Mills Act program have resulted in the development of a list of designated historic resources within the City of Chula Vista. These resources are identified in the citywide conditions discussion below.

CEQA provides a definition of an "historic resource" as a resource which includes the following:

> (1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code SS5024.1, Title 14 CCR, Section 4850 et seq.).

(2) A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

(3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code SS5024.1, Title 14 CCR, Section 4852) including the following:

(A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

(B) Is associated with the lives of persons important in our past;

(C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

(D) Has yielded, or may be likely to yield, information important in prehistory or history.

In 2002, the City approved the formation of an Ad Hoc Historic Preservation Committee to develop an historic preservation plan that would coordinate with the General Plan Update. The purpose of the Ad Hoc Preservation Committee was to:

- Evaluate the City’s existing historic preservation program;
- Make a recommendation for an appropriate program for the future;
- Identify short-term and long-term tasks that would assist the City of Chula Vista in accomplishing the mission for historic preservation.

The report of the Ad Hoc Committee titled An Evaluation of Historic Preservation in Chula Vista was adopted by the City Council on September 30, 2003 [Resolution #2003-416] and is attached in Appendix J.

5.4.1.2 Existing Citywide Conditions

a. Historic Background

Native American presence in San Diego County is known to extend back some 9,000 years before the present. The oldest sites in the region are represented by an artifact assemblage that was first described by Malcolm Rogers as the "Scraper-makers" and later named the San Dieguito (Rogers 1929, 1945, 1966). The people who are associated with this period, circa 9,000 years before the present, left an artifact assemblage that is typified by large flaked stone tools.

In the South County region there is evidence to suggest that the most widely represented period of site development is the very long La Jolla phase. Robbins-Wade (1990) concludes that "Otay Mesa appears to have been used mainly between 7000 and 2000 years ago, but the chronometric data come from only 13 of the almost 200 sites recorded on the mesa." This description can be applied with some confidence to the remaining area or the baseline coverage.

Following the La Jolla phase is the Late Prehistoric Period. This period probably reflects the emergence of populations related to the ethnographic populations of the area. In the study region there is sporadic evidence for Late Prehistoric settlement based primarily on the occurrence of ceramic items at recorded sites and on published records. The presence of ceramics, long considered an indication of Late Period association, is rare in the coastal Chula Vista region. Significant Late Prehistoric sites occur in the Otay River valley and the far eastern portion of the General Plan area, east of the Otay Lakes.

The Chula Vista area was part of a Spanish land grant known as Rancho del Rey, the King's Ranch. Under Mexican rule in 1821, this ranch became known as Rancho de la Nacion. It encompassed National City, Chula Vista, Bonita, Sunnyside, and the Sweetwater Valley. In 1845, the ranch was granted to Juan Forster, son-in-law of Mexican governor Pio Pico.

In 1885, Frank Kimball brought the Santa Fe Railroad to southern California, with its first terminus in National City. Several directors of the Santa Fe Railroad and Colonel W.G. Dickinson, a professional town planner, formed the San Diego Land and Town Company. They began developing the area by subdividing a 5,000-acre portion into five-acre lots. The lots were separated with avenues and streets 80 feet in width and a steam motor passing through the center of the streets. The purchaser was required to build thereon.

The Sweetwater Dam was built by the San Diego Land and Town Company to bring water to Chula Vista; a railroad was built to connect Chula Vista and Otay with National City and San Diego. The people coming to Chula Vista grew lemons, and in time, the area became the largest lemon-growing center in the world.

The city was incorporated in 1911 with a population of 550. After its incorporation, Chula Vista continued to be a leading lemon-growing center. Other important crops were tomatoes, celery, and salt. The Western Salt Works has been operating on the Chula Vista bay front since the beginning of the century. From 1916 to 1920, Chula Vista had a kelp processing plant that produced potash and acetone to make cordite used by the British to make bombs during World War I. This plant, previously located on the site known as Gunpowder Point, had the largest kelp harvesting fleet and tank farm in the world at that time. Just after World War II, Rohr Aircraft Company was established on the bay front.

The Rohr Aircraft Corporation moved to Chula Vista in 1941. Rohr was started in San Diego in 1940 and moved to their Chula Vista location in February of the following year. In July of 1941 they employed 752 people and by the height of World War II they employed 9,000 people. By 1945 Rohr was the largest producer of aircraft power packages in the world, and by 1950 the influx of workers to the facility had doubled the population of Chula Vista to over 16,000.

b. Resource Information

As a result of the research conducted in the city, numerous historic and archaeological resources have been identified. The current planning area supports at least 611 cultural resource sites. Largely, these sites have been recorded over the past 30 years. A percentage of these resources are no longer present at their mapped locations as they were destroyed as a result of development. However, many remain in part or in total. Most of these resources were recorded as a result of the CEQA process completed by the city for specific developments.

In 1985, the City of Chula Vista sponsored a local historic resources inventory. The inventory was limited to the area of Trousdale Drive to the north, L Street to the south, Interstate 5 to the west, and Hilltop Drive on the east. As a result, approximately 258 homes were included on the survey list with 42 of the homes being included on the Chula Vista List of Historic Sites. There are currently ~~61~~ 69 sites on the List of Historic Structures in the city (Table 5.4.1). These 69~~1~~ structures have been determined by the City Council to meet the City's historic criteria.

The EIR for the 1989 General Plan contained a map of "areas of cultural resource potential." With the work that has been completed since that study, the areas of prehistoric archaeological resource potential have been updated (Figure 5.4-1).

TABLE 5.4-1
CHULA VISTA DESIGNATED HISTORIC SITES

Site No.	Address	Historic Name	Common Name	Resource Conservation Commission Recom.	City Council App.
1	699 E St.	Site of Greg Rogers House			7/28/87
2	3 North Second Ave.	James Bulmer House	Blumer House		7/28/87
3	210 Davidson St.	Alfred Haines House	Handel Cordrey House		7/28/87
4	666 Third Ave.	Our House	Orchard House		7/28/87
5	276 F St.	First Congregational Church			7/28/87
6	525 F St.	James Johnson House	James Johnson House		7/28/87
7	669 Del Mar Ave.	George Worthington House	El Nido		7/28/87
8	671 Fourth Ave.	William Haines House	Seaman Haines House		7/28/87
9	21 F St.	Reginald Vaughn House	Augusta Starkley House		7/28/87
10	613 Second Ave.	Byron Bronson House	Byron Bronson House		7/28/87
11	640 Fifth Ave.	Engebretson-Stafford House	Stafford House		7/28/87
12	357 G St.	Chula Vista Women's Club		5/7/84	5/22/84
13	264 I St.	Clara Smith House	Four Seasons Day Care Center	7/28/86 (M)	7/28/87
14	617 Del Mar	Frances Fisher House	Glen Roberts House	7/28/86 (M)	7/28/87
15	630 Del Mar	George Rife House	Rosemary Bullen House	7/28/86 (M)	7/28/87
16	30 F St.	Herbert Bryant House	Michael Carson House	8/4/86	7/28/87
17	50 F St.	Herman Hotel Carriage House	William Smith House	8/4/86	7/28/87
18	54 F St.	W.J.S. Browne House	William Browne House	8/4/86	7/28/87
19	88 L St.	San Diego Country Club	San Diego Country Club	8/4/86	7/28/87
20	62 Cook Court	Hazel Goes Cook House	Hazel Goes Cook House	8/4/86	7/28/87
21	89 Country Club Dr.	Theodore Thursten House	Theodore Thursten House	8/4/86	7/28/87
22	344 Hilltop	Dupree-Gould House	Gould House	8/4/86	7/28/87
23	170 Cypress	L.G. Spring House	Ruth Weatherbie House	8/18/86 (M)	7/28/87
24	34 Davidson	Carl Boltz House	Mary Boltz House	8/18/86	7/28/87
25	124 Hilltop	Leo Christy House	Leo Christy House	8/18/86 (M)	7/28/87
26	151 Landis	Albert Barker House	Abraham Eitzen House	8/18/86 (M)	7/28/87
27	209 D St.	Nancy Jobes House	Marcos Carver House	8/18/86	7/28/87
28	503 G St.	Kindergarten Building	Old Kindergarten Building	8/18/86	7/28/87
29	511 G St.	San Diego County Insectary	Insectary Building	8/18/86	7/28/87
30	44 North Second Ave.	Edward Gillette House	Marcella Darling House	8/18/86	7/28/87
31	301-305 Third Ave.	Melville Block	Security Trust Bank Building	8/18/86	7/28/87
32	410 Church	Elmer Mikkelson House	Rex Budel House	8/25/86	7/28/87
33	665 Del Mar	Mary Mill House	Mary Miller House	8/25/86	7/28/87
34	374 Roosevelt St.			8/25/86	7/28/87
35	155 G St.	Mrs. B.K. Maude House	The Boarding House	8/25/86	7/28/87
36	33 I St.	Robert Mueller House	Celia Flynn House	8/25/86	7/28/87

TABLE 5.4-1
CHULA VISTA DESIGNATED HISTORIC SITES
(continued)

Site No.	Address	Historic Name	Common Name	Resource Conservation Commission Recom.	City Council App.
37	379 J St.	Evelyn Haines House	Theodore Curtis House	8/25/86	7/28/87
38	435 First Ave.	William Sallmon House	William Smith House	8/25/86	7/28/87
39	320 Second Ave.	Allison Crocket House	Allison Crocket House	8/25/86	7/28/87
40	10 Second Ave.	Lucious Wright House	Lucious Wright House	8/18/86	7/28/87
41	614 Second Ave.	Nadine Davies House	Lee Burch House	7/28/86	7/28/87
42	616 Second Ave.	Greg Rogers House	Greg Rogers House	7/28/86	7/28/87
43	642 Second Ave.	Garrettson-Frank House	Frank House	7/28/86	7/28/87
44	644 Second Ave.	Jennie MacDonald House	Jean McCall House	7/28/86	7/28/87
45	311 D St.	Frank Damren House	Margaret Cameron House		
46		Rohr Manor		8/25/86	7/28/87
47	200 K St.	Edmund Russ House		7/2/01	9/25/01
48	224 Fig	George Steese House		10/15/01	12/4/01
49	279 J St.	Victory Day House		12/3/01	12/11/01
50	466 E St.	The Galligan House		12/3/01	1/22/02
51	292 Sea Vale	Harold Payton House		4/15/02	6/11/02
52	209 I St.	Summer-Lee House		4/29/02	6/11/02
53	190 K St.	Erle Halliburton House		4/15/02	6/11/02
54	475 E St.	William Drew House		6/3/02	8/6/02
55	840 First	Mary Drew House		6/3/02	8/6/02
56	462 E St.	Cleaton Robertson House		7/1/02	8/6/02
57*	No Site Listed				
58	7 Cresta Way	Hadlye Johnson House		8/19/02	9/17/02
59	415 Hilltop	Southern Beauty		8/19/02	9/17/02
60	616 Del Mar	Edwin T. Smith Sr. House		8/19/02	9/17/02
61	382/384 Del Mar	The First Woman's Clubhouse		8/19/02	9/17/02
62	475 E St.	The William Ada Monroe House		9/30/02	11/19/2002
63	20 Second Avenue	Rose Barrows House			
64	254 Fifth Avenue	Martin Sette House			
65	181 Madrona Street	Almond Pickering House			
66	238Second Avenue	John M. Davidson House			
67	186 Cypress Street	James Williams House			
68	3487 Main Street	Lorenzo Anderson House			
69	470 E Street	The Horace Sloan House			

*Site 57 was not listed because the owners submitted letters to the City Council at the 7/28/87 meeting requesting no designation.

5.4.1.3 Update Areas

Northwest Planning Area

The Urban Core Subarea of the Northwest Planning Area encompasses the downtown area of Chula Vista, which contains a designated historic site and other potential historic properties. While the historic significance of individual buildings has not been determined, the downtown corridor of Third Avenue between E and G Streets represents a significant community character resource. The effects of the General Plan Update on community character are discussed in the Land Use section of this EIR.

Southwest Planning Area

Cultural resources within the Southwest Planning Area and the Montgomery Subarea have been studied less than in the northwest and east areas of the city. As with the northwest, there has not been a building-by-building historic significance review in this planning area. There are some potential historic resources known in the vicinity; however, determining the historic significance of such resources would require additional investigations. In addition to structural resources, the Southwest Planning Area has some potential for archaeological deposits along the northern edge of the Otay River Valley.

East Planning Area

The East Planning Area has been the subject of several archaeological surveys. Otay Ranch was initially surveyed by RECON in 1989 and subsequently investigated by Ogden Environmental in 1992. As a result of these investigations, archaeological and historic sites were recorded. The Otay Ranch Resource Management Plan has a three-step program to approach these resources. These include: (1) a comprehensive resource study, (2) site importance and boundary testing, and (3) development of a conservation program involving preservation and/or data recovery for those site determined important.

5.4.2 Thresholds of Significance

The proposed General Plan Update would result in a significant impact to cultural resources if it would:

- Threshold 1: Cause a substantial adverse change in the significance of a historical or archaeological resource as defined in State CEQA Guidelines §15064.5.

- Threshold 2: Disturb any human remains, including those interred outside of formal cemeteries.

5.4.3 Impacts

5.4.3.1 Threshold 1: Substantial adverse Change in Significance

Threshold 1 states that the General Plan Update would have a significant impact on historic or archaeological resources if it would result in a significant change to resources as defined in State CEQA Guidelines §15064.5. This section of the Guidelines defines a significant change in a historical resource as one that demolishes or materially alters the physical characteristics of a resource that convey the historic significance of that resource. Specifically §15064.5(b)(1) identifies a significant effect on the environment if it causes a substantial adverse change in the significance of an historical resource. It defines a substantial adverse change as follows:

> Substantial adverse change in the significance of an historical resource means physical demolition destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historic resource would be materially impaired.

As noted above, the current planning area supports at least 611 archaeological resource sites. Largely, these sites have been recorded over the past 30 years. A percentage of these resources are no longer present at their mapped locations as they were destroyed as a result of development. However, many remain in part or in total. In addition, there are 69~~1~~ sites/structures that have been determined by the City Council to meet the local criteria and are currently listed on the Chula Vista List of Historic Sites (see Table 5.4-1).

In addition to the known resources, there are areas of the city that have not been subject to exhaustive archaeological and historic surveys and there may be significant resources that have yet to be identified.

Development in accordance with the Preferred Plan or any of the Scenarios may result in impacts to historic resources. In areas of the built environment, direct impacts could occur if, as a result of plan implementation, buildings determined to be historic were demolished or significantly altered. In addition, there is the potential that future development, as permitted by the plan, could impact historic and prehistoric archaeological sites.

Impacts to cultural resources would be reduced through adoption and compliance with the policies in the proposed General Plan Update associated with Objectives LUT 11 and LUT 12. Policy LUT 12.1 provides for the development of a preservation program as outlined in "An Evaluation of Historic Preservation in Chula Vista". Policy LUT 12.2 calls for an amendment to the zoning code to implement the recommendations contained in that document, and LUT 12.4 requires a comprehensive survey of historic properties. In addition, Policies LUT 12.7, LUT 12.11, LUT 12.12 and EE 9.1 require that an assessment and mitigation of impacts resulting from private development and public projects be completed

in accordance with CEQA. These policies along with the other policies addressing historic resources are as follows:

Objective LUT 12

Protect Chula Vista's important historic resources.

Policies

LUT 12.1: Establish a formalized process for historic preservation by evaluating requirements for certified local government status as defined by the state historic preservation office.

LUT 12.2: Amend City zoning codes as necessary to implement the recommendations contained in "An Evaluation of Historic Preservation in Chula Vista", and any related subsequent evaluations and studies.

LUT 12.3: Adopt a Historic Preservation ordinance that implements the goals established by the City Council in February, 2000; the City Council strategic themes of 2003, and the document "An Evaluation of Historic Preservation in Chula Vista,"

LUT 12.4: Conduct an objective, comprehensive city-wide survey of Chula Vista's historical assets for the purpose of establishing a list of buildings appropriate for formal historical designation.

LUT 12.5: Recognize the inherent public value of historic preservation in contributing to the beauty, character, and sense of place in Chula Vista, and promote and facilitate participation in the Mills Act and other appropriate incentive programs to encourage the preservation of cultural resources.

LUT 12.6: Through the City's development regulations, acknowledge and recognize those areas of the City that contain historic resources. Examine current and future zoning and development regulations and design guidelines to ensure they support preservation and restoration of designated historic resources, and as appropriate require new development or redevelopment to acknowledge these in context.

LUT 12.7: Continue to assess and mitigate the potential impacts of private development and public facilities and infrastructure to historic

resources in accordance with the California Environmental Quality Act.

LUT 12.8: As practicable, the City will support and encourage the rehabilitation of sound historic buildings.

LUT 12.9: Encourage and promote the adaptive reuse of historic resources and buildings, and where appropriate, the non-historic buildings that embody Chula Vista's cultural or historic character.

LUT 12.10: Promote the maintenance, repair, stabilization, rehabilitation, restoration, and preservation of historical resources in a manner consistent with federal and state standards.

LUT 12.11 Prior to the approval of any projects that propose the demolition or significant alteration of a potentially significant historic resource as defined pursuant to applicable state and federal laws, require the completion of an historic survey report to determine significance. If determined to be significant, require appropriate and feasible mitigation pursuant to CEQA Guidelines Section 15064.5.

LUT-12.12: Require the implementation of an appropriate conservation program in accordance with applicable state and federal laws, in instances where projects may adversely affect significant historic resources.

LUT-12.13: Protect, preserve, and seek to restore publicly-owned historical resources (such as Rohr Manor House and the Chula Vista Women's Club).

Objective EE 9

Protect Chula Vista's important cultural resources and support and encourage their accessibility to the public.

Policies

EE 9.1: Continue to assess and mitigate the potential impacts of private development and public facilities and infrastructure to cultural resources in accordance with the California Environmental Quality Act.

EE 9.2: Support and encourage the accessibility of Chula Vista's important cultural resources to the public for educational, religious, cultural, scientific and other purposes, including the establishment of

museums and other facilities accessible to the public where such resources can be appropriately studied, exhibited, curated, etc.

EE 9.3: Conduct a comprehensive survey and establish and maintain an up-to-date inventory of historic properties

EE 9.4: Discourage disruption, demolition, and other negative impacts to historic cultural resources.

These policies reduce impacts to historic resources that could result from the adoption of the Preferred Plan or any of the Scenarios. Policies LUT 12.7, 12.11, 12.12, and EE 9.1 require that an assessment and mitigation of impacts resulting from private development and public projects be completed in accordance with CEQA. While impacts to historic resources in accordance with Threshold 1 are reduced by these policies, impacts to historic resources would be significant without the mitigation measure detailed below. Because the development footprint and relative intensity of land uses of each of the scenarios is similar, impacts resulting from implementation of any of the scenarios (Preferred Plan, Scenarios 1, 2, or 3) would be the same regardless of which is ultimately selected.

Threshold 2: Human Remains

Threshold 2 indicates that a significant impact would result if the project would disturb any human remains, including those interred outside of formal cemeteries.

The Preferred Plan or any of the Scenarios would not affect any formal cemeteries or known burials outside of formal cemeteries. When currently undeveloped areas are developed there is the potential that currently unknown human remains may exist that would be disturbed through development. As with Threshold 1, Policy LUT 12.7 requires that an assessment and mitigation of impacts resulting from private development and public projects be completed in accordance with CEQA. Compliance with this policy would reduce adverse impacts to these as yet unknown resources. While impacts to historic resources in accordance with Threshold 2 are reduced by the policies associated with Objectives EE 9 and LUT 12, impacts to historic resources would be significant without the mitigation measure detailed below. The proposed scenarios (Preferred Plan and Scenarios 1, 2, or 3) would not result in the disturbance of any known human remains, either within or outside of formal cemeteries.

5.4.4 Level of Significance Prior to Mitigation

Threshold 1: Substantial adverse Change in Significance

The Preferred Plan represents potential increased development densities in the Northwest and Southwest Update Areas and increased potential for conversion of open areas to

developed land uses in the East Update Area. In areas of the built environment, significant direct impacts could occur if, as a result of plan implementation, buildings determined to be historic were demolished or significantly altered. In open areas, there is the potential that future development, as permitted by the plan, could significantly impact historic and prehistoric archaeological sites.

While impacts to historic resources in accordance with Threshold 1 are reduced by the policies associated with Objectives EE 9 and LUT 12, impacts to historic resources would be significant without the mitigation measure detailed below.

Threshold 2: Human Remains

The Preferred Plan or any of the Scenarios would not affect any formal cemeteries or known burials outside of formal cemeteries. When currently undeveloped areas are developed there is the potential that currently unknown human remains may exist that would be disturbed through development. While impacts to historic resources in accordance with Threshold 2 are reduced by the policies associated with Objectives EE 9 and LUT 12, impacts to historic resources would be significant without the mitigation measure detailed below.

5.4.5 Mitigation Measures

Implementation of the following measures and the policies identified above would reduce significant impacts to cultural resources to below a level of significance. In addition, Section 15064.5 (b)(3) of the CEQA guidelines indicates that:

> Generally, a project that follows the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving Rehabilitating Restoring and Reconstructing Historic Buildings or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (1995), Weeks and Grimmer, shall be considered as mitigated to a level of less than a significant impact on the historical resource.

5.4-1 Implementation of Policies LUT 12.7 and EE 9.1 shall include the following measures:

1. Any future development project that has not been previously examined shall be subject to a cultural resource survey or review, to identify any specific resources that could be potentially affected by the proposed project.

2. In western Chula Vista, an archaeological survey shall be completed for any development project that includes previously undisturbed acreage and has not been previously examined or for which there is reason to expect a potentially significant historic or prehistoric archaeological resources, to identify any specific resources that could be potentially affected by the proposed project.

3. The City will promote maintenance, repair, stabilization, rehabilitation, restoration, and preservation of historical resources. Where these will be undertaken, they will be conducted in a manner consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings.

4. Prior to the approval of any projects that propose to demolish or significantly alter a potentially significant historic resource, as defined pursuant to applicable state and federal laws, shall complete an historic survey report to determine potential historic significance. The determination of resource significance shall be made in accordance with CEQA Guidelines Section 15064.5 and the program established as a result of Policies LUT 12.3, 12.4, 12.7, and 12.11 and EE 9.1, and shall be completed to the satisfaction of the appropriate decision maker.

5. In the event that significant resources could be adversely affected by the proposed action, as established in Policy LUT 12.12, a conservation program shall be implemented in accordance with applicable state and federal laws, to the satisfaction of the appropriate decision maker. The conservation program shall be designed to reflect the reason that the identified resource is considered important. Where appropriate for a standing historic structure that will not be preserved in place, conservation can include documentation to Historic American Building Survey (HABS) standards and/or relocation. For archaeological remains, conservation of a resource for which preservation in place is not feasible would include the execution of a research design directed program of scientific data collection and analysis.

5.4.6 Level of Significance After Mitigation

Compliance with the policies associated with Objectives LUT 12 and EE 9 and the mitigation measures identified above would reduce the impact to cultural resources resulting from the adoption of the General Plan Update to below a level of significance.

5.5 Geology and Soils

5.5.1 Existing Conditions

5.5.1.1 Regulatory Plans and Policies

The state regulates development within California to reduce or mitigate potential hazards from earthquakes and other geologic hazards. Development in potentially seismically active areas is also governed by the Alquist-Priolo Earthquake Fault Zoning Act (California Public Resource Code, Section 2621-2630).

The purpose of the Alquist-Priolo Earthquake Fault Zoning Act of 1972 (renamed in 1994) is "to regulate development near active faults so as to mitigate the hazard of surface fault rupture." The State Geologist (chief of the Division of Mines and Geology) is required to delineate Earthquake Fault Zones (formerly known as "Special Studies Zones") along known active faults. Cities and counties affected by the zones must regulate certain development within the zones. They must withhold development permits for sites within the zones until geologic investigations demonstrate that the sites are not threatened by surface displacement from future faulting. Typically, structures for human occupancy are not allowed within 50 feet of the trace of an active fault. There are no known active faults within the General Plan area. However, the potentially active La Nacion fault is present.

Local governments are required under the Tanner Act (Assembly Bill [AB] 2948) to adopt "siting criteria" for evaluating hazardous waste facility proposals within established "general areas." Geological constraints are evaluated when considering the designation of "general areas" that may be used for siting hazardous waste facilities. Specific geological conditions to be considered include flood hazard areas, areas subject to tsunamis, seiches, and storm surges, proximity to active and potentially active faults, areas of potential slope instability or rapid geologic change, subsidence/liquefaction, and dam failure inundation areas.

5.5.1.2 Existing Citywide Conditions

Topography and Land Use

The overall site topography varies from generally level mesas, river valleys, and coastal plains to steeply sloping canyons, arroyos, drainages, and mountains. Elevations across the area range from sea level to roughly 2,000 feet above mean sea level (MSL). The land use in the plan area varies from developed land to open, former agricultural land, and undisturbed native habitat.

The topography of western Chula Vista, which extends from San Diego Bay to I-805 (west to east), and roughly from the Sweetwater River to the Otay River (north to south), ranges from low-lying tidal and river valleys with elevations at or near sea level, to relatively level mesas

with elevations up to approximately 260 feet above MSL. The mesas generally slope gradually downward toward the west with steeper slopes occurring along the I-805 area and Telegraph Canyon.

East of I-805 from State Route 54 and the Sweetwater Reservoir to Telegraph Canyon Road and Otay Lakes Road (north to south) and from I-805 to the eastern city limits of Chula Vista (west to east), includes the relatively level Sweetwater River valley, intermittent flat-topped mesas and relatively steep drainage canyons including Long Canyon, Rice Canyon, and Telegraph Canyon, and hilly to mountainous terrain with steep slopes including Mother Miguel Mountain and portions of San Miguel Mountain. Elevations in this area range from approximately 20 feet above MSL in the Sweetwater River valley to approximately 1,800 feet above MSL on the ridges of San Miguel Mountain.

South of Telegraph Canyon Road and Otay Lakes Road, east to the Lower Otay Reservoir, the area varies from low-lying river valley along the Otay River to hilly areas with intervening drainages and stream valleys, as well as small mesa portions. Major drainages include the Otay River and Poggi, Johnson, O'Neal, and Wolf Canyons. Elevations range from approximately 80 feet above MSL in the Otay River channel to approximately 750 feet above MSL near Fenton Ranch.

East of the Otay Lakes are the Jamul and San Ysidro Mountains, Jamul and Dulzura Creeks, and Sycamore and Cedar Canyons. Topographically, this area is generally hilly to mountainous with creek and drainage valleys and steep slopes. Elevations in this area range from approximately 500 feet above MSL at Lower Otay Reservoir to approximately 1,700 feet above MSL in the Jamul Mountains.

LANDFORMS

The two distinct geomorphological areas that exist within the General Plan area include the coastal plain of the Coastal Province, which comprises the majority of the plan area, and the foothills of the Peninsular Range Province in the eastern edge.

The north-south trending La Nacion fault traverses the Eastern Territories, and consists of several branching, minor faults. The La Nacion fault is considered potentially active with a maximum credible magnitude of 6.0 on the Richter scale. Earthquake faults within 40 miles of the plan area include the Rose Canyon fault, which travels under San Diego Bay, the Coronado bank, and the San Diego Trough zones under the Pacific Ocean. The Elsinore and the San Miguel fault zones lie to the east.

The plan area is underlain generally by artificial fill, alluvium and slope wash, landslide deposits, stream terrace deposits, marine terrace deposits (Bay Point Formation and Unnamed Nearshore Marine Sandstone) and materials of the Lindavista Formation, San Diego Formation, Otay Formation, Unnamed Fanglomerate Deposits, Mission Valley

Formation, and Santiago Peak Volcanics, which are shown on Figure 5.5-1 and described below.

- Artificial Fill (not presented on the Geologic Map)

  Significant portions of the western portion of the plan area are underlain by fill material placed during land reclamation projects along San Diego Bay. Large fill areas are located in the vicinity of the west end of H Street, the salt evaporators west of I-5 at Main Street, and near the mouth of the Sweetwater River. Much of the fill has been placed as hydraulic fill and has not been engineered. It is anticipated that many portions of the plan area are underlain by artificial fill placed during the grading of the developments. Due to the scale of the plan area and the geologic map, fill material was not mapped as a separate unit. Fill materials encountered at specific sites should be evaluated on a case-by-case basis to evaluate the condition of existing fill relative to proposed improvements.

- Alluvium (map symbol Qal)

  Holocene-age alluvial deposits are mapped in numerous drainage courses that cross the plan area including the Sweetwater River valley, the Otay River valley, Telegraph Canyon, and along San Diego Bay on the western edge of the plan area. Localized deposits of alluvium may also be present beneath the fill in some areas. Alluvial deposits are generally composed of uncemented sand, silt, clay, and gravel with varying amounts of cobbles and gravel. Slope wash/colluvium is generally present along the flanks and base of slopes. These units have not been differentiated from alluvial deposits on the geologic map.

- Landslide Deposits (not presented on the Geologic Map)

  Landslide deposits are mapped in numerous locations throughout the plan area. Some of the larger landslide locations include the bluffs along the south bank of the Otay River valley; the slopes above Telegraph Canyon, Poggi Canyon, Johnson Canyon, and O'Neal Canyon; the slopes of Mother Miguel Mountain, Gobbler's Knob, and Long Canyon; as well as a small area in the Jamul Mountains. Most of the landslides in the plan area are rotational gravity slides or slumps in the San Diego and Otay Formations resulting from basal erosion of oversteepened slopes, groundwater saturation, and surface water erosion where poorly consolidated rock and/or adverse geologic structure is present.

- Stream Terrace Deposits (map symbol Qt)

  Sediments mapped as Quaternary-age stream terrace deposits are mapped along many of the slopes above the Sweetwater River and Otay River valleys. The deposits include unconsolidated sand and gravel derived locally from the sedimentary, igneous, and metamorphic rocks of the area.

- Marine Terrace Deposits (Bay Point Formation, map symbol Qt)

  Quaternary-age terrace deposit sediments, mapped as Bay Point Formation together with an unnamed nearshore marine sandstone, are present in the coastal plains area of Chula Vista. In general, the marine terrace deposits are composed of yellowish to reddish and light brown, moist to saturated, medium dense to dense, fine to medium sand with varying amounts of silt and clay. The terrace deposits may also be present as weakly cemented sandstone with local fossiliferous or concretion-bearing sandstone beds.

  Terrace deposits are generally not susceptible to liquefaction or seismically induced settlement. They commonly possess sufficient bearing capacity to support deep or conventional foundations, and are readily excavatable. Terrace deposits in the plan area generally do not form steep, instability-prone slopes.

- Lindavista Formation (map symbol Qt)

  Materials of the Pleistocene-age Lindavista Formation are described as consisting generally of reddish brown, moderately cemented, medium- to coarse-grained sandstone, conglomeritic sandstone, and cobble conglomerate. The Lindavista Formation tops many of the mesas in the central and southeastern portions of the plan area above roughly elevation 450 feet above MSL. The Lindavista Formation is generally stable and resistant to erosion. This formation possesses good compressibility characteristics, and cut slopes inclined at 2:1 (horizontal:vertical) are generally stable to heights in excess of 50 feet. However, clay and claystone present in the unit may form expansive soils.

- San Diego Formation (map symbol Tp)

  Materials of the Pliocene-age San Diego Formation locally underlie the Pleistocene-age Lindavista Formation, generally mapped in the central portion of the plan area. Deposits of the San Diego Formation are described as consisting generally of yellowish-brown, weakly cemented, fine- to medium-grained sandstone, with interbeds of cobble conglomerate, bentonite, marl, and brown mudstone. The San Diego Formation is resistant to erosion and outcrops in steep natural exposures.

- Otay Formation (map symbol Tp)

  In general, the Oligocene-age Otay Formation consists of light gray, moderately cemented massive to thin-bedded sandstone with beds of bentonitic clay up to six feet or more in thickness. The Otay Formation is mapped as underlying central portion of the plan area, and much of the Otay Ranch and EastLake areas.

  Because it is a formational unit, the Otay Formation should have reasonably good bearing characteristics. Due to the possible, localized presence of bentonite clay, which

typically has a low shear strength, localized cut slopes constructed in the Otay Formation may need remedial measures due to slope stability concerns. Active landslides and ancient landslide deposits have been mapped in areas underlain by the Otay Formation. The bentonite clay is also typically highly expansive.

- Unnamed Fanglomerate Deposit (map symbol Tp)

  An unnamed mid-Tertiary-age boulder-fanglomerate is in the vicinity of the Lower Otay Reservoir. The unit is described as being composed of angular clasts of locally derived metamorphic and granitic rock in a matrix of sandstone and bentonite. Portions of this unit are considered correlative with the Oligocene-age Sweetwater Formation.

- Mission Valley Formation (map symbol Tp)

  Materials of the Eocene-age Mission Valley Formation are mapped in the northeastern portion of the plan area, mainly east of the La Nacion fault and in the slopes above the Otay River. The Mission Valley Formation is unconformably overlain by younger Pliocene marine rocks and is composed primarily of light olive gray, soft and friable, fine- to medium-grained sandstone interbedded with weakly indurated claystone. The unit is mapped as being prone to landsliding and several landslides are mapped in areas underlain by the unit south of the Sweetwater Reservoir. Portions of the Mission Valley Formation are considered correlative with the Oligocene-age Sweetwater Formation.

- Santiago Peak Volcanics (map symbol Jsp)

  Rocks of the Santiago Peak Volcanics are mapped in the northeastern and eastern portions of the plan area. The Santiago Peak Volcanics are composed primarily of dacitic and andesitic volcanic rock, including a wide variety of breccia, agglomerate, volcanic conglomerate, fine-grained tuff, and tuff breccia. The unit has locally been subject to low-grade metamorphism. The Santiago Peak Volcanics are generally hard and resistant to weathering and erosion. Soils formed from the unit are relatively thin and excavation in moderately to slightly weathered rock may necessitate the use of mechanical rock breaking or blasting. The unit is generally stable to semi-stable on slopes, but due to severe jointing and steep slopes, it is locally subject to raveling, erosion, rock fall, and debris flow.

Soils

Four main groups of soil types are included in the plan area and are described below.

SALINAS-CORRALITOS ASSOCIATION

This association is generally moderately well drained to somewhat excessively drained clays, clay loams, and loamy sands on alluvial fans. It is found on 0 to 9 percent slopes at elevations ranging from 25 to 300 feet above MSL. These soils tend to be found in the Otay and Sweetwater River valleys.

HUERHUERO-STOCKPEN ASSOCIATION AND REDDING-OLIVENHAIN ASSOCIATION

These associations are made up of soils that developed on marine terraces. They are generally moderately well drained loams, gravelly clay loams, and cobbly loams that have a subsoil of clay or gravelly clay over a hardpan of cobbly alluvium. They are found on 0 to 50 percent slopes at elevations ranging from sea level to 600 feet above MSL. These soils are found in the western portion of the plan area and southeast, north, and east sides of Otay Lake. Soils of the Olivenhain series may be subject to expansion.

EXCHEQUER-SAN MIGUEL AND FRIANT-ESCONDIDO ASSOCIATIONS

This association is made up of soils that developed in material from hard metavolcanic or metasedimentary rock. It is generally well drained silt loams, sandy loams, and very fine sandy loams. They are found on 30 to 75 percent slopes at elevations ranging from 400 to 3,500 feet above MSL. These soils are found in the foothills of the eastern plan area.

DIABLO-LINNE AND DIABLO-ALTAMONT ASSOCIATIONS

These associations are made up of soils that were derived from soft marine sandstone, soft calcareous marine sandstone, and shale. Soils in these associations are generally moderately well drained clays and clay loams. They are found on 5 to 50 percent slopes at elevations ranging from 100 to 600 feet above MSL. These soils are found southeast of the Sweetwater River and north of Otay River. Soils in the Diablo series are known to be prone to erosion and may be expansive.

Faulting and Seismicity

Chula Vista is situated within a seismically active region. However, the General Plan area is not underlain by known active fault splays (i.e., faults that exhibit evidence of ground displacement during the last 11,000 years). Ground surface rupture due to active faulting is not considered likely in the plan area due to the absence of any known active faults underlying the plan area. Lurching or cracking of the ground surface as a result of nearby or distant seismic events is also considered unlikely. The Rose Canyon fault, located approximately 14 miles northwest of the plan area, is currently classified as “active” by the state of California, and lies within an earthquake fault zone. The Rose Canyon fault has an assigned maximum earthquake magnitude of 6.9 and is most likely to affect the plan area.

Traces of the La Nacion fault zone, considered "potentially active" by the City of Chula Vista and the state of California, are known to cross the General Plan area in a generally north-south direction roughly in the vicinity of I-805. The location of mapped traces of the La Nacion fault zone are presented on the Figure 5.5-2. The greatest magnitude earthquake expected on the La Nacion fault is estimated at 6.0.

Distances from central Chula Vista to active fault ruptures within 100 kilometers of the site are presented in Table 5.5-1 below.

TABLE 5.5-1
ACTIVE FAULT DISTANCES

Fault	Distance (Km)	Maximum Moment Magnitude
Rose Canyon	14	6.9
Coronado Bank	30	7.4
Elsinore Fault–Julian	64	7.1
Newport–Inglewood (Offshore)	69	6.9
Elsinore–Coyote Mountain	70	6.8
Earthquake Valley	70	6.5
Elsinore–Temecula	81	6.8
San Miguel	87	6.0
San Jacinto–Coyote Creek	97	6.8
San Jacinto–Borrego	97	7.2

Historically, the Chula Vista area has generally been spared a major destructive earthquake. However, based on a search of earthquake databases of the United States Geological Survey (USGS) – National Earthquake Information Center (NEIC), several major earthquakes (Magnitude 5.0 or more) have been recorded within approximately 100 kilometers of the plan area since 1800. Table 5.5-2 summarizes the approximate magnitude and distance to these seismic events.

TABLE 5.5-2
HISTORICAL EARTHQUAKES

Date	Magnitude (M)	Epicentral Distance (Km)
11/22/1800	6.5	48
05/27/1862	5.9	19
02/24/1892	6.7	65
05/28/1892	6.3	96
10/23/1894	5.7	25
11/04/1949	5.7	65
12/22/1964	5.6	93
1/12/1975	5.1	92
7/13/1986	5.8	88

The plan area contains some areas that may be subject to liquefaction. Groundwater is likely to be shallow below the existing ground surface in many areas mapped as being underlain by fill and unconsolidated alluvial sediments. Based on the presence of these conditions, the California Divisions of Mines and Geology (CDMG) classifies these areas as having a high potential for liquefaction and seismically induced settlement. Areas with high liquefaction potential are presented on Figure 5.5-2, and include the Chula Vista coastal areas and most of the western plan area, the Sweetwater River valley, and the Otay River valley.

Landsliding, Slope Instability, and Erosion

Landslides were mapped or observed at several locations in the General Plan area during the 2003 reconnaissance survey by Ninyo and Moore. Most of the landslides in the plan area are rotational gravity slides or slumps in the Sweetwater and Otay Formations. Many slopes in the plan area have been mapped as "generally susceptible" to slope instability or contain active or ancient landslides. Areas of known landslides or areas generally susceptible to landsliding are presented on Figure 5.5-2.

Deep-seated landslides are likely to impact small portions of the plan area based on the published and observed geologic and engineering properties of the mapped formational units in the plan area. However, surficial slope instability would more likely impact the proposed development areas if adversely modified. Potential hazards associated with slope instability may include surficial failures, earthflows, debris flows, mudslides, rockfalls, soil creep, or erosion. Slopes steeper than 25 degrees (approximately 2:1), potentially subject to instability, are presented on Figure 5.5-2.

The potential for earthquake-induced landsliding in hillside terrain in the plan area is also present. In general, areas such as the steep slopes of the Jamul and San Ysidro Mountains are considered to be relatively susceptible to earthquake-induced landsliding. In addition to earthquake-induced failures of natural slopes, failures of man-made slopes could also occur in some of the previously developed portions of Chula Vista.

5.5.1.3 Update Areas

The majority of the Urban Core Subarea has been previously developed with residential, commercial, and industrial uses. This Urban Core Subarea is underlain with Quaternary Terrace deposits.

The Montgomery Subarea has also been previously developed with residential, commercial, and industrial uses. The Montgomery Subarea is underlain with Quaternary Alluvium deposits and Tertiary Sedimentary Rocks.

The East Planning Area contains undeveloped former ranch and grazing land. The southernmost boundary of the East Planning Area is located within an area containing active

landslide-prone terrain. The East Planning Area is underlain with Tertiary Sedimentary rocks, Metavolcanic Rocks, and Quaternary Terrace and Alluvium deposits.

Areas with shallow groundwater tables and poorly consolidated granular sediments potentially subject to hazards associated with seismically induced liquefaction occur in all three update areas. The liquefaction hazard areas are located along the northern boundary of the Urban Core Subarea and continue south, adjacent to I-5 through the Montgomery Subarea, traversing east along the Southwest and East Planning Area boundaries.

Potentially active faults are located east of the Northwest and Southwest Update Areas, and traverse north-south in the general vicinity of I-805. There area no potentially active faults in the vicinity of the East Update Area.

5.5.2 Thresholds of Significance

The proposed General Plan Update would result in a significant geology and soils impact if it would:

- Threshold 1: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

  i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning or based on other substantial evidence of a known fault; or

  ii) Place sensitive uses in situations that have the potential to be adversely affected by soil conditions.

5.5.3 Impacts

Threshold 1 states that adoption of the General Plan Update would result in significant impacts if the plan would expose people or structures to potentially substantial adverse effects, including the risk of loss, injury, or death involving the rupture of a known earthquake fault or place sensitive uses in situations that have the potential to be adversely affected by soil conditions.

Implementation of the proposed land uses identified in the Preferred Plan or Scenarios 1, 2, or 3 has the potential to result in significant impacts from potential geologic hazards. In areas of the built environment, direct impacts would occur if, as a result of plan implementation, land uses, buildings, or other structures are determined to be unsafe from geologic hazards. In undeveloped areas, there is the potential that significant impacts from potential geologic hazards could occur as a result of development allowed by the plan.

Construction on liquefiable soils within drainage courses could result in injuries or loss of property during ground shaking of sufficient magnitude and duration. Expansive soils within pavement, foundation, or slab subgrade could heave when wetted, resulting in cracking or failure of these development improvements. Expansive soils have been reported to be present in localized areas throughout the plan area and are especially prevalent in the Diablo Series and Olivenhain Series soils. Zones of highly expansive bentonite may be encountered in the Otay Formation. Evaluation of on-site soils for expansion potential will be performed as a portion of the geotechnical evaluation for proposed developments on a case-by-case basis in conformance with policies contained in the proposed Objective EE 14.

Loose or compressible soils are found over much of the plan area, especially in undeveloped areas in the east with deposits of alluvium or slope wash/colluvium, and in developed areas with hydraulic or uncompacted fill. These materials are subject to settlement under increased loads, or due to an increase in moisture content from site irrigation or changes in drainage conditions.

Groundwater is likely to be shallow below the existing ground surface in areas mapped as being underlain by fill and unconsolidated alluvial sediments along the northern and western boundaries of the Urban Core Subarea and along the southern boundary of the Montgomery Subarea and the East Planning Area. Based on the presence of these conditions, the CDMG classifies these areas as having a high potential for liquefaction and seismically induced settlement.

Ground surface rupture due to active faulting is not likely in the plan area due to the absence of any known active faults underlying the plan area. Lurching or cracking of the ground surface as a result of nearby or distant seismic events is also unlikely. Accordingly, there is no potentially adverse impact from ground surface rupture.

There are no known active faults underlying the city of Chula Vista. The closest known active fault is the Rose Canyon fault, located approximately 14 miles northwest of the plan area. The Rose Canyon fault has an assigned maximum earthquake magnitude of 6.9 (California Division of Mines and Geology 1998). Based on a Probabilistic Seismic Hazard Assessment for the western United States, issued by the United States Geological Survey (1999), Chula Vista is located in a zone where the horizontal peak ground acceleration having a 10 percent probability of exceedance in 50 years ranges from 0.19 g (19 percent of the acceleration of gravity) to 0.26 g. The north-south trending La Nacion fault traverses the East Planning Area and is potentially active, which means it has not offset geologic formations younger than 11,000 years old.

The General Plan Update proposes the adoption of one objective and five associated policies to reduce potential impacts associated with geologic hazards. The objective and policies are:

Objective EE 14

Minimize the risk of injury, loss of life, and property damage associated with geologic hazards.

Policies

EE 14.1: To the maximum extent practicable, protect against injury, loss of life, and major property damage through engineering analyses of potential seismic hazards, appropriate engineering design, and the stringent enforcement of all applicable regulations and standards.

EE 14.2: Prohibit the subdivision, grading, or development of lands subject to potential geologic hazards in the absence of adequate evidence demonstrating that such development would not be adversely affected by such hazards and would not adversely affect surrounding properties.

EE 14.3: Require site-specific geotechnical investigations for proposals within areas subject to potential geologic hazards and ensure that all measures deemed necessary by the City Engineer and/or Building Official to avoid or adequately mitigate such hazards will be implemented.

EE 14.4: Promote programs to identify un-reinforced masonry buildings and other buildings and structures that would be at risk during seismic events and promote strengthening of these buildings and structures where appropriate.

EE 14.5: Wherever feasible, land uses, buildings, and other structures determined to be unsafe from geologic hazards shall be discontinued, removed, or relocated.

Impacts to soils and geology can be avoided through the implementation of these policies. Implementation of Policy EE 14.1 requires an engineering analysis which would identify potential seismic hazards prior to construction, and allow for project-specific design to take into account and avoid seismic hazards. By complying with Policies EE 14.2 and 14.3, a comprehensive, site-specific soil and geologic evaluation would be conducted for all future projects to determine potential hazards and site conditions. The design of the structures developed in conformance with the proposed General Plan Update will comply with the requirements of the Uniform Building Code and standard practices of the Association of Structural Engineers of California.

5.5.4 Level of Significance Prior to Mitigation

5.5.4.1 Threshold 1: Exposure to Effects of Faults and Adverse Soil Conditions

Threshold 1 indicates that there would be a significant impact if the proposed plan were to expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning or based on other substantial evidence of a known fault; or ii) Place-sensitive uses in situations that have the potential to be adversely affected by soil conditions.

Adverse geological impacts resulting from development completed in conformance with the Preferred Plan or any of the Scenarios will be reduced to below a level of significance because the plan contains policies which ensure protection from geologic hazards. Compliance with Policy EE 14.1 requires an engineering analysis in order to identify potential seismic hazards prior to construction, and allow for project-specific design to take into account and avoid seismic hazards. Application of Policy EE 14.2 prohibits approval of a subdivision, grading, or development of lands subject to potential geologic hazards in the absence of adequate evidence demonstrating that such development would not be adversely affected by such hazards and would not adversely affect surrounding properties. In addition, Policy EE 14.3 requires a comprehensive, site-specific soil and geologic evaluation shall be conducted for all future projects to determine potential geologic/soils hazards; the results of which shall be subject to the review of City staff.

With the implementation of these policies, the potential to expose people or structures to substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning or based on other substantial evidence of a known fault or to place sensitive uses in situations that have the potential to be adversely affected by soil conditions is avoided. Therefore, impacts are self mitigated.

5.5.5 Mitigation Measures

No mitigation is necessary, because the objectives and policies avoid the potential impact.

5.5.6 Level of Significance After Mitigation

Not significant.

5.6 Paleontological Resources

Paleontological resources (fossils) are the remains and/or traces of prehistoric animal and plant life exclusive of human remains or artifacts. Fossil remains such as bones, teeth, shells, leaves, and so on, are found in the geologic deposits (rock formations) within which they were originally buried. Fossil remains are important as they provide indicators of the earth's chronology and history. They represent a limited, nonrenewable, and sensitive scientific and educational resource.

5.6.1 Existing Conditions

5.6.1.1 Regulatory Plans and Policies

For activities subject to CEQA (California Public Resources Code Sections 21000 – 21178), potential impacts to paleontological resources must be evaluated. Pursuant to Section 15065 of the State CEQA Guidelines (California Code of Regulations Sections 15000 – 15387), a lead agency must find that a project may have a significant effect on the environment where the project has the potential to eliminate important examples of the major periods of California prehistory, which includes the destruction of significant paleontological resources.

5.6.1.2 Existing Citywide Conditions

The General Plan area can be subdivided into three distinct geomorphic regions: the Coastal Terraces Region between San Diego Bay and Interstate 805; the Inland Mesa and Canyon Region between Interstate 805 and Lower Otay Lake; and the Peninsular Ranges Foothill Region between Lower Otay Lake and State Route 94. The paleontological sensitivity of the following geologic formations that occur within the General Plan area are listed below and shown in Figure 5.6-1.

Coastal Terraces Region

The Coastal Terraces Region of Chula Vista is underlain by a thick accumulation of Pleistocene to recent marine and non-marine sedimentary rocks deposited within a seismically active, fault-bounded, pull-apart basin formed by faults of the Rose Canyon fault zone. These faults generally strike north-south and are responsible for the formation of modern San Diego Bay. The general flat topography of this region is largely a factor of deposition at or near sea level in a broad coastal floodplain. For the most part, the low topographic relief, extensive residential and commercial development, and widespread native and introduced vegetation that characterize the Coastal Terraces Region are also responsible for the limited number of areas where the underlying geology is exposed in outcrop. In turn, this lack of geologic exposure is probably also responsible for the paucity of paleontological collecting sites recorded from the Coastal Terraces Region. These few sites have produced a limited assemblage of terrestrial mammals including fossil species of tapir, horse, and rabbit.

The following geologic formations occur within the Coastal Terraces Region:

Later Quaternary Alluvium (Qal); Low Sensitivity

Bay Point Formation & Unnamed Nearshore Marine Sandstone (Qu); Moderate Sensitivity

Inland Mesa and Canyon Region

The Inland Mesa and Canyon Region of Chula Vista is underlain by a layer-cake sequence of Eocene to Pleistocene marine and non-marine sedimentary rocks deposited within a variety of paleonenvironments from ancient river floodplain to open marine sea floor to protected estuarine mud flats. The general layer-cake arrangement of this sedimentary sequence has been locally deformed by normal faults of the La Nacion fault zone. Pleistocene and Recent rivers and streams flow west from the Peninsula Ranges. The oldest sedimentary strata in this region are assigned to the Mission Valley Formation, which is exposed in only a limited area. These strata are overlain by sedimentary rocks of the Otay Formation, which are exposed over a large portion of the eastern area of Chula Vista. The San Diego Formation overlies the Otay Formation in the western portion of the Inland Mesa and Canyon Region. The relatively high topographic relief in this region coupled with its numerous faults and recent urbanization is responsible for the great abundance of known paleontological collecting sites. These sites have produced diverse assemblages of terrestrial mammals (e.g., insectivores, rodents, carnivores, rhinoceros, camels, and oreodonts) from the Otay Formation and diverse assemblages of marine mammals (e.g., sea cows, fur seals, walruses, dolphins, porpoises, sperm whales, and baleen whales) from the San Diego Formation.

The following geologic formations occur within the Inland Mesa and Canyon Region:

- Unnamed River Terrace Deposits (Qt); Moderate Sensitivity
- Lindavista Formation (Qlv); Moderate Sensitivity
- San Diego Formation (Tsd); High Sensitivity
- Otay Formation (To); High Sensitivity
- Sweetwater Formation (Tsw); High Sensitivity
- Mission Valley Formation (Tmv); High Sensitivity

Peninsular Ranges Foothill Region

The Peninsular Ranges Foothill Region of Chula Vista is primarily underlain by Mesozoic metavolcanic and metasedimentary rocks with Mesozoic plutonic (“granitic”) rocks

occurring immediately to the east and north. Although subsequent crustal uplift and regional erosion eventually exposed these crystalline basement rocks at the surface, they were later reburied beneath a thick accumulation of Cenozoic sedimentary rocks. Thus, the isolated resistant peaks of Mesozoic crystalline rocks at Rock Mountain on the north side of Otay Valley and at Mother Miguel Mountain on the north side of Proctor Valley are actually "rooted" at a depth to the buried Mesozoic crystalline rock terrane. These basement "highs" demonstrate the amount of topographic relief on the buried landscape of the eastern portion of Chula Vista. Presently, there are no reported occurrences of paleontological collecting sites within the Peninsular Ranges Foothill Region. However, the presence of isolated patches of Oligocene fanglomerates of the Otay Formation suggests that fossil remains may eventually be discovered in this region.

The only geologic formation that occurs within the Peninsular Ranges Foothill Region is Santiago Peak Volcanics (KJsp), and is assigned a Marginal Sensitivity.

Update Areas

The Urban Core and Montgomery Subareas are located in the Coastal Terraces Region. The majority of the Northwest and Southwest Update Areas are underlain with unnamed nearshore marine sandstone (Qu). Additionally, later quaternary alluvium (Qal) and Lindavista Formation (Qlv) occur within these update areas.

The northern portion of the East Planning Area is located within the Inland Mesa and Canyon Region and the southern portion is located within the Peninsular Ranges Foothill Region. The East Planning Area is underlain by San Diego Formation and Otay Formation. Along the Otay River Valley in the southern portion of the East Update Area, unnamed river terrace deposits are well preserved on Otay Ranch east of Main Street. Additionally, a small portion of this update area contains Sweetwater Formation (Tsw).

5.6.2 Thresholds of Significance

The proposed project would result in a significant impact to paleontological resources if it would:

- Threshold 1: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

5.6.3 Impacts

Threshold 1 states that adoption of the General Plan Update would result in significant impacts to paleontological resources if the plan would directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

The City of Chula Vista is located in a highly sensitive area for paleontological resources. Development completed in conformance with the proposed Preferred Alternative or Scenarios 1, 2, or 3 has the potential to result in significant adverse impacts to paleontological resources. Each of the scenarios would result in increased development in the Northwest, Southwest, and East Planning Areas. Because the development footprint and relative intensity of land uses for each of the scenarios is similar, impacts to paleontological resources resulting from implementation of the Preferred Plan or Scenarios 1, 2, or 3 would be the same regardless of which is ultimately selected.

The General Plan Update proposes the adoption of the following objective and associated policies that address the protection of paleontological resources:

Objective EE 10

Protect important paleontological resources and support and encourage public education and awareness of such resources.

Policy

EE 10.1: Continue to assess and mitigate the potential impacts of private development and public facilities and infrastructure to paleontological resources in accordance with the California Environmental Quality Act.

Compliance with Objective EE 10 and policy EE 10.1 would reduce impacts to paleontological resources. Application of Policy EE 10.1 requires that assessment and mitigation of impacts resulting from private development and public projects be completed in accordance with CEQA. Application of this policy would reduce potential impacts to paleontological resources resulting from development completed in accordance with the proposed General Plan Update; however, not to below a level of significance. Without mitigation measures, implementation of the land use modifications proposed in each of the scenarios would result in a substantial adverse change to paleontological resources.

5.6.4 Level of Significance Prior to Mitigation

5.6.4.1 Threshold 1: Destroy a Unique Paleontological Resource

Chula Vista is located in a highly sensitive area for paleontological resources and as such, adoption of the proposed General Plan may have significant impacts to paleontogical resources.

In areas of the built environment, significant direct impacts could occur if, as a result of plan implementation, sensitive geological formation were substantially disturbed during

development. In open areas, there is the potential that future development, as permitted by the plan, could impact paleontological resources.

Policies associated with Objectives EE 10 demonstrate Chula Vista's commitment to the protection of paleontological resources. Policy EE 10.1 requires that assessment and mitigation of impacts resulting from private development and public projects be completed in accordance with CEQA. This policy, however, would not preclude impacts to paleontological resources. Compliance with Objective EE 10 and policy EE 10.1 would reduce impacts to paleontological resources because Policy EE 10.1 would require that an assessment and mitigation of impacts resulting from private development and public projects be completed in accordance with CEQA. Application of Policy EE 10.1 would reduce potential impacts to paleontological resources, but not to below a level of significance. The following mitigation measures are designed to further the application of this policy.

5.6.5 Mitigation Measures

5.6-1 On a case-by-case basis, the following grading thresholds shall be used by the appropriate decision maker to determine whether or not a proposed project may potentially result in significant impacts to sensitive paleontological resources:

Sensitivity Rating	Excavation Volume and Depth Thresholds
High	>1000 cubic yards and >5 feet deep
Moderate	>2000 cubic yards and > 5 feet deep
Zero-Low	Mitigation Not Required

5.6-2 It may be determined that a project may result in potentially significant impacts to sensitive paleontological resources if a known paleontological resource exists within the impact area of a project regardless of the volume and depth of excavation. If it is determined that potentially significant impacts to sensitive paleontological resources may result, then such impacts shall be mitigated by a pre-construction mitigation program or construction mitigation program, or both, to be determined prior to project approval by the appropriate decision maker. All mitigation programs shall be performed by a qualified professional paleontologist, defined here as an individual with a M.S. or Ph.D. in paleontology or geology who has proven experience in San Diego County paleontology and who is knowledgeable in professional paleontological procedures and techniques. Fieldwork may be conducted by a qualified paleontological monitor, defined here as an individual who has experience in the collection and salvage of fossil materials. The paleontological monitor shall always work under the direction of a qualified paleontologist.

Pre-construction mitigation. This method of mitigation is only applicable to instances where well-preserved and significant fossil remains, discovered in the

assessment phase, would be destroyed during initial brush clearing and equipment move-on. The individual tasks of this program include:

1. Surface prospecting for exposed fossil remains, generally involving inspection of existing bedrock outcrops but possibly also excavation of test trenches;

2. Surface collection of discovered fossil remains, typically involving simple excavation of the exposed specimen but possibly also plaster jacketing of large and/or fragile specimens or more elaborate quarry excavations of richly fossiliferous deposits;

3. Recovery of stratigraphic and geologic data to provide a context for the recovered fossil remains, typically including description of lithologies of fossil-bearing strata, measurement and description of the overall stratigraphic section, and photographic documentation of the geologic setting;

4. Laboratory preparation (cleaning and repair) of collected fossil remains, generally involving removal of enclosing rock material, stabilization of fragile specimens (using glues and other hardeners), and repair of broken specimens;

5. Cataloging and identification of prepared fossil remains, typically involving scientific identification of specimens, inventory of specimens, assignment of catalog numbers, and entry of data into an inventory database;

6. Transferal, for storage, of cataloged fossil remains to an accredited institution (museum or university) that maintains paleontological collections (including the fossil specimens, copies of all field notes, maps, stratigraphic sections, and photographs); and

7. Preparation of a final report summarizing the field and laboratory methods used, the stratigraphic units inspected, the types of fossils recovered, and the significance of the curated collection.

Construction mitigation. Under this program, mitigation occurs while excavation operations are underway. The scope and pace of excavation generally dictate the scope and pace of mitigation. The individual tasks of a construction mitigation program typically include:

1. Monitoring of excavation operations to discover unearthed fossil remains, generally involving inspection of ongoing excavation exposures (e.g., sheet

graded pads, cut slopes, roadcuts, basement excavations, and trench sidewalls);

2. Salvage of unearthed fossil remains, typically involving simple excavation of the exposed specimen but possibly also plaster jacketing of large and/or fragile specimens, or more elaborate quarry excavations of richly fossiliferous deposits;

3. Recovery of stratigraphic and geologic data to provide a context for the recovered fossil remains, typically including description of lithologies of fossil-bearing strata, measurement and description of the overall stratigraphic section, and photographic documentation of the geologic setting;

4. Laboratory preparation (cleaning and repair) of collected fossil remains, generally involving removal of enclosing rock material, stabilization of fragile specimens (using glues and other hardeners), and repair of broken specimens;

5. Cataloging and identification of prepared fossil remains, typically involving scientific identification of specimens, inventory of specimens, assignment of catalog numbers, and entry of data into an inventory database;

6. Transferal, for storage, of cataloged fossil remains to an accredited institution (museum or university) that maintains paleontological collections, including the fossil specimens, copies of all field notes, maps, stratigraphic sections and photographs; and

7. Preparation of a final report summarizing the field and laboratory methods used, the stratigraphic units inspected, the types of fossils recovered, and the significance of the curated collection.

5.6.6 Level of Significance After Mitigation

Compliance with Policy EE 10.1 of the proposed General Plan Update and the implementation measures provided in mitigation measures 5.6-1 and 5.6-2 would reduce impacts to paleontological resources to below a level of significance.

5.7 Agriculture

5.7.1 Existing Conditions

5.7.1.1 Regulatory Plans and Policies

The Otay Ranch General Development Plan, approved jointly by the City of Chula Vista and County of San Diego for the future development of Otay Ranch, establishes goals, objectives, policies, and implementation measures relative to the protection of agricultural resources.

Chapter 3 of the Otay Ranch Resource Management Plan (RMP) contains several objectives and policies relating to agriculture. The single unifying goal of the RMP is the establishment of an open space system that will become a permanent preserve dedicated to the protection and enhancement of environmental resources. In conformance with the RMP, a Range Management Plan for Otay Ranch was subsequently prepared. In general, the Range Management Plan recommendations and implementing actions provide for ongoing managed grazing activities on conveyed lands if the activity is shown not to negatively affect biological resources.

5.7.1.2 California Land Conservation (Williamson) Act

The California Land Conservation Act of 1965, also referred to as the Williamson Act, is an agricultural protection program that currently protects more than 16 million of the state's 30 million acres of farm and ranch land. Under the Act, a private landowner may voluntarily enter into a rolling term 10-year contract with the local government for the purpose of restricting specific parcels of land to agricultural or compatible open space use. Lands must be located within an agricultural preserve area and be a minimum of 100 acres in size unless a smaller size is authorized by the local government.

There are no active Williamson Act contract properties within the General Plan area.

5.7.1.3 Otay Ranch Grazing Ordinance

The Draft Otay Ranch Grazing Ordinance has been prepared as one of several Chula Vista MSCP Subarea Plan implementing ordinances. The purpose of the ordinance is to implement the goals and recommendations of the Range Management Plan for the Otay River Valley Management Area. The draft Grazing Ordinance states that it is unlawful to conduct grazing activities in the city of Chula Vista on land designated by the Otay Ranch GDP as Otay Ranch Preserve, except as provided in the ordinance. Ordinance regulations apply to all land designated by the Otay Ranch GDP as the Otay Ranch Preserve and as 100 percent Conservation Area in the Chula Vista MSCP Subarea Plan. For areas where interim grazing is allowed, the draft Grazing Ordinance establishes controls or provides for

grazing to be phased out in highly sensitive areas (i.e., riparian areas), unless determined to be biologically beneficial. For areas designated for restoration, cessation of grazing is required for a period of time prior to initiation of restoration activities to facilitate soil preparation and exotic plant control.

5.7.1.4 Farmland Mapping and Monitoring Program

The Farmland Mapping and Monitoring Program (FMMP) is implemented by the State Department of Conservation, Division of Land Resource Protection and recognizes the suitability of land for agricultural production. The FMMP is non-regulatory and was developed to inventory land and provide categorical definitions of important farmlands to provide consistent and impartial data to decision makers for use in assessing present status, reviewing trends, and planning for the future of California's agricultural land resources. The program does not necessarily reflect local General Plan actions, urban needs, changing economic conditions, proximity to market and other factors which may be taken into consideration when government considers agricultural land use policies. *Important Farmland Maps*, which are a hybrid of resource quality (soils) and land use information, are produced by the FMMP.

5.7.1.5 Existing Citywide Conditions

There are approximately 3,182 acres of land within the boundaries of the current General Plan area that are zoned for agriculture. The majority of lands retaining agricultural zoning within the General Plan area are located within the unincorporated area of the county. The County of San Diego Zoning Ordinance (Section 2700 et seq.) enacted the A-70 (Limited Agriculture) and A-72 (General Agriculture) use regulations. County of San Diego use regulations for parcels zoned A-70 or A-72 (minimum 2-, 4-, or 8-acre parcels) within the plan area are shown on Figure 5.7-1.

Agricultural activities in the City are allowed on lands zoned for Agriculture (A-8, A-X) and, on an interim basis, Planned Community (P-C). These agricultural zones provide for a minimum lot size of 8 acres (A-8) or more (A-X, with X representing a number of acres greater than eight). These zones are "intended to preserve in agricultural use land which may be suited for eventual development in urban uses and which will encourage proper timing for the economical provision of utilities, major streets and other facilities, so that orderly development will occur" (Section 19.20.010). Of the 3,182 acres of land zoned for agriculture in the planning area, an estimated 883 acres of agriculturally zoned land are located within the City of Chula Vista boundary. The Otay Landfill is one of the areas that is currently zoned for agriculture.

Permitted uses in the City's A-8 or A-X classification include agriculture, one single-family dwelling per lot or parcel, public parks, and factory-built home/mobile home. Agriculture is defined in Chapter 19.04.010 to include farming, dairying, pasturage, agriculture,

horticulture, floriculture, viticulture, apiaries, animal husbandry (excluding swine), and accessory uses for storing produce but not stockyards or the commercial feeding of garbage or offal to animals.

Farmland data for the county is not broken down by jurisdiction but agriculture has a long history within the city of Chula Vista and the neighboring area. Figure 5.7-2 shows the most recent farmland data for the city and General Plan area. Much of the area indicated as locally important has been developed. In these areas the farm land map is out of date. These include lands designated as prime and unique farmlands, farmland of statewide and local importance, grazing land, urban and built-up, and other land. There are no Farmlands of Statewide Importance within the General Plan area.

The adopted General Plan does not identify agricultural preserve areas within the plan area and none currently exist. A limited number of parcels still retain agricultural zoning as shown on Figure 5.7-1. The purpose of the agricultural zone is to provide a zone with appropriate uses for areas rural in character, which are undeveloped and not yet ready for urbanization. The zone is intended to preserve in agricultural use land which may be suited for eventual development in urban uses. Much of the land zoned for agriculture west of the Sweetwater Reservoir has been incorporated into parkland. Only a relatively few landholdings within the western planning boundary, located primarily in the vicinity of the Otay River along the southern boundary of the plan area, still retain small-scale agricultural operations and agricultural use within these zones is considered an interim use.

The adopted General Plan identifies Rancho Janal and Otay Ranch as the most important of the yet undeveloped agricultural lands remaining in the plan area, but indicates that access to water for irrigation is a major impediment due to the expense associated with developing a new reservoir and other required water main improvements. Rising land values, water costs, increasing taxes, habitat management planning, and other land use conflicts, combined with pressure for urbanization, have contributed to a significant reduction in agricultural uses and future viability.

The U.S. Soil Conservation Service has rated soils in the area for crop suitability. A substantial amount of acreage of soils within the Plan area, specifically level soils with slopes of 0–9 percent in the East Planning Area, are rated good or fair for agricultural production.

Table 5.7-1 depicts the approximate acreage for each of the FMMP categories within the General Plan area. According to the Important Farmlands Inventory map, lands within the General Plan area contain prime farmland, farmland of statewide and local importance, and grazing land. Urban and built-up land comprises a majority of the plan area west of I-805 and significant areas to the east. The prime farmland mapped in the area is in areas planned as open space. Their status would not change as part of or as a result of the proposed General Plan Update.

TABLE 5.7-1
FARMLAND INVENTORY: CITY OF CHULA VISTA GENERAL PLAN AREA
(acres)

Category	General Plan Area		
	Within the City	Outside the City	Total
Prime farmland	13	21	34
Farmland of statewide importance	0	0	0
Farmland of local importance	6,833	678	7,511
Grazing land	6,363	14,063	20,426
Urban and built-up land	17,084	3,594	20,678
Other land	1,562	5,647	7,209
Water	57	1,198	1,255
Not inventoried	1,452	132	1,584
TOTAL	33,364	25,333	58,697

5.7.1.6 Update Areas

The Northwest Update Area and the majority of the Southwest Update Area have been previously developed with residential, commercial, and industrial uses. These areas do not contain farmlands of importance according to the Important Farmlands Inventory Map. A small portion of the Southwest Update Area, along the Otay River, is zoned for agriculture uses. Both of the small portions of Prime Farmland occur along the Otay River Valley in the Southwest Planning Area.

The East Update Area contains farmlands of local importance and grazing land according to the Important Farmland Inventory Map. Although the project site contains farmland of local importance, the high cost of importing water has become prohibitive for many agricultural activities (City of Chula Vista 1989a). The General Development Plan for the Otay Ranch indicates that agricultural activity is allowed as “an interim use” (City of Chula Vista 1993:426).

5.7.2 Thresholds of Significance

The proposed General Plan Update would result in a significant impact to agricultural resources if it would:

- Threshold 1: Convert prime farmland or farmland of statewide importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use and/or involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use.

5.7.3 Impacts

Threshold 1: Convert prime farmland or farmland of statewide importance to non-agricultural use.

As specified in Threshold 1, a significant impact to agriculture would occur if a project would convert prime farmland or farmland of statewide importance to non-agricultural uses or result in other changes that could result in such a change.

The city of Chula Vista contains 0.03 percent prime farmland (13 acres) and no farmland of statewide importance. The proposed General Plan Update does not change the land use designation for this 0.03 percent of prime farmland, and it provides for its continued use as farm land. Policy EE 4.1 allows historical agricultural uses to continue within planned development areas as an interim land use in accordance with the MSCP Subarea Plan, and Policy EE 4.2 allows agricultural uses on privately owned property within the Chula Vista Greenbelt and elsewhere, provided the use is consistent with the provisions of the MSCP Subarea Plan as well as the zoning of the property. These policies are associated with Objective 4, which states:

Objective EE 4

Maintain the opportunity for limited agricultural and related uses to occur as an interim land use within planned development areas and as a potential permanent land use within appropriate locations.

Policies

EE 4.1: Allow historical agricultural uses to continue within planned development areas as an interim land use in accordance with the MSCP Subarea Plan.

EE 4.2: Allow agricultural uses on privately owned property within the Chula Vista Greenbelt and elsewhere, provided the use is consistent with the provisions of the MSCP Subarea Plan as well as the zoning of the property.

EE 4.3: Encourage the development of community gardens and similar related uses within appropriate, compatible locations throughout the city.

Because the development footprint and relative intensity of land uses for each of the scenarios are similar, impacts to agricultural resources resulting from implementation of any

of the scenarios (Preferred Plan and Scenarios 1, 2, or 3) would be the same regardless of which is ultimately selected.

Each of the scenarios would result in increased development in areas of the built environment in the northwestern and southwestern portion of the city. Each would also convert farmland of local importance and grazing land in the east for residential, commercial, industrial, and recreational uses.

There are no important farmlands, as defined by FMMP, and no agricultural activities occurring in the Northwest Update Area. As discussed above and shown on Figures 5.7-1 and 5.7-2, a small portion of the Southwest Update Area along the Otay River Valley contains prime farmland and is zoned for agriculture. While the agricultural lands in the Southwest Update Area represent a potential community resource, the limited amount of agricultural land by itself is not considered an important agricultural resource.

The East Update Area contains farmland of local importance and grazing land as defined by the FMMP. The FMMP defines farmland of Local Importance as land of importance to the local economy, as defined by each county's local advisory committee and adopted by its Board of Supervisors. Farmland of Local Importance is either currently producing, or has the capability of production, but does not meet the criteria of Prime Farmland, Farmland of Statewide Importance, or Unique Farmland. This update area is not zoned for agriculture and the current agricultural activities are an interim land use and consist of intermittent cattle grazing and dry land farming. Although this update area contains farmland of local importance, agricultural crop production is constrained by irrigation availability and cost. Long-term agricultural uses are not planned for this area.

Impacts to agricultural uses as stated in Threshold 1 are not significant because the plan does not require or result in the conversion of prime farmland or farmland of statewide importance. While the proposed General Plan Update would apply non-agricultural land uses to this 0.03 percent of prime farmland (13 acres)—which is zoned for agricultural use—it would also provide for its continued use as farm land. Policy EE 4.1 allows historical agricultural uses to continue within planned development areas as an interim land use in accordance with the MSCP Subarea Plan, and Policy EE 4.2 allows agricultural uses on privately owned property within the Chula Vista Greenbelt and elsewhere, provided the use is consistent with the provisions of the MSCP Subarea Plan as well as the zoning of the property. In addition, no areas of highly productive agricultural lands have been identified within the General Plan area. Past agricultural operations consisted of miscellaneous fruit, vegetable, apiary, cattle grazing, and dry land farming operations. Intermittent cattle grazing and dry land farming occurred primarily in the non-irrigated portions of the Eastern Territories. Production associated with these uses is not significant in terms of countywide agricultural value.

5.7.4 Level of Significance Prior to Mitigation

Threshold 1 states that a significant impact would occur to agriculture if the action would convert prime farmland or farmland of statewide importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.

There are no prime farmland or farmlands of statewide importance in the city that would be converted as a result of the proposed land use changes. This land is currently designated, and would remain as open space, and is zoned for agriculture. Therefore, impacts to agriculture are not significant.

5.7.5 Mitigation Measures

Since no adverse impacts to agricultural resources would result, no mitigation is necessary.

5.7.6 Level of Significance After Mitigation

No significant agricultural resources impacts have been identified.

5.8 Energy

5.8.1 Existing Conditions

5.8.1.1 Regulatory Plans and Policies

The San Diego Regional Energy Plan provides policy and program recommendations to achieve energy sustainability and security. The San Diego Regional Energy Office (SDREO) provides a regional focus for several public-good energy program areas, including energy efficiency, renewable energy, coordinating energy issues with regional land use planning, clean fuel vehicles and infrastructure development, and energy information, education, and outreach. These programs are accomplished in conjunction with several state and federal energy programs, including statewide California Public Utilities Commission (CPUC) Energy Efficiency Programs, Department of Energy (DOE) Rebuild America, DOE Million Solar Roofs Initiative, Environmental Protection Agency (EPA) Climate Wise, and the California Energy Commission's (CEC) Renewable Energy and Public Interest Energy Research Programs.

Chula Vista has adopted an energy plan to address the City's long-term energy issues and to protect its residents from unreliable energy supply and volatile prices. The plan, called the Chula Vista Energy Strategy and Action Plan, addresses demand side management, energy efficient and renewable energy outreach programs for businesses and residents, energy acquisition, power generation, and distributed energy resources and legislative actions (City of Chula Vista, February 23, 2001). There are also a number of other plans, projects, and actions that have been developed by the City of Chula Vista to help reduce energy use and costs for the city and the community, including the CO_2 Reduction Plan. The CO_2 Reduction Plan focuses on reducing fossil fuel consumption and decreasing reliance on power generated by fossil fuels.

In October 2000, the Metropolitan Transit Development Board (MTDB) adopted a strategy for improving future transit in San Diego. The strategy, which is a plan to make transit an attractive first choice for everyday trips, is called Transit First. Transit First includes a network of new services with the purpose of providing transit users with increased convenience, comfort, security, and speed.

The City continues to work cooperatively with MTDB, SANDAG, and surrounding local jurisdictions on the South Bay Transit First Program. The South Bay Transit First Program strives to implement the recently adopted Transit First regional transportation vision in the south San Diego County area. This includes identifying transit routes, stations, and priority measures for transit vehicles and addressing integration with transit supportive land uses.

Chula Vista is working on a Transportation Demand Management (TDM) program to aid in the reduction of energy consumption and mobile source emissions. The program works to

provide alternative commute methods such as carpooling. Immediate TDM options currently being considered by the City include express bus service to downtown San Diego from eastern Chula Vista, shuttle service to and from trolley stations, TDM incentives such as payouts for new participants, and the use of a SANDAG vanpool. The City's energy conservation programs reflect the measures listed in Appendix F of the state CEQA guidelines.

5.8.1.2 Existing Citywide Conditions

Electricity

San Diego Gas & Electric Company (SDG&E) is the owner and operator of electricity transmission, distribution, and natural gas distribution infrastructure in San Diego County. Power generation and power use are not linked geographically. In other words, power generated within Chula Vista is not dedicated to users in Chula Vista. Electricity generated is fed into the statewide grid and is generally available to any users statewide.

There is one major power plant in Chula Vista: the South Bay Power Plant. There are also two co-generation facilities in or near the city and a number of smaller generating plants in San Diego County that are used as backup during times of peak power demand. Figure 5.8-1 shows the location of electrical generating facilities and substations within the General Plan area and in the immediate vicinity.

Natural Gas

Natural gas imported into southern California originates from any of a series of major supply basins located from Canada to Texas. Although the San Diego region has access to all of these basins by interstate pipeline, the final delivery into the SDG&E system is dependent on just one Southern California Gas Company (SoCalGas) pipeline.

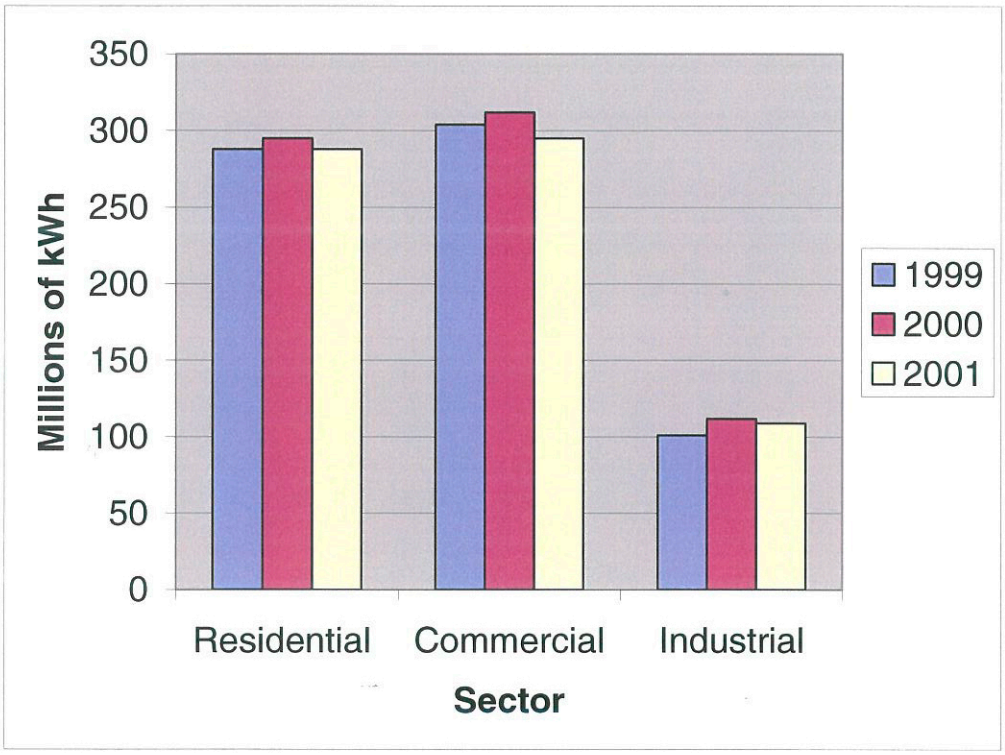
Energy Use

The discussion of energy use is presented in two main sections: fixed uses, such as homes and businesses, and mobile uses, primarily cars and trucks.

FIXED USES

Electricity consumption in the San Diego region varies greatly by sector (residential, commercial, industrial, and agriculture). In 1999, the City of Chula Vista consumed about 700 million kilowatt-hours (kWh) or $62 million of electricity (City of Chula Vista 2001:45). Chart 5.8-1 shows the citywide energy consumption in Chula Vista by sector for the years 1999, 2000, and 2001. As was the case for the San Diego region, the largest electricity

CHART 5.8-1
CITYWIDE ENERGY CONSUMPTION
IN CHULA VISTA BY SECTOR: 1999-2001



consumption in Chula Vista comes from commercial uses, followed by residential, industrial, and agriculture.

In 1999, about 150 million therms, or $24 million of natural gas, were consumed in Chula Vista, approximately two-thirds of which was attributable to the South Bay Power Plant (City of Chula Vista 2001). Chart 5.8-2 shows natural gas consumption in Chula Vista by sector.

Natural gas consumption by sector varies somewhat each year. In general, power plants account for the highest percentage of natural gas consumption in the San Diego region. Residential consumption of natural gas is the second highest percentage, followed by cogeneration, commercial consumption, industrial consumption, and natural gas vehicles.

MOBILE USES

The primary mobile use of energy is motorized vehicle travel. Table 5.8-1 presents the 24-hour total vehicle miles of travel on a typical weekday. There were approximately 353.6 miles of roads in the city of Chula Vista in 2000. As Table 5.8-1 shows, approximately 3,223,000 miles were traveled on a typical weekday in the city in 2000. According to the U.S. Department of Energy's Energy Information Administration, the average fuel consumption for all motorized vehicles including passenger cars, vans, pickup trucks, sport utility vehicles, trucks, motorcycles, and buses was approximately 17 miles per gallon in 2000 (U.S. Department of Energy 2001). Using this average, motorized vehicles in Chula Vista consumed approximately 190,000 gallons daily in 2000.

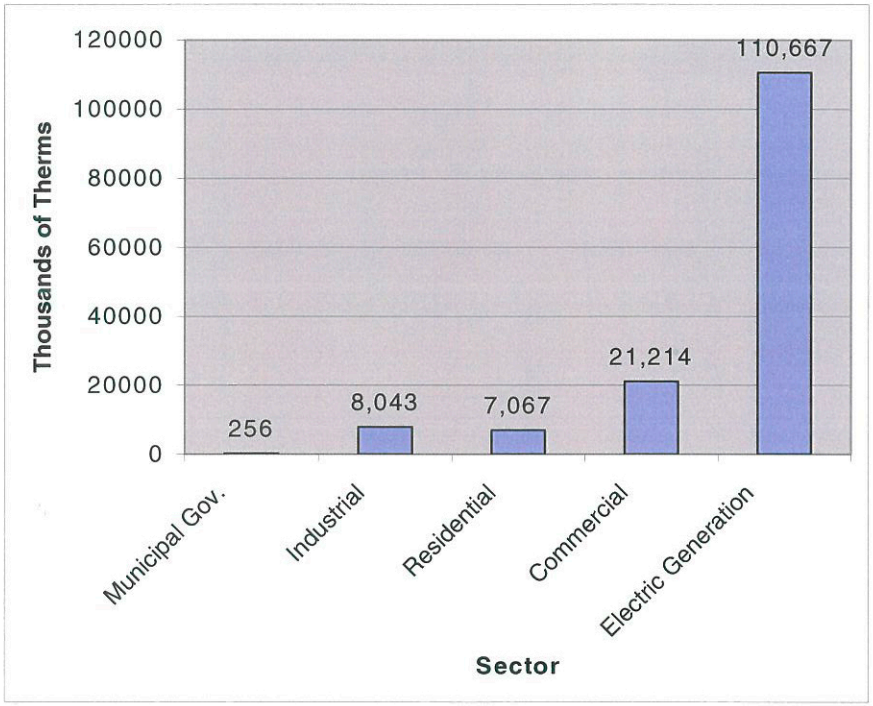
TABLE 5.8-1
POPULATION TRAVEL AND FUEL USE 1995–2030 – CITY OF CHULA VISTA

Year	1995	2000	2010	2020	2030
Population	149,791	174,319	244,332	269,529	282,664
Per Person VMT	18.49	18.49	18.49	18.49	18.49
Per Day VMT	2,769,000	3,223,000	4,517,000	4,984,000	5,226,000
Daily Gallons Used	163,000	190,000	266,000	293,000	307,000

SOURCE: SANDAG 2001; VMT = vehicle miles of travel.

Table 5.8-1 presents the estimated population, vehicle miles of travel (VMT), and vehicle fuel consumption in Chula Vista from 1995 to 2030, as calculated by SANDAG. Projected daily vehicle miles of travel for 1995, 2010, 2020, and 2030 are based on 2000 VMT. This mileage rate was then applied to population figures provided by SANDAG to calculate VMT in other years. An estimate for the amount of vehicle fuel used per day was calculated by dividing the daily VMT by the estimated fuel consumption rate of 17 miles per gallon. By

CHART 5.8-2
NATURAL GAS CONSUMPTION IN CHULA VISTA BY SECTOR



(SOURCE: City of Chula Vista 2001)

using this estimate, it is assumed that the fuel consumption rate in the future will remain nearly the same as it was in the year 2000.

5.8.2 Thresholds of Significance

The proposed General Plan Update would result in a significant impact to energy if it would:

- Threshold 1: Result in the available supply of energy to fall below a level considered sufficient to meet the City's needs or cause a need for new and expanded facilities.

5.8.3 Impacts

Implementation of the proposed land uses identified in the General Plan Update has the potential to result in impacts to energy supply as a result of anticipated growth. Direct impacts would occur if, as a result of plan implementation, a substantial energy resource is reduced or eliminated, or if future demand outstrips available supply.

Because the proposed action is the adoption of a plan and does not specifically address any particular development project, impacts to energy resources are based on planned growth. The proposed General Plan Update contains energy policies that promote the use of non-polluting and renewable alternatives to vehicle travel, and additional policies identified in the Land Use and Transportation Element that seek to reduce energy consumption by optimizing traffic flow, and directing higher density housing within walking distance of transit facilities, would reduce energy demand.

SDG&E has identified infrastructure needs for the City. Included in these needs are the need for two new electric distribution substations – one corresponding to the Otay Ranch area and one in the western Chula Vista area between I-805 and I-5 in order to serve the City's energy needs requirements (Figure 5.8-2). The transmission source for the east Chula Vista distribution substation initially requires two transmission circuits that may require separate and distinct transmission right-of-ways (ROWs) 25 feet in width. It is also possible that the initial transmission circuits could be installed on one pole line in a single ROW 25 feet in width, or placed partly or entirely within the public right-of-way.

There is a conceptual plan for a new distribution substation west of I-805. The timing and location should be addressed in the future as more detailed information becomes available on the scope of any redevelopment. The transmission source for this distribution substation initially requires at least two separate and distinct transmission ROWs each 25 feet in width. Each ROW may vary in length and location, but will need to maintain reasonably direct access from the new distribution substation to a nearby existing transmission ROW.

In addition, there is a conceptual plan for a new 200-foot-wide transmission ROW in the Northeast section of Chula Vista. The new ROW would be parallel to but at least 2,000 feet

from the existing right-of-way. Finally, the South Bay substation may relocate to a new site if the City and SDG&E can determine a mutually agreeable site.

Table 5.8-2 contains electricity and natural gas demand projections for the Preferred Plan and Scenarios 1, 2, and 3 compared to existing conditions. All scenarios represent an increase in energy demand. As can be seen in the table, the Preferred Plan is predicted to have the greatest demand for energy, followed by Scenario 2. This is because the greatest number of residential units occurs under the Preferred Plan. Scenario 3 represents the smallest increase in future energy demand.

TABLE 5.8-2
PROJECTED ENERGY DEMAND

	Electricity (million kWh)		Natural Gas* (million therms)	
Condition	Demand	Demand Increase Above Existing	Demand	Demand Increase Above Existing
Existing	774	NA	41.8	NA
Scenario 1	1,178	404	63.7	21.9
Scenario 2	1,209	435	65.3	23.5
Scenario 3	1,150	376	62.1	20.3
Preferred Plan	1,212	438	65.5	23.7

SOURCE: City of Chula Vista calculations based upon Chula Vista consumption quantities contained in the Chula Vista Energy Strategy and Action Plan (City of Chula Vista 2001).
kWh = kilowatt hours; NA = not applicable
*Demand estimates do not include natural gas consumed by the South Bay Power Plant

Policies associated with proposed Objectives EE 6, EE 7, and PFS 22 and PFS 23 would aid in reducing adverse energy impacts, but would not preclude projects that could result in significant energy consumption impacts. These policies, and the programs currently implemented by the City, promote measures to reduce wasteful, inefficient, and unnecessary consumption of energy and help reduce demand for peak energy demand. These objectives and policies are as follows:

Objective EE 6

Improve local air quality by minimizing the production and emission of air pollutants and toxic air contaminants and limit the exposure of people to such pollutants.

Policies

EE 6.1: Encourage compact development featuring a mix of uses that locate residential areas within reasonable walking distance to jobs, services, and transit.

EE 6.2: Promote and facilitate transit system improvements in order to increase transit use and reduce dependency on the automobile.

EE 6.3: Ensure that operational procedures of the City promote clean air by maximizing the use of low- and zero-emissions equipment and vehicles.

EE 6.4: Avoid siting new or repowered energy generation facilities, and other major toxic air emitters within 1,000 feet of a sensitive receiver, or the placement of a sensitive receiver within 1,000 feet of a major toxic emitter.

EE 6.5: Ensure that plans developed to meet the City's energy demand use the least polluting strategies, wherever practical. Conservation, clean renewables, and clean distributed generation should be considered as part of the City’s energy plan, along with larger natural gas-fired plants.

EE 6.6: Explore incentives to promote voluntary air pollutant reductions, including incentives for developers who go above and beyond applicable requirements and for facilities and operations that are not otherwise regulated.

EE 6.7: Encourage innovative energy conservation practices and air quality improvements in new development and redevelopment projects consistent with the City's Air Quality Improvement Plan Guidelines or its equivalent, pursuant to the City's Growth Management Program.

EE 6.8: Support the use of alternative fuel transit, City fleet and private vehicles in Chula Vista.

EE 6.9: Discourage the use of landscaping equipment powered by two-stroke gasoline engines within the City and promote less-polluting alternatives to their use.

EE 6.10: The siting of new sensitive receivers within 500 feet of highways resulting from development or redevelopment projects shall require the preparation of a health risk assessment as part of the CEQA review of the project. Attendant health risks identified in the HRA shall be feasibly mitigated to the maximum extent practicable in accordance with CEQA, in order to help ensure that applicable federal and state standards are not exceeded.

EE 6.11: Develop strategies to minimize CO hot spots that address all modes of transportation.

EE 6.12: Promote clean fuel sources that help reduce the exposure of sensitive uses to pollutants.

EE 6.13: Encourage programs and infrastructure to increase the availability and usage of energy-efficient vehicles such as hybrid electric vehicles, electric vehicles, or those that run on alternative fuels.

EE 6.14: The City will implement a clean vehicle/alternative fuel program for City vehicles (except safety vehicles and equipment when not feasible) and promote the development of infrastructure to support their use.

EE 6.15: Site industries in a way that minimizes the potential impacts of poor air quality on homes, schools, hospitals, and other land uses where people congregate.

Objective EE 7

Promote energy conservation through the efficient use of energy and through the development of local non-fossil fuel based renewable sources of energy.

Policies

EE 7.1: Promote development of regulations and building design standards that maximize energy efficiency through appropriate site and building design and through the use of energy-efficient materials, equipment, and appliances.

EE 7.2: Encourage and support the local research, development, generation, and use of non-fossil fuel based renewable sources of energy, including wind and solar resources, that meet local energy needs in an environmentally sensitive manner and reduces dependence on imported energy.

EE 7.3: Develop and provide pertinent information about the benefits of energy conservation and available energy conservation incentive programs to all segments of the community.

EE 7.4: Pursue and encourage the expansion of local energy conservation, energy efficiency and related incentive programs.

EE 7.5: Pursue 40 percent city-wide electricity supply from clean renewable resources by 2017.

EE 7.6: Encourage the construction and operation of "green buildings," considering such programs as the Leadership in Energy and Environmental Design (LEED) Green Building Rating System.

EE 7.7: Support tree planting programs that will be implemented to reduce energy needs.

Objective PFS 22

Ensure adequate energy supplies throughout Chula Vista.

Policies

PFS 22.1: Continue to address energy needs in Chula Vista by periodically reviewing and updating the Chula Vista Energy Strategy and Action Plan, and by implementing and monitoring the recommendations of the Strategy.

PFS 22.2: Coordinate with regional energy planning programs and efforts.

PFS 23.3: Ensure adequate area is reserved early in the development process for critical electrical service facilities.

PFS 23.4: Assure that utility facilities safely integrate into the developed landscape.

PFS 23.5: Appropriate secondary land uses (such as nurseries, RV storage, and usable open space and parks, among others) should be encouraged to locate within overhead transmission facility rights-of-way when appropriate. Trails can also be included as a secondary land use pursuant to agreement with SDG&E.

Objective PFS 23

Sensible and efficient electrical and natural gas facility integration into the natural and developed environment.

Policies

PFS 23.1: Use existing transmission corridors as effective wildlife corridors.

PFS 23.2: Provide sufficient open space buffering between utility facilities and residential development.

PFS 23.3: Ensure adequate area is reserved early in the development process for critical electrical service facilities.

PFS 23.4: Wise/efficient use of lands within large transmission ROW by providing opportunities for other appropriate land uses to be located within overhead electrical facility alignment areas.

PFS 23.5: Assure that utility safety integrate into the developed landscape.

PFS 23.6: Appropriate secondary land uses (such as nurseries, RV storage, useable open space and parks, among others) should be encouraged to be located within overhead transmission facility rights-of-way when appropriate. Trails can also be included as a secondary land use pursuant to agreement with SDG&E.

Although these programs and policies would result in more efficient use of energy the projected increase in population resulting from the Preferred Plan or any of the Scenarios would result in an increased demand for energy. None of the policies would ensure that energy supplies will be available when needed. Because there is no assurance of a long-term supply of energy in the future, the increased projected energy demand results in a significant impact.

5.8.4 Level of Significance Prior to Mitigation

5.8.4.1 Threshold 1: Available Supply of Energy

Threshold 1 indicates that a significant impact would result if the proposed General Plan Amendment would cause the available supply of energy to fall below a level considered sufficient to meet the City's needs or cause a need for new and expanded facilities.

Impacts to energy are significant because there is no long-term assurance that energy supplies will be available in 2030, avoidance of energy impacts cannot be assured regardless of land use designation or population size. Although changes to planned land uses in the city would continue to implement the Energy Strategy Action Plan, San Diego Regional Energy Plan and Transit First Plan, implementation of the proposed land uses identified in the General Plan Update would result in impacts to energy resources as a result of anticipated growth.

5.8.5 Mitigation Measures

The following mitigation measure will lessen the extent of energy impacts that will result from the approval of the Preferred Plan or any of the Scenarios. Because there is no long-term assurance that energy supplies will be available in 2030, regardless of land use designation or population size, avoidance of energy impacts cannot be assured and impacts remain significant and unmitigated.

5.8-1 The City shall continue to implement the Energy Strategy and Action Plan, that addresses demand side management, energy efficient and renewable energy outreach programs for businesses and residents, energy acquisition, power generation, and distributed energy resources and legislative actions, and continue to implement the CO_2 Reduction Plan to lessen the impacts on energy.

5.8.6 Level of Significance After Mitigation

While compliance with mitigation measure 5.8-1 and the policies associated with Objectives EE 6, EE 7, PFS 22, and PFS 23 would reduce energy related impacts, because there is no assurance that energy resources will be available to adequately serve the projected increase in population resulting from the Preferred Plan or any of the Scenarios, the impact remains significant and unmitigated.

5.9 Water Resources and Water Quality

This section discusses the expected increase in runoff, potential for downstream flooding, and significant adverse effects on water quality resulting from the proposed General Plan Update. A hydrology study was prepared by PBS&J for the proposed General Plan Update that evaluated the Preferred Plan and each of the three scenarios. This report is included as part of this EIR (Appendix D).

5.9.1 Existing Conditions

5.9.1.1 Regulatory Plans and Policies

Clean Water Act

The Clean Water Act (CWA) is the primary federal law that protects our nation's waters, including lakes, rivers, aquifers, and coastal areas. Section 401 of the CWA requires that any applicant for a federal permit to conduct any activity, including the construction or operation of a facility, which may result in the discharge of any pollutant, must obtain certification from the state. Section 402 of the Clean Water Act established the National Pollutant Discharge Elimination System (NPDES) to regulate the discharge of pollutants from point sources. Section 404 of the Clean Water Act established a permit program to regulate the discharge of dredged material into waters of the U.S. Section 303 of the CWA requires states to identify surface waters that have been impaired. Under Section 303(d), states, territories, and authorized tribes are required to develop a list of water quality segments that do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology.

The Porter–Cologne Water Quality Control Act (1969), California Water Code §13000 et seq., provides for aesthetic values, fish and wildlife preservation, water reclamation, and comprehensive planning and regulation to attain the highest "reasonable" water quality in consideration of conflicting demands. California's Porter–Cologne Water Quality Control Act (1969), which became Division 7 (Water Quality) of the State Water Code, establishes the responsibilities and authorities of the nine Regional Water Quality Control Boards (RWQCBs; previously called Water Pollution Control Boards) and the State Water Resources Control Board (SWRCB), and directs each regional board to formulate and adopt a water quality control plan for all areas within the region.

Safe Drinking Water Act

The Safe Drinking Water Act (SDWA) was originally passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply. The law was amended in 1986 and 1996 and requires many actions to protect drinking water and its sources: rivers, lakes, reservoirs, springs, and groundwater wells. (SDWA does not regulate private wells

that serve fewer than 25 individuals.) Originally, SDWA focused primarily on treatment as the means of providing safe drinking water at the tap. The 1996 amendments greatly enhanced the existing law by recognizing source water protection, operator training, funding for water system improvements, and public information as important components of safe drinking water. This approach ensures the quality of drinking water by protecting it from source to tap.

Point Source Permits (Water Discharge Requirements & NPDES)

The San Diego RWQCB regulates most point source discharges of waste through the issuance of Waste Discharge Requirements (WDR) and NPDES permits. Compliance with these permits requires self-monitoring and reporting to the RWQCB by each individual discharger. All applicable dischargers are required to comply with the conditions of these permits.

Construction Permit

All construction activities must comply with all applicable regulations established by the EPA, as set forth in Section 402 NPDES permit requirements for urban runoff and stormwater discharge. Compliance with NPDES includes meeting the requirements of the General Permit for Stormwater Discharges Associated with Construction Activity (General Construction Permit). In order to be covered under the General Construction Permit, a Notice of Intent must be filed with the RWQCB. Compliance with the permit requires that a stormwater pollution prevention plan (SWPPP) be prepared and implemented for any project within the study area larger than one acre in size.

The Post-Construction Stormwater Management Plan requires that Permanent Best Management Practices (BMPs) be established to prevent the discharge of sediment and other pollutants in stormwater runoff from a completed project. Typical post-development BMPs to treat water quality are concerned with nuisance water and first flush events. This includes the volume of runoff produced from an 85th percentile, 24-hour rainfall event.

The San Diego Municipal Permit

In 1990, under authority of the CWA, but prior to finalization of the NPDES Phase I regulations, the San Diego RWQCB issued its first municipal permit for the San Diego Region (Order 90-42). The Municipal Permit named the 18 municipalities within the county, including the City of Chula Vista, the County of San Diego, and the San Diego Unified Port District as co-permittees. More recently, on February 21, 2001, the San Diego RWQCB adopted Order No. 2001-01, for a new Municipal Permit, which represents the second municipal permit issued to the San Diego County co-permittees. The minimum requirement of the Municipal Permit is to ensure that pollutants in discharges from storm drain systems owned by the co-permittees are reduced to the maximum extent practicable (MEP), and that

pollutants in discharges from construction are reduced by employing BAT/BCT (Best Available Technology/Best Conventional Technology) performance standards. The Municipal Permit outlines the individual responsibilities of the co-permittees including, but not limited to, the implementation of: (1) management programs; (2) BMPs; and (3) monitoring programs.

Each co-permittee is required to implement the requirements of the Municipal Permit across two broad levels of responsibility. Co-permittees have responsibility for the water quality impacts of urbanization within: (1) their jurisdiction, and (2) their watershed(s). The Municipal Permit reflects these two broad levels of responsibility, in that it requires implementation of comprehensive Urban Runoff Management Plans (URMPs) at both jurisdictional and watershed levels. The City of Chula Vista has complied with this condition by producing a Jurisdictional Urban Runoff Management Program (JURMP), which was submitted to the San Diego RWQCB on February 21, 2002. The City, along with seven other municipalities, the County of San Diego, and the San Diego Unified Port District, has submitted the San Diego Bay Watershed Urban Runoff Management Program (WURMP) to the San Diego RWCQB for compliance with the Municipal Permit. These programs are designed to identify and prioritize local water quality problems that can be attributed to urban runoff and provide solutions to mitigate these problems. WURMPs look at land use as one component of watershed management and detail impervious surfaces as a major component to water quality degradation.

The San Diego Bay WURMP provides general information about the San Diego Bay watershed and the regulatory context within which the program was developed. It provides an assessment of the quality of the water of receiving bodies within the watershed and identifies and prioritizes related challenges as well as outline activities the local jurisdictions will undertake in cooperation with others in order to address the water quality problems that have been identified.

The WURMP's primary goal is to positively affect the water resources of the San Diego Bay Watershed while balancing economic, social, and environmental constraints. The Program identifies four primary objectives to strive towards this goal: (1) develop and expand methods to assess and improve water quality within the watershed; (2) integrate watershed principles into land use planning; (3) enhance public understanding of sources of water pollution within the watershed; and (4) encourage and enhance stakeholder involvement within the watershed. To help reach these goals and objectives, the WURMP document identifies and prioritizes water quality related issues within the watershed that can be potentially attributed to discharges from the municipal storm drain systems. Additionally, activities to abate sources of pollution and restore and protect beneficial uses are also identified.

The San Diego Bay WURMP was developed with the input from a diverse set of stakeholders, who will also be an integral part of program implementation. It is the goal of

all participating jurisdictions to work cooperatively with other agencies, non-governmental organizations, and private citizens at the watershed level in order to positively affect the water resources of the region and achieve compliance with the Municipal Permit.

The Municipal Permit requires the development and implementation of a program addressing urban runoff pollution issues in development planning for public and private projects. The City of Chula Vista developed the Development and Redevelopment Projects Storm Water Management Standards Requirements Manual (Manual) in November 26, 2002 to address these urban runoff pollution issues. The Manual provides information to applicants for development, redevelopment, and public projects processed through the City on how to comply with permanent and construction storm water requirements. The Manual guides project applicants through the selection, design, and incorporation of storm water BMPs into their projects. The Manual includes the Standard Urban Stormwater Mitigation Plan (SUSMP), which was developed by the City of Chula Vista to address post-construction urban runoff pollution from new development and redevelopment projects meeting the "priority project" classifications. The goal of the SUSMP is to develop and implement policies to ensure to the maximum extent practicable that development does not increase pollutant loads from a project site and considers urban runoff flow rates and velocities. This goal may be achieved through site-specific controls and/or drainage area–based or shared structural treatment controls. The City of Chula Vista developed the SUSMP to identify appropriate BMPs for certain designated project types to achieve this goal. Under the SUSMP, the City of Chula Vista will approve the SUSMP project plan(s) as part of the development plan approval process for discretionary projects, and prior to issuing permits for ministerial projects.

Industrial Permit

Along with the establishment of the Municipal Permit, the EPA published final regulations that establish application requirements for stormwater permits associated with industrial activity (CA 97-03-DWQ General Industrial Stormwater Permit). The regulations require that stormwater associated with industrial activity, which discharges either directly to surface waters or indirectly through municipal separate storm sewers, must be regulated by an NPDES permit.

As with the General Construction Permit described above, the General Industrial Permit requires authorization for continued and future stormwater discharge. If receiving water quality standards are exceeded, facility operators are required to submit a written report providing additional BMPs that would be implemented to achieve water quality standards.

Section 303 (d) Process – Impaired Water Bodies List

Section 303 of the CWA requires states to identify surface waters that have been impaired. Under Section 303(d), states, territories, and authorized tribes are required to develop a list

of water quality segments that do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. The 303(d) list is required to be updated by the RWQCB and SWRCB bi-annually. The Chula Vista Marina, one of the surface waters located in the plan area has been identified for inclusion on the 303(d) list. Table 5.9-1 indicates that the San Diego Bay Shoreline at the Chula Vista Marina contains bacterial indicators that caused the shoreline to be listed as an impaired water body. Potential sources of these pollutants are from urban runoff and storm sewers, marina and recreational boating, boatyards, and boat discharges or vessel wastes.

TABLE 5.9-1
POTENTIAL EFFECTS TO PROPOSED 303(d) WATER BODIES

Hydrologic Descriptor	Waterbody	Pollutant/Stressor	TMDL Priority	Extent of Impairment
La Nacion HSA (909.12)	San Diego Bay Shoreline: Chula Vista Marina	Bacterial Indicators	Low	0.41 mile

SOURCE: 2002 CWA Section 303(d) list.

State Fish and Game Code

Under Sections 1601-1603 of the State Fish and Game Code, notification to the California Department of Fish and Game is required prior to carrying out any project which would divert, obstruct, or change the natural flow or bed, channel, or bank of any river, stream, or lake. When an existing fish or wildlife resource may be substantially adversely affected, the Department of Fish and Game is required to propose reasonable project changes to protect the resource. These modifications are formalized in a “streambed alteration agreement,” which becomes part of the project design and construction.

City Growth Management Ordinance Threshold Standard

The Growth Management Ordinance Threshold Standard for drainage states that storm water flows and volumes shall not exceed City Engineering Standards and that the GMOC shall annually review the performance of the City’s storm drain system to determine its ability to meet the goals and objectives above.

Chula Vista Subdivision Manual

All development projects are required to adhere to the City of Chula Vista Subdivision Manual. With respect to drainage, the developer of a proposed subdivision is required to:

1. Accept any drainage entering a proposed subdivision and to provide adequate drainage facilities to convey all drainage on the property to discharge into, or connect to, the drainage facility into which the drainage would naturally flow;

2. Provide on-site storm detention facilities such that post-development flow rate for a given design storm does not exceed the pre-development flow rate at the outlet of the subdivision;

3. Provide on-site erosion protection and de-silting facilities;

4. Provide bonds for the cost of design and construction of any drainage facilities, including but not limited to off-site easements or facilities, necessary to accomplish these responsibilities;

5. Provide all graded pads with adequate drainage facilities as approved by the City Engineer; and

6. Submit plans for all private storm drain systems for review and approval by the City Engineer.

5.9.1.2 Existing Citywide Conditions

San Diego Bay Watershed

A portion of the San Diego Bay Watershed lies within the General Plan area and surrounding area. The San Diego Bay Watershed encompasses a 415 square-mile area that extends more than 50 miles to the east to the Laguna Mountains. The watershed lies at sea level at San Diego Bay and reaches a maximum elevation of approximately 6,000 feet above sea level at the eastern boundary. The majority of the watershed land area generally lies north of the border with Mexico and south of Interstate 8. The headwaters of the watershed begin in the unincorporated area of the County and then transect all or portions of seven cities, including Chula Vista.

The San Diego Bay covers 10,532 acres of water and 4,419 acres of tidelands. Only 17 to 18 percent of the original Bay floor remains undisturbed by dredge or fill. Ninety percent of the original salt marshes and fifty percent of the original mudflats have been filled or dredged for development. Construction of dams and extensive use of groundwater in the Sweetwater and Otay Rivers has reduced the input from these rivers to the Bay by 76 percent. The majority of freshwater input to the Bay is from surface runoff from urban areas and intermittent flow from rivers and creeks during rain events. There are over 200 storm drains that discharge into the Bay. The major watercourses feeding the Bay include the Sweetwater River, Otay River, Chollas Creek, Paleta Creek, Paradise Creek, and Switzer Creek.

The San Diego Bay watershed is comprised of 3 sub-watersheds: the Pueblo San Diego, Sweetwater, and Otay hydrologic units, of which two (Sweetwater and Otay hydrologic units) are within the plan area. Figure 5.9-1 shows these hydrologic units in relation to the plan area. Table 5.9-1 identifies the hydrologic areas and their corresponding sub-areas within the plan area. Pursuant to the California Water Code Section 13240 and the Clean Water Act Section 303, all surface waters and groundwaters in the San Diego region are assigned beneficial uses by the Regional Water Quality Control Board. The beneficial uses for the Sweetwater and Otay hydrologic units within the plan area are listed in Tables 5.9-2 and 5.9-3, respectively.

Sweetwater Hydrologic Unit

The Sweetwater Hydrologic unit is the largest of the three encompassing the San Diego Bay Watershed, with 230 square miles of the approximately 415 square-mile total. Over 86 percent of the watershed is within unincorporated jurisdictions. Major waterbodies in the watershed include the Sweetwater River, Sweetwater Reservoir, Loveland Reservoir, and the San Diego Bay. The dominant land uses in the Sweetwater River watershed are urban (29 percent), open space/agriculture (22 percent), and undeveloped (49 percent). Approximately two-thirds of the land area categorized as urban is composed of residential communities. The most important watershed issues are related to the protection of municipal water supplies and the protection and restoration of sensitive wetland and wildlife habitats.

The Sweetwater hydrologic unit contains a variety of habitat types including oak and pine woodlands, riparian forest, chaparral, coastal sage scrub, and coastal salt marsh. The urbanized lower portion of the Sweetwater watershed contains portions of Chula Vista, as well as several cities.

Otay Hydrologic Unit

The Otay hydrologic unit encompasses approximately 160 square miles in southwest San Diego County. The major waterbodies include the Upper and Lower Otay Reservoirs, Otay River, and the San Diego Bay. The Otay Reservoir is a drinking water source. The watershed consists largely of unincorporated area, but also includes portions of the city of Chula Vista, as well as other cities. The predominant land uses in the watershed are open space (67 percent) and urban/residential (20 percent). Serious water quality problems are limited to the presence of elevated coliform bacteria in the Pacific Ocean receiving waters near Coronado.

Drainage and Flood Control

The City of Chula Vista operates and maintains its own drainage and flood control facilities. This system is made up of, among various other facilities, improved and unimproved flood control channels, storm drains, bridge crossings, detention basins, and approximately 312

TABLE 5.9-2
SWEETWATER HYDROLOGICAL UNIT BENEFICIAL USES
WITHIN THE STUDY AREA

Beneficial Uses	Hydrologic Area Number	Inland Surface Water	Reservoirs and Lakes	Coastal Waters	Ground Water
Municipal and Domestic Supply	909.11	+			•
	909.12	+			•
	909.21	•	•		
Agricultural Supply	909.11				•
	909.12				•
	909.21	•	•		
Industrial Service Supply	909.11	•			o
	909.21	•			•
	SD Bay		•	•	
Industrial Process Supply	909.12	•			
	909.21	•	•		
Navigation	SD Bay			•	
Contact Water Recreation	909.11	o			
	909.12	o			
	909.21	•	•		
	SD Bay			•	
Non-Contact Water Recreation	909.11	•			
	909.12	•			
	909.21	•	•		
	SD Bay			•	
Commercial and Sport Fishing	SD Bay			•	
Biological Habitats of Special Significance	909.21	•			
	SD Bay			•	
Warm Freshwater Habitat	909.11	•			
	909.12	•			
	909.21	•	•		
Cold Freshwater Habitat					
Wildlife Habitat	909.11	•			
	909.12	•			
	909.21	•	•		
	SD Bay			•	
Rare, Threatened, or Endangered	SD Bay			•	
Marine Habitat	SD Bay			•	
Migration of Aquatic Organisms					
Estuarine Habitat	SD Bay			•	
Shellfish Harvesting	SD Bay			•	

SOURCE: Water Quality Control Plan for the San Diego Basin 1994.
SD Bay = Includes the tidal prisms of the Otay and Sweetwater Rivers
• = Existing Beneficial Use
o = Potential Beneficial Use
+ = Exempted by SDRWQCB from Municipal Use

TABLE 5.9-3
OTAY HYDROLOGICAL UNIT BENEFICIAL USES WITHIN THE STUDY AREA

Beneficial Uses	Hydrologic Unit HA Number	Inland Surface Water	Coastal Waters	Reservoirs and Lakes	Ground Water
Municipal and Domestic Supply	910.20	+			•
	910.30			•	•
	910.31	•		•	
	910.32	•		•	
Agricultural Supply	910.20	•			•
	910.30				•
	910.31	•		•	
	910.32	•		•	
Industrial Process Supply	910.31			•	
	910.32			•	
Industrial Service Supply	910.20	o			•
	910.30		•		•
	910.31	•		•	
	910.32	•		•	
	SD Bay				
Navigation	SD Bay		•		
Contact Water Recreation	910.20	o			
	910.31	•	•	•*	
	910.32	•		•	
	SD Bay				
Non-Contact Water Recreation	910.20	•			
	910.31	•	•	•	
	910.32	•		•	
	SD Bay				
Commercial and Sport Fishing	SD Bay		•		
Biological Habitats of Special Significance	SD Bay		•		
Warm Freshwater Habitat	910.20	•			
	910.31	•		•	
	910.32	•		•	
Cold Freshwater Habitat	910.31			•	
	910.32			•	
Wildlife Habitat	910.20	•			
	910.31	•	•	•	
	910.32	•		•	
	SD Bay				
Rare, Threatened, or Endangered	910.20	•			
	910.31	•	•		
	SD Bay				
Marine Habitat	SD Bay		•		
Estuarine Habitat	SD Bay		•		
Shellfish Harvesting	SD Bay		•		

SOURCE: Water Quality Control Plan for the San Diego Basin, 1994. and www.projectcleanwater.com.
SD Bay = Includes the tidal prisms of the Otay and Sweetwater Rivers
• = Existing Beneficial Use
o = Potential Beneficial Use
+ = Exempted by SDRWQCB from Municipal Use
* Fishing from shore or boat permitted, but other contact water recreational uses are prohibited.

miles of existing storm drain pipelines of various sizes. Table 5.9-4 quantifies approximate miles of primary collection systems.

TABLE 5.9-4
CHULA VISTA STORMWATER
COLLECTION SYSTEM STATISTICS

Type of Collection System	Miles (approximate)
Underground	160
River	14
Stream	137
Canal	16
Ditch	68

The major drainage courses within the city include Palm Road Basin, Poggi Canyon, the Otay River, Telegraph Canyon, Central Area Basin, the Lower Sweetwater River, Long Canyon, Salt Creek, Wolf Canyon, Judson Basin, and Rice Canyon. There are many other minor drainage courses throughout the city. The City must maintain these drainages to keep them free of invasive vegetation and other debris which can cause stream blockage and remote flooding if left unattended.

The condition of the overall drainage system is continually monitored for any major deficiencies or problems. Of primary concern in the present system is the Montgomery Subarea of the Southwest Planning area, generally bound by L Street to the north and Hilltop Drive to the east. Missing street and drainage improvements, such as curb, gutter, and sidewalks, are scattered throughout the area. As a result, both drainage and pavement-related problems occur. Missing improvements should be constructed prior to or coincident with any pavement rehabilitation in order to preserve pavement life. Completion of the Drainage Facilities Master Plan would enable the City to determine the extent of drainage inadequacies and costs associated with improvements and repairs.

At the eastern end of the Otay River valley are two reservoirs used for flood control and municipal water storage by the City of San Diego, the Upper and Lower Otay Reservoirs. The reservoirs are fed by Proctor Valley Creek, Jamul (Dulzura) Creek, and a number of smaller drainages in the San Miguel and Jamul Mountains, as well as imported water. The use of pesticides, herbicides, irrigation water, and fertilizers are strictly controlled adjacent to the Otay Reservoir. Additional water quality monitoring would be required if herbicides or pesticides are used.

During severe rain seasons, low-lying areas along the floodplains of the Sweetwater and Otay Rivers, as well as their tributaries, may experience flooding. The portions of the plan area potentially subject to these hazards are presented on Figure 5.9-2. Dams, levees, reservoirs, and drainage channels have been constructed to control the drainage of much of the plan area. Due to these flood control measures, the potential for hazardous flooding of developed portions of the plan area is relatively low.

The Federal Emergency Management Agency (FEMA) has mapped zones of anticipated flooding based on base flood elevations for 100- and 500-year flood events, as presented on their Flood Insurance Rate Maps (FIRM). Areas within the 100-year flood zone are presented on Figure 5.9-2.

Groundwater

All the major drainage basins in the San Diego region contain groundwater basins. Nearly all of the local groundwaters of the region have been intensely developed for municipal and agricultural supply purposes. The direction of groundwater flow is generally toward the west, with significant local variations. Groundwater depths vary throughout the plan area depending upon topography and range from just beneath the ground surface near the bay, to hundreds of feet below ground in hilly areas. Perched water conditions due to irrigation and runoff may also be present. The majority of the plan area, other than those areas described above, is not expected to be affected by shallow groundwater. Groundwater has historically been used for drinking water and agriculture; however, due to decreased water quality, groundwater is used in limited cases.

Water service is provided to the General Plan Area by the Otay Water District, the Sweetwater Authority, and Cal-American. A map of the Sweetwater and Otay Water District service boundaries is provided in Figure 5.14-1 in the Utilities sections of this EIR. Of these three water service providers, Sweetwater Authority is currently the only provider that pumps groundwater for distribution within their boundaries. The Sweetwater Authority pumps groundwater throughout their service boundary from two sources, the Sweetwater Alluvium and the San Diego Groundwater Formation. The Sweetwater Valley Ground Water Basin has two water-bearing formations. The Quaternary alluvium has a storage capacity of 13,000 acre-feet and the San Diego Formation has a storage capacity of 960,000 acre-feet.

The Sweetwater Authority distributes approximately 5,000 acre-feet of groundwater per year out of the 25,000 acre-feet total water distribution per year. In 2004, they produced 3,637 acre-feet. At its Richard A. Reynolds Groundwater Desalination Facility in Chula Vista, the Authority extracts brackish water from the alluvium of the Sweetwater River, and from the San Diego Formation. The Richard A. Reynolds Groundwater Desalination Facility, which began operations in January 2000, uses reverse-osmosis treatment to remove dissolved salts and microscopic particles, such as bacteria and other contaminants which could be found in

the alluvial groundwater. Brackish water contains high levels of dissolved solids, which are removed at the facility with advanced reverse osmosis membrane treatment. The water is then treated to prevent corrosion, and chlorine and ammonia are added to further assure disinfection.

Surface Water

The location of surface waters within the General Plan area is provided in the San Diego Bay, Otay, and Sweetwater watershed discussions above. The major inland water bodies, Upper and Lower Otay Reservoirs~~Lakes~~, are two reservoirs that supply drinking water to more than 200,000 people. The Otay Reservoir is part of the City of San Diego municipal drinking water supply system and is kept approximately 75 to 85 percent full in order to meet emergency water storage requirements. These reservoirs also provide important habitat and recreational opportunities.

Dam Inundation

Portions of the plan area are subject to potential hazards associated with inundation in the event of the failure of several dams in the area. Figure 5.9-2 shows the limits of the maximum probable dam inundation in the plan area. The areas of potential dam inundation are generally along the Sweetwater and Otay River valleys, portions of tributary stream channels, and the low-lying areas near the coastal portions of the plan area along the San Diego Bay. Based on historical data and the high level of development in portions of the dam inundation hazard zones, the potential for serious hazards in the event of a dam failure is significant.

5.9.1.3 Update Areas

The entire Northwest planning area and a small, northern portion of the Southwest planning area are located within the Sweetwater hydrologic unit. Portions of the San Diego Bay, which is west of these update areas, are listed as a Section 303(d) impaired water body for coliform bacteria, trace metals, and other toxics. Predominant sources of water quality degradation are from agricultural and urban runoff. Additionally, the northern portion of the Northwest planning area is potentially subject to hazards associated with the 100-year flood.

The majority of the Southwest planning area and the entire East planning area are located in the Otay hydrologic unit. Samples from the Otay River Valley, which is along the southern boundary of these update areas, did not meet federal secondary drinking water standards (Otay Ranch GDP EIR 1992). The southern portion of the Southwest and East planning areas are potentially subject to hazards associated with the 100-year flood. Additionally, portions of the update areas within the Southwest planning area are located in dam inundation areas; update areas within the East Planning area are just north of potential dam inundation areas.

5.9.2 Thresholds of Significance

The proposed project would result in a significant impact to water quality if it would:

- Violate any water quality standards or waste discharge requirements.
- Substantially deplete groundwater resources or aquifer recharge areas or divert existing groundwater flows.
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation or flooding.
- Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam or place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.

5.9.3 Impacts

5.9.3.1 Threshold 1: Water Quality Standards

Threshold 1 states that the proposed General Plan Update would result in a significant impact to water quality if it would violate any water quality standards or waste discharge requirements.

The proposed General Plan Update would facilitate the development of additional residential, commercial, and industrial uses. Direct runoff to drainage basins, municipal storm sewer systems, and eventual drainage to surface waters and/or the ocean, would be increased and would contain typical urban runoff pollutants such as sediment, pathogens, heavy metals, petroleum products, nutrients, and trash. In addition, grading and construction activities could also generate sediments as well as oil and grease which could enter surface waters. This could incrementally decrease water quality and impair the beneficial uses of surface waters, which would result in a significant impact.

As discussed previously, the City of Chula Vista has prepared several water quality management plans in accordance with the Municipal Permit. The City has produced a JURMP that outlines the specific measures the City would take to meet permit requirements including construction, commercial, and industrial site inspections, public education and outreach efforts, dry weather field screening, and enforcement of local stormwater ordinance. A SUSMP has been prepared by the City to reduce pollutants and runoff flows from all new development and significant redevelopment projects. Additionally, the copermittees in the San Diego Bay Watershed have developed a WURMP for the San Diego

Bay Watershed to identify and prioritize local water quality problems that can be attributed to urban runoff and provide solutions to mitigate these problems. The WURMP looks at land use as one component of watershed management and identifies impervious surfaces as a major contributor to water quality degradation.

The San Diego Bay WURMP outlines several activities the San Diego Bay Copermittees have been implementing and will continue to implement over the remaining life of the Municipal Permit. In an effort to meet the Municipal Permit requirements, four primary objectives were developed to guide watershed management decisions: (1) develop and expand methods to assess and improve water quality within the watershed; (2) integrate watershed principles into land use planning; (3) enhance public understanding of sources of water pollution within the watershed; and (4) encourage and enhance stakeholder involvement within the watershed. A variety of activities and/or programs were conducted to achieve these objectives. These include developing and conducting monitoring programs, enhancing data management, developing education programs aimed at targeting priority pollutants and emphasizing the overall watershed concept, and developing strategies for enhancing inter-jurisdictional planning.

Construction and industrial activities would be subject to specific conformance requirements of the State Water Resources Control Board's General Construction and Industrial NPDES Permits, including the implementation of an approved SWPPP and monitoring/testing program, with pollution control measures involving the use of best available technology, best conventional pollutant control technology, and/or best management practices pursuant to direction by the SWRCB and the applicable RWQCB office.

The proposed Environmental Element of the General Plan Update identifies the following objective and associated policies addressing water quality:

Objective EE 2

Protect and improve water quality within surface water bodies and groundwater resources within and downstream of Chula Vista.

Policies

EE 2.1: Ensure safely swimmable and fishable surface waters through careful management of land uses and activities within Chula Vista.

EE 2.2: Pursue safe alternatives to traditional pest management methods whenever feasible in order to reduce toxics in urban runoff and large open uses of land (e.g., golf courses, parks, agricultural lands).

EE 2.3: Educate residents, business owners and City departments about feasible methods to minimize the discharge of pollutants into natural drainages and the municipal storm drainage system.

EE 2.4: Ensure compliance with current federal and state water quality regulations, including the implementation of applicable NPDES requirements and the City's Pollution Prevention Policy.

EE 2.5: Encourage and facilitate construction and land development techniques that minimize water quality impacts from urban development.

EE 2.6: Maximize the protection of potable water supply resources from pollutants.

EE 2.7: Collaborate with other applicable jurisdictions in the development and funding of regional watershed management plans that will provide a balance between watershed protection, regional economic growth, and development of public infrastructure and services consistent with the goals and objectives of the General Plan.

Preferred Plan

Development of the proposed land uses and circulation improvements under the Preferred Plan would degrade water quality, and have a significant impact. Short-term water quality impacts would occur during individual site construction, and long-term impacts would be experienced after completion of development. Development of the Preferred Plan would increase the residential, commercial, and industrial uses within the city compared to both the adopted General Plan and existing conditions, which would result in an increase in the amount of impervious surfaces and ornamental landscaping, and therefore an increase in runoff. During a storm event, runoff water would pick up contaminants on those surfaces, including sediment, nitrogen and phosphate compounds from fertilizers, pesticides, herbicides and fungicides used in plant and pest control, and oils, fuel residues, trash, and trace metals from products used in urban developments. The addition of these urban pollutants to the drainages within the city would contribute to the water quality degradation of sensitive water bodies, thus resulting in an increase in the cumulative amounts of urban pollutants over existing conditions.

To reduce the impacts to water quality, all construction activities disturbing one acre of land or more would have to comply with all applicable regulations established by the U.S. Environmental Protection Agency as set forth in the National Pollutant Discharge Elimination System (NPDES) permit requirements for urban runoff and storm water discharge. Compliance with NPDES includes meeting the requirements of the General

Permit for Stormwater Discharges Associated with Construction Activity (General Construction Permit). In order to be covered under the General Construction Permit, a Notice of Intent must be filed with the RWQCB. Compliance with the permit requires that a SWPPP be prepared and implemented for the project. Best management practices, design, treatment, and monitoring for storm water quality must be addressed with respect to municipal and construction permits.

Compliance with the policies associated with proposed Objective EE 2 would minimize the potential for adverse impacts to surface water and groundwater quality because the policies require the compliance with current federal and state water quality regulations, including the implementation of applicable NPDES requirements and the City's Pollution Prevention Policy. Additionally, the policies include construction and land development techniques to minimize water quality impacts by the preparation and implementation of an approved SWPPP and monitoring/testing program, with pollution control measures involving the use of best available technology, best conventional pollutant control technology, and/or best management practices pursuant to direction by the SWRCB and the applicable RWQCB office. Conformance to Policies EE 2.2 through EE 2.7 and to all federal, state, and regional water quality objectives would ensure that impacts to surface water and groundwater quality from specific developments would not be significant.

Scenarios 1, 2, and 3

As with the Preferred Plan, Scenarios 1, 2, and 3 represent an increase in the development of additional residential, commercial, and industrial uses compared to existing conditions. Direct runoff to drainage basins would increase and would contain pollutants such as sediment, pathogens, heavy metals, petroleum products, nutrients, and trash. Grading and construction activities could also generate sediments as well as oil and grease which could enter surface waters. Conformance to Policies EE 2.2 through EE 2.7 and to all federal, state, and regional water quality objectives would ensure that impacts to surface water and groundwater quality from specific developments would not be significant.

5.9.3.2 Threshold 2: Groundwater Resources

Threshold 2 states that the General Plan Update would result in a significant impact to water quality if it would substantially deplete groundwater resources or aquifer recharge areas or divert existing groundwater flows.

The Sweetwater Authority pumps potable groundwater from two sources, the Sweetwater Alluvium and the San Diego Groundwater Formation. The Richard A. Reynolds Groundwater Desalination Facility, uses reverse-osmosis treatment to remove dissolved salts and microscopic particles, such as bacteria and other contaminants which could be found in the alluvial groundwater. The Sweetwater Authority extracts brackish water from the alluvium of the Sweetwater River, and from the San Diego Formation. Brackish water

contains high levels of dissolved solids, which are removed at the facility with advanced reverse osmosis membrane treatment. The water is then treated to prevent corrosion, and chlorine and ammonia are added to further assure disinfection. The Sweetwater Authority distributes approximately 5,000 acre-feet of groundwater per year within their supply boundary.

Groundwater exists in the area in an alluvial aquifer and in the San Diego Formation. The Sweetwater Authority has four wells in the alluvial aquifer and six wells in the San Diego Formation, which provide potable water to customers throughout the Authority's supply boundary (see Figure 5.14-1). There have been no contaminants detected in the San Diego Formation Wells supply. However, the source is considered most vulnerable to the following activities located near the drinking water source: golf courses and freeways/state highways. The golf courses are a potential concern because of the pesticides, herbicides, and fertilizers that may be used. Freeways and state highways may contribute particulate matter, gasoline, motor oils, and other potential contaminants. Sweetwater Authority monitors the wells on a regular basis for these contaminants. All monitoring tests have been negative for contamination to Sweetwater Authority's wellfield. Sweetwater Authority operates three wells in National City. There have been no contaminants detected in the National City Wells supply. The source is considered most vulnerable to the following activities located near the drinking water source: confirmed leaking tanks, a repair shop, photo processing/finishing, dry cleaners, non-regulated tanks, freeway/state highways, and a parking lot/mall.

Although the increased exposure to urban pollutants could affect the quality of water recharging groundwater, filtering would occur during percolation. In any event, urban runoff has not been identified as a source of significant groundwater recharge. Therefore, no significant impacts to groundwater resources would result from buildout of the Preferred Plan or any of the three scenarios.

5.9.3.3 Threshold 3: Drainage

Threshold 3 states that the General Plan Update would result in a significant impact to water quality if it would substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation or flooding.

Future growth under the proposed General Plan Update would result in an increase in impermeable surfaces, alteration of the hydrology of local streams and drainage, and grading and clearing of vegetation. All of these actions have the potential to cause erosion and sedimentation that would degrade the quality of local and regional surface waters. Irrigation and cultivation on steep slopes and/or on erosive soils would potentially have erosion and sedimentation impacts. The creation of roads, especially dirt roads that are not properly engineered to accommodate surface runoff, and the abandonment of roads, would potentially cause erosion and sedimentation impacts.

The proposed Public Facilities and Services Element of the General Plan Update contains two objectives and associated policies that address drainage facilities and are listed below.

Objective PFS 1

Ensure adequate and reliable water, sewer and drainage service and facilities.

Policies

PFS 1.3: Plan and design drainage facilities, and upgrade existing facilities as necessary to meet current needs, accommodate growth and to satisfy state and federal requirements.

PFS 1.4: For new development, require on-site detention of storm water flows such that, where practical, existing downstream structures will not be overloaded. Slow runoff and maximize on-site infiltration of runoff.

PFS 1.5: Accelerate infrastructure upgrades throughout the city, especially in older portions of western Chula Vista as growth places additional demands on existing, sometimes sub-standard facilities.

PFS 1.7: Identify ways to obtain timely funding for public facility and service needs. Upon request by community representatives, facilitate the possible formation of assessment districts to finance public infrastructure, upgrades and maintenance.

Objective PFS 2

Increase efficiencies in water use, wastewater generation and its re-use, and handling of stormwater runoff throughout the city through use of alternative technologies.

Policies:

PFS 2.2: As part of project construction and design, assure that drainage facilities in new development incorporate stormwater runoff and sediment control, including state-of-the-art technologies where appropriate.

PFS 2.3: In designing water, wastewater and drainage facilities, limit the disruption of natural landforms and water bodies. Encourage the use of natural channels that simulate natural drainage ways while protecting property.

Impacts to drainage infrastructure resulting from the three scenarios and the Preferred Plan, are focused on four areas: western Chula Vista, defined for this study as areas westerly of Interstate 805, Poggi Canyon, Rolling Hills Basin Area, and southeasterly Chula Vista, defined for this study as undeveloped areas in the southeasterly portion of the city. The location of these drainage basins is shown on Figure 5.9-3. From a drainage perspective, the remainder of the city can be considered as built-out, and for this reason, there are no considerable differences between the existing condition and the Preferred Plan.

Preferred Plan

As referenced above, a hydrology study was prepared by PBS&J for the proposed General Plan Update that evaluated the Preferred Plan and each of the three scenarios. The impacts to drainage infrastructure was focused on four areas: the Western Chula Vista area, containing the Northwest and Southwest Planning Areas; and Poggi Canyon, Rolling Hills, and Southeasterly Chula Vista areas, which all contain portions of the East Planning Area. The impacts to these areas are analyzed below.

WESTERN CHULA VISTA

Impacts to drainage infrastructure west of Interstate 805, which includes the Northwest and Southwest Planning Areas, resulting from implementation of the Preferred Plan would primarily result from redevelopment. The drainage basins impacted by redevelopment include: Sweetwater Basins 1, 2/3 and 7, Southwest Basins 1, 2, 4, 5/6 and 7, Central Basin 1/3/4/5 and 2, Judson Basin 1, and Telegraph Canyon Basin 1. Table 1 of Appendix D presents a comparison of peak runoff rates for the existing conditions versus the Preferred Plan. Inspection of the comparison shows negligible impacts to most of the drainage basins affected by redevelopment. However, several increases are noted: Sweetwater Basin 7 shows a 10 percent increase in peak runoff for the 50-year storm event, and Southwest Basins 4, 5/6 and 7 show 6 percent, 9 percent, and 16 percent increases in peak runoff, respectively for the 50-year storm event. These increases in peak runoff may result in impacts to drainage infrastructure within each of these drainage basins. Prior to or in conjunction with redevelopment in these areas, drainage infrastructure improvements should be made to accommodate this increase in runoff.

Compliance with policies associated with Objectives PFS 1 and 2 would ensure that the Preferred Plan would not result in a significant impact to the existing drainage pattern of the site or area in a manner which would result in substantial erosion or siltation or flooding by retaining stormwater on-site so that pollutants could settle out of any runoff discharged offsite, and infiltration would filter pollutants.

POGGI CANYON

Impacts to drainage infrastructure within the Poggi Canyon watershed resulting from implementation of the Preferred Plan would primarily result from changes in land use for areas currently undeveloped. The majority of the Poggi Canyon watershed is currently built out. Table 1 of Appendix D presents a comparison of peak runoff rates for the existing conditions versus the Preferred Plan. In the existing condition, the majority of the portion of Poggi Canyon located southerly of Olympic Parkway, easterly of Brandywine Avenue and westerly of La Media Road is undeveloped. Development of this land in accordance with the Preferred Plan results in approximately a 3 percent increase in peak storm runoff rate as calculated at the downstream end of the Poggi Canyon watershed.

Compliance with policies associated with Objectives PFS 1 and 2 would ensure that the Preferred Plan would not result in a significant impact to the existing drainage pattern of the site or area in a manner which would result in substantial erosion or siltation or flooding by retaining stormwater on-site so that pollutants could settle out of any runoff discharged offsite, and infiltration would filter pollutants.

ROLLING HILLS BASIN AREA

In the existing condition, the Rolling Hills basin area is primarily undeveloped. The Preferred Plan proposes residential development for portions of the Rolling Hills basin area. Increases in peak storm runoff when compared to the existing condition are anticipated and range approximately 1 to 22 percent for the eight watersheds within the Rolling Hills basin area.

Compliance with policies associated with Objectives PFS 1 and 2 would ensure that the Preferred Plan would not result in a significant impact to the existing drainage pattern of the site or area in a manner which would result in substantial erosion or siltation or flooding by retaining stormwater on-site so that pollutants could settle out of any runoff discharged offsite, and infiltration would filter pollutants.

SOUTHEASTERLY CHULA VISTA

In the existing condition, much of this portion of the city is undeveloped, and subsequently, increases in peak runoff are expected with implementation of the Preferred Plan. When compared to the existing condition, substantial increases in 50-year storm event peak runoff occur for the following basins: Otay River Basin 4, 7, 8, 9, 11, 12, 13, 15, 16, 17, 18, 21, 22, 24; Otay River South Basin 2, and Wolf Canyon Basin 1.

Increases in peak runoff for the watersheds adjacent to the Otay River valley typically occur in areas which have little or no existing drainage infrastructure. Therefore, the increases in runoff can be accounted for during the engineering design phase of projects within each of

these watersheds. Construction of required drainage facilities within each watershed can be performed by developers as a condition of development or the projects can be funded and built as deemed appropriate by the City of Chula Vista.

Development of the Preferred Plan would transform large amounts of undeveloped land in eastern Chula Vista to developed land. Therefore, the amount of storm water collected and entering drainage channels would significantly increase and the velocity created by this increase would place additional stress and wear on system components. Redevelopment of portions of the Northwest and Southwest Planning Areas would have a less significant impact as the amount of added impervious surface is often marginal and the quality of runoff may actually improve due to replacement of components of the existing drainage system with new components which function at a higher standard. Development within the East Planning Area would alter the existing drainage pattern of the area due to the existing rural nature of the area. Compliance with policies associated with Objectives PFS 1 and 2 would ensure that the Preferred Plan would not result in a significant impact to the existing drainage pattern of the site or area in a manner which would result in substantial erosion or siltation or flooding by retaining stormwater on-site so that pollutants could settle out of any runoff discharged off-site, and infiltration would filter pollutants.

Scenarios 1, 2, and 3

WESTERN CHULA VISTA

Impacts to drainage infrastructure west of Interstate 805, which includes the Northwest and Southwest Planning Areas, resulting from implementation of the Preferred Plan would primarily result from redevelopment. Based on the review of existing land use in the proposed redevelopment areas and a qualitative comparison with land use as outlined in Scenarios 1 through 3, there would be minimal impacts to publicly owned drainage infrastructure resulting from implementation of these scenarios. When compared to existing conditions, land use associated with redevelopment according to these scenarios is generally similar in nature from a perspective of hydrologic response. That is, the typical percentage of imperviousness for a given parcel of land is similar between the existing and redeveloped condition.

Compliance with policies associated with Objectives PFS 1 and 2 would ensure that Scenarios 1 through 3 would not result in a significant impact to the existing drainage pattern of the site or area in a manner which would result in substantial erosion or siltation or flooding by retaining stormwater on-site so that pollutants could settle out of any runoff discharged offsite, and infiltration would filter pollutants.

POGGI CANYON

Scenario 1 includes similar industrial land use as that presented in the adopted General Plan, but substitutes a large area of low-medium residential for what is shown as high density residential and commercial in the adopted plan. The runoff potential for low-medium residential is typically lower than that for commercial and high-density residential and therefore, alternative one appears to have less impacts to drainage infrastructure than the adopted General Plan.

Scenario 2 substitutes high and low-medium residential land use for areas projected in the adopted General Plan to be used for industrial facilities. Furthermore, similar to alternative one, alternative two substitutes a large area of low-medium residential for what is shown as high density residential and commercial in the General Plan. These differences from the adopted General Plan would likely result in a decrease in storm runoff and therefore, have less impacts to drainage infrastructure than the adopted General Plan.

Scenario 3 appears to contain a higher percentage of industrial land use than the adopted General Plan, substituting industrial for medium residential for the tract of land located southwesterly of the intersection of Paseo Ranchero and Olympic Parkway. Industrial land use is typically associated with higher runoff potential than residential. However, countering this increase, the region located southeasterly of the intersection is presented as low-medium residential in alternative three, whereas the adopted General Plan includes this area as commercial and high density residential land use. Low-medium residential land use is typically associated with a lower runoff potential than commercial and high density residential. Based on visual inspection of this land use scenario, it appears that the runoff potential for alternative three is similar to that of the currently adopted General Plan.

Compliance with policies associated with Objectives PFS 1 and 2 would ensure that Scenarios 1 through 3 would not result in a significant impact to the existing drainage pattern of the site or area in a manner which would result in substantial erosion or siltation or flooding by retaining stormwater on-site so that pollutants could settle out of any runoff discharged offsite, and infiltration would filter pollutants.

ROLLING HILLS BASIN AREA

The Rolling Hills basin area is located in the northeasterly corner of the General Plan area. The land is currently primarily undeveloped but is scheduled for construction of residential development in the near future. In the existing condition, storm runoff from this area drains southerly to the Upper Otay Reservoir across undeveloped areas, containing little to no drainage infrastructure. Therefore development associated with implementation of any land use scenario would have minimal impacts to existing drainage infrastructure. In addition, Scenarios 1 through 3 would not present land use scenarios that differ from the adopted General Plan for the Rolling Hills basin area.

Compliance with policies associated with Objectives PFS 1 and 2 would ensure that Scenarios 1 through 3 would not result in a significant impact to the existing drainage pattern of the site or area in a manner which would result in substantial erosion or siltation or flooding by retaining stormwater on-site so that pollutants could settle out of any runoff discharged offsite, and infiltration would filter pollutants.

SOUTHEASTERLY CHULA VISTA

Southeasterly Chula Vista consists of Wolf Canyon, southerly Salt Creek and portions of the Otay River Valley. These areas all drain southerly to the Otay River and similar to the Rolling Hills basin area, currently drain through undeveloped areas. Although the three scenarios described above present differing land uses for southeasterly Chula Vista, there is minimal existing drainage infrastructure in this region and therefore minimal impacts to existing drainage infrastructure resulting from implementation of any of the alternatives.

As with the Preferred Plan, development under all three scenarios would increase the amount of impermeable surfaces due to the grading and clearing of vegetation. Redevelopment of portions of the Northwest and Southwest Planning Areas would have a less significant impact as the amount of added impervious surface is often marginal and the quality of runoff may actually improve due to replacement of components of the existing drainage system with new components which function at a higher standard. Development within the East Planning Area would alter the existing drainage pattern of the area due to the existing rural nature of the area. Development of Scenario 2 has the highest percentage of development and grading relative to the other scenarios; this scenario proposes to fill in a portion of Wolf Canyon for development within Village Two. Compliance with policies associated with Objectives PFS 1 and 2 would ensure that Scenarios 1 through 3 would not result in a significant impact to the existing drainage pattern of the site or area in a manner which would result in substantial erosion or siltation or flooding by retaining stormwater on-site so that pollutants could settle out of any runoff discharged off-site, and infiltration would filter pollutants.

5.9.3.4 Threshold 4: Flood Hazard

Threshold 4 states that the General Plan Update would result in a significant impact to water quality if it would expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam, or place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.

Growth of the City requires that technology be upgraded and expanded to provide for better management and planning of the City's infrastructure. The Public Works Operations Department continually monitors and reviews both existing facilities and proposed projects to ensure that established thresholds are being met and will continue to be met. The existing

Drainage Master Plan and General Plan Public Facilities Element include an analysis of drainage facilities based on growth estimates. As discussed above, the analysis concluded that the system would need improvements to accommodate the predicted drainage conditions at General Plan buildout. It can be assumed that the demand for drainage facilities would continue to increase as development of previously undeveloped areas in the city increases. Needed drainage improvement projects are addressed through the City's Capital Improvement Program and Development Impact Fee (DIF) Programs. Developers in areas not covered by DIFs may be required to construct drainage improvements as a condition of project approval.

Areas that have a one percent or greater chance of flooding in any given year are designated Special Flood Hazard Areas (SFHAs) on FIRM maps. Developers in floodplains will need to construct in accordance with FEMA and obtain a Letter of Map Amendment (LOMA) or a Letter of Map Revision-Based on Fill (LOMR-F) with the City's approval. LOMAs and LOMR-Fs are documents issued by FEMA that officially remove a property and/or structure from the SFHA designation. To obtain a LOMA or LOMR-F, the applicant must submit mapping and survey data for the property.

The proposed Environmental Element of the General Plan Update identifies an objective and associated policies that address drainage facilities and are listed below.

Objective EE 15

Minimize the risk of injury and property damage associated with flood hazards.

Policies

EE 15.1: Prohibit the subdivision, grading or development of lands subject to potential flood hazards in the absence of adequate evidence demonstrating that such proposals would not be adversely affected by such hazards and that such proposals would not adversely affect surrounding properties. Require site-specific hydrological investigations for proposals within areas subject to potential flood hazards and ensure that all measures deemed necessary by the City Engineer to avoid or adequately mitigate such hazards will be implemented.

EE 15.2: Wherever feasible, land uses, buildings, and other structures determined to be unsafe from flood hazards shall be discontinued, removed, or relocated.

Preferred Plan

The northern portion of the Northwest planning area and the southern portion of the Southwest and East planning areas are potentially subject to hazards associated with the 100-year flood. Additionally, portions of the Southwest planning area are located in dam inundation areas; update areas within the East planning area are just north of potential dam inundation areas. Implementation of the Preferred Plan would not put structures at risk of flooding or inundation; therefore, impacts would be less than significant. However, project-level mitigation measures would be required for project level development within the 100-year flood zone.

Scenarios 1, 2, and 3

As with the Preferred Plan, development under Scenarios 1, 2, and 3 would not put structures at risk of flooding or inundation; therefore, impacts would be less than significant. However, project-level mitigation measures would be required for project level development within the 100-year flood zone.

5.9.4 Level of Significance Prior to Mitigation

5.9.4.1 Threshold 1: Water Quality

Compliance with policies associated with proposed Objective EE 2 would minimize the potential for adverse impacts to surface water and groundwater quality resulting from development completed in compliance with the proposed General Plan Update. Conformance with policy EE 2.4 would ensure compliance with current federal and state water quality regulations, including the implementation of applicable NPDES requirements and the City's Pollution Prevention Policy. Policy EE 2.5 would include construction and land development techniques to minimize water quality impacts. This would be achieved by the preparation and implementation of an approved SWPPP and monitoring/testing program, with pollution control measures involving the use of best available technology, best conventional pollutant control technology, and/or best management practices pursuant to direction by the SWRCB and the applicable RWQCB office. The conformance to Policies EE 2.2 through EE 2.7 and to all federal, state, and regional water quality objectives would ensure that impacts to surface water and groundwater quality from specific developments would not be significant. The General Plan Update is self-mitigated.

When compared to the existing condition, there are increases in peak runoff within many of the undeveloped and partially undeveloped watersheds in eastern Chula Vista. Compared to existing conditions there are minor increases in peak runoff within the developed watersheds throughout the General Plan area. In undeveloped areas there is very little existing drainage infrastructure and thus minimal impacts. For those areas where impacts are anticipated, infrastructure upgrades would be made prior to or coincidentally with construction of projects within these areas. There may exist areas within each basin where individual site

development can adversely impact downstream drainage facilities, although when looked at as a whole, the overall drainage basin is not significantly impacted.

5.9.4.2 Threshold 2: Groundwater Resources

Although the increased exposure to urban pollutants could affect the quality of water recharging groundwater, filtering would occur during percolation. In any event, urban runoff has not been identified as a source of significant groundwater recharge. Therefore, no significant impacts to groundwater resources would result from buildout of the Preferred Plan or any of the three scenarios.

5.9.4.3 Threshold 3: Drainage

Compliance with policies associated with Objectives PFS 1 and 2 would ensure that the Preferred Plan and Scenarios 1 through 3 would not result in a significant impact to the existing drainage pattern of the site or area in a manner which would result in substantial erosion or siltation or flooding by retaining stormwater on-site so that pollutants could settle out of any runoff discharged offsite, and infiltration would filter pollutants.

5.9.4.4 Threshold 4: Flood Hazard

Compliance with policies associated with proposed Objective EE 15 ensure that the Preferred Plan and Scenarios 1 through 3 would not result in a significant impact from the risk of injury and property damage associated with flood hazards because the policies prohibit subdivision, grading, or development of lands subject to potential flood hazards and require site-specific hydrological investigations for proposals within areas subject to potential flood hazards and ensure the implementation of all measures to avoid or adequately mitigate such hazards.

5.9.5 Mitigation Measures

Since no adverse impacts to water resources would result, no mitigation is necessary.

5.9.6 Level of Significance After Mitigation

No significant water resources impacts have been identified.

5.10 Transportation

The traffic analysis for the General Plan Update was conducted by Kimley-Horn and Associates. The results of that analysis are attached to this report as Appendix E. The information provided in this section of the EIR is based upon that analysis.

5.10.1 Existing Conditions

5.10.1.1 Regulatory Plans and Policies

The adopted General Plan Circulation Element includes the following components:

- Thirty-three objectives grouped under the following goals:

    1. Accommodate Future Traffic Increases
    2. Mitigate External Traffic Impacts
    3. Provide for Pedestrian Safety/Mobility
    4. Reduce Traffic Congestion
    5. Transportation Phasing
    6. Public Participation

- Ten Bicycle Plan objectives

- Six Public Transit Plan objectives

As part of the EIR process, the goals, policies, and objectives of the adopted General Plan were evaluated for relevance and applicability to the new policies of the proposed General Plan Land Use and Transportation Element. Some policies would remain unchanged, while others have been updated. Objectives 2 and 8 of the adopted General Plan identify level of service (LOS) C as the operational goal for city streets and intersections. Other objectives address applying sound engineering practices in the city; limiting through traffic impacts on residential streets; promoting interagency cooperation; accommodating non single-occupancy vehicle modes of travel; implementing Transportation Systems Management (TSM) measures; and others. Objective 29 provides the basis for the Growth Management Traffic Monitoring Program. Objective 27 promotes the development of well-planned communities which would tend to be self-supportive and thus reduce the length of the vehicular trip, reduce dependency on the automobile, and encourage the use of other modes of travel. Public transit objectives primarily address encouraging local (rather than regional) transit service.

Growth Management: In accordance with the City's Growth Management Program and Growth Management Ordinance (Chapter 19.09 of the City of Chula Vista Municipal Code), Chula Vista monitors the traffic-related impacts of new development on an

ongoing basis. The City's Growth Management Program requires the City Council to hold a public hearing to consider a development moratorium if the observed average travel speed on a designated arterial falls below the performance standard (i.e., LOS C, with no more than two hours of LOS D during peak hours).

Section 19.09.030 of the City's Municipal Code specifies that the purpose of the Growth Management Program is to implement the general plan and provide that development does not occur unless facilities and improvements are available to support that development. The program requires identification of all facilities and improvements necessary to accommodate land uses specified in the general plan; specify size, capacity, service level, and threshold standards for each identified facility; project total buildout development levels and identify projected facility and improvement needs; provide a policy for timing the construction of each facility and improvement; and identify the financing method or methods for each facility and improvement.

The traffic section of Section 19.09.040 specifies the Growth Management requirements for traffic. These criteria are used to assess traffic short-term impacts for projects implemented in conformance to the General Plan. This section states:

I. Traffic.

1. City-wide. Maintain LOS "C" or better as measured by observed average travel speed on all signalized arterial segments; except, that during peak hours a LOS "D" can occur for no more than two hours of the day.

2. West of Interstate 805. Those signalized intersections which do not meet the standard above may continue to operate at their current (year 1991) LOS, but shall not worsen.

3. Notes to Standards.

   a. Arterial segment LOS measurements shall be for the average weekday peak hours, excluding seasonal and special circumstance variations.

   b. Urban and suburban arterials are defined as surface highways having signal spacing of less than two miles with average weekday traffic volumes greater than 10,000 vehicles per day.

   c. Arterial segments are stratified into three classifications:

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Chula Vista Municipal Code 19.09.040

i. Class I arterials are roadways where free-flow traffic speeds range between 35 mph and 45 mph and the number of signalized intersections per mile is less than four. There is no parking and there is generally no access to abutting property.

ii. Class II arterials are roadways where free-flow traffic speeds range between 30 mph and 35 mph, and the number of signalized intersections per mile ranges between four and eight. There is some parking and access to abutting properties is limited.

iii. Class III arterials are roadways where free-flow traffic speeds range between 25 mph and 35 mph, and the number of signalized intersections per mile is closely spaced. There is substantial parking and access to abutting property is unrestricted.

d. The LOS measurement of arterial segments and freeway ramps shall be a growth management consideration in situations where proposed developments have a significant impact at interchanges.

e. Circulation improvements should be implemented prior to anticipated deterioration of LOS below established standards.

f. The criteria for calculating arterial LOS and defining arterial lengths and classifications shall follow the procedures detailed in Chapter 11 of the 1985 Highway Capacity Manual (HCM) and shall be confirmed by the city traffic engineer.

g. During the conduct of future traffic monitoring program field surveys, intersections experiencing significant delays would be identified. The information generated by the field surveys would be used to determine possible signal timing changes and geometric and/or traffic operational improvements for the purpose of reducing intersection delay.

h. Level of service values for arterial segments shall be based on the following table:

Table I

Level of Service	Average Travel Speed (mph)		
	Class 1	Class 2	Class 3
A	>35	30>	25>
B	>28	24>	19>
C	>22	18>	13>
D	>17	>14	>9
E	>13	>10	>7
F	<13	<10	<7

SANDAG RTP: The San Diego Association of Governments (SANDAG) adopted the Regional Transportation Plan (RTP) Mobility 2030 in November 2003. Improved transit service is a major theme of Mobility 2030, and the Regional Transit Vision (RTV) described in the RTP emphasizes integration of transit service within communities and neighborhoods; makes use of high-occupancy vehicle lanes and/or managed lanes, incorporates signal priority or transit-only lanes on arterials, increases transit competitiveness with automobile trips, and improves transit customer service.

SANDAG RCP: In July 2004, SANDAG adopted the Regional Comprehensive Plan (RCP) for the San Diego region. The RCP is the strategic planning framework for the San Diego region and establishes a regional vision. One of the key principles of the RCP is the concept of "smart growth." From a transportation planning perspective, smart growth involves identifying appropriate land patterns and a complementary multi-modal[1] transportation system so as to improve the viability of public transit and other alternative travel modes (such as walking or bicycling) for the whole range of trip types, including commuting, shopping, school, etc. Smart growth has many advantages, including improved accessibility within a community; encouraging investment in already developed areas; and limiting expansion into outlying undeveloped areas, along with associated traffic and air quality benefits. As discussed in the proposed Land Use and Transportation Element, smart growth concepts would guide land use and transportation planning efforts throughout the city.

The South Bay Transit First – Tier One Plan was prepared by SANDAG (formerly the Metropolitan Transit Development Board) in May 2003. The Transit First concept (also described as Bus Rapid Transit [BRT]), involves the implementation of enhanced transit service strategies designed to improve the attractiveness and viability of transit to capture trips that typically travel by single-occupancy passenger cars. The overall intent is to use improved buses that emulate light rail service by increasing vehicle speeds and rider

[1]That is, public transit, passenger cars, pedestrians, and bicycling.

comfort and convenience. Vehicle speeds are increased due to fewer stops along a give route through the application of a variety of traffic engineering methods (such as traffic signal priority and queue jumper lanes) to assign priority to a transit vehicle in the traffic stream. The South Bay Transit First Plan provides a feasibility analysis of alternative route alignments and station designs throughout the city of Chula Vista.

As part of transit and mobility improvements, SANDAG manages the TransNet program. The City is working with SANDAG to obtain TransNet funding for circulation and mobility improvements. A TransNet extension was approved by San Diego County residents allowing the continuation of transportation funding for 40 years starting at the expiration of the current program in 2008 and continuing until 2048. One third of the entire TransNet revenues are allocated to local jurisdictions. Another third is allocated to regional freeways. TransNet revenues allocated to Chula Vista will increase at a higher rate than the region average due to population growth in Chula Vista. These local revenues are allocated by the City Council for local roadways in Chula Vista. In addition, TransNet will finance freeway improvements on I-805 and I-5 as planned in the RTIP from revenues allocated to regional freeways.

5.10.1.2 Existing and Citywide Conditions

Overview of Existing Transportation Facilities

The city of Chula Vista shares borders with the city of National City, the city of San Diego, and the county of San Diego. As the second-largest city in the county, Chula Vista's west side is largely developed, while the east side is experiencing a sustained period of growth. Some adjacent areas in neighboring jurisdictions (National City and Coronado) are largely built out; however, some areas (such as Otay Mesa in the city and county of San Diego) are growing. County land to the east of Chula Vista is generally vacant and undeveloped, although planned uses in these areas would generate some degree of traffic.

Roadway classifications under the adopted General Plan, existing traffic volumes, and level of service (LOS) is provided in Table 5.10-1. The existing system has freeways, six-lane Prime Arterials, six-lane Major Streets, four-lane Major Streets, and three- and four-lane Collectors.

I-5 and I-805 are major regional north/south freeways that link the U.S.–Mexico border area to the city of San Diego and other areas to the north. State Route 54 is an east/west freeway located generally along Chula Vista's northern boundary. East/west travel within the city is accommodated by a network of arterials, including E Street/Bonita Road; H Street/East H Street; Telegraph Canyon Road/Otay Lakes Road; Palomar Street; Orange Avenue/Olympic Parkway; and Main Street. State Route 125, a north/south tollway, is currently under construction in the eastern portion of the city.

TABLE 5.10-1
ANALYZED EXISTING ROADWAY SEGMENTS – EXISTING CONDITIONS

Segment			Adopted	Existing
Street	From	To	Plan	Volume
E Street	Marina Parkway	I-5	4-Lane Major	14,520
E Street	I-5	Woodlawn Avenue	4-Lane Major	26,924
E Street	Woodlawn Avenue	Broadway	4-Lane Major	21,997
E Street	Broadway	First Avenue	4-Lane Class I Collector	17,493
E Street	First Avenue	I-805	4-Lane Class I Collector	17,966
F Street	Bay Boulevard	Broadway	4-Lane Class I Collector	3,255
F Street	Broadway	Third Avenue	4-Lane Class I Collector	9,514
H Street	I-5	Broadway	4-Lane Major	33,116
H Street	Broadway	Hilltop Drive	4-Lane Major	26,055
H Street	Hilltop Drive	I-805	4-Lane Major	40,184
H Street	I-805	Hidden Vista Drive	7 Lane Prime	66,700
H Street	Hidden Vista Drive	Paseo del Rey	6-Lane Prime	54,967
H Street	Paseo del Rey	Paseo Ranchero	6-Lane Prime	44,534
H Street	Paseo Ranchero	Otay Lakes Road	6-Lane Prime	35,518
H Street	Otay Lakes Road	SR-125	4-Lane Major	4,080
J Street	Marina Parkway	Bay Boulevard	4-Lane Major	5,347
J Street	Bay Boulevard	Broadway	4-Lane Major	19,024
J Street	Broadway	Hilltop	4-Lane Class I Collector	13,248
L Street	I-5	Broadway	4-Lane Class I Collector	15,450
L Street	Broadway	Hilltop Drive	4-Lane Class I Collector	15,641
L Street	Hilltop Drive	I-805	4-Lane Class I Collector	20,407
Palomar Street	I-5	Broadway	6-Lane Prime	34,579
Palomar Street	Broadway	Hilltop	6-Lane Prime	16,538
Palomar Street	Hilltop	I-805	4-Lane Class I Collector	5,538
Palomar Street	I-805	Heritage Road	4-Lane Major	9,590
Orange Avenue	Palomar Street	Hilltop Drive	4-Lane Major	11,574
Orange Avenue	Hilltop Drive	I-805	4-Lane Major	24,518
Main Street	I-5	Broadway	4-Lane Major	22,953
Main Street	Broadway	Hilltop Drive	4-Lane Major	19,850
Main Street	Hilltop Drive	I-805	4-Lane Major	21,165
Main Street	I-805	Heritage Road	6-Lane Prime	14,846
Sweetwater Road	Plaza Bonita Road	Plaza Bonita Center Rd.	4-Lane Major	19,900
Sweetwater Road	Plaza Bonita Center Rd.	Willow Road	4-Lane Major	12,700
Sweetwater Road	Willow Road	SR-54	4-Lane Class I Collector	12,700
Bonita Road	I-805	Plaza Bonita Road	4-Lane Major	42,691
Bonita Road	Plaza Bonita Road	Willow Street	4-Lane Major	31,088
Bonita Road	Willow Street	Central Avenue	4-Lane Major	33,617
Bonita Road	Central Avenue	Sweetwater Road	4-Lane Major	24,937
Central Avenue	Sweetwater Road	Bonita Road	4-Lane Class I Collector	11,800
Central Avenue	Bonita Road	Corral Canyon Road	4-Lane Class I Collector	11,000
Proctor Valley Rd.	Mount Miguel Road	Hunte Parkway	6-Lane Prime	6,968
Telegraph Canyon Rd.	I-805	Oleander Avenue	6-Lane Prime	64,060
Telegraph Canyon Rd.	Oleander Avenue	Paseo del Rey	6-Lane Prime	60,008
Telegraph Canyon Rd.	Paseo del Rey	Paseo Ranchero	6-Lane Prime	51,802
Telegraph Canyon Rd.	Paseo Ranchero	Otay Lakes Road	6-Lane Prime	41,814
Otay Lakes Road	Bonita Road	Avenida del Rey	4-Lane Major	33,443
Otay Lakes Road	Avenida del Rey	H Street	4-Lane Major	29,300
Otay Lakes Road	H Street	Telegraph Canyon Rd.	4-Lane Major	25,040
Otay Lakes Road	Telegraph Canyon Rd.	SR-125	6-Lane Prime	43,219
Otay Lakes Road	SR-125	Eastlake Parkway	6-Lane Prime	41,349
Otay Lakes Road	Eastlake Parkway	Lane Avenue	6-Lane Prime	19,400
Otay Lakes Road	Lane Avenue	Hunte Parkway	6-Lane Prime	12,800

TABLE 5.10-1
ANALYZED ROADWAY SEGMENTS – EXISTING CONDITIONS
(continued)

Segment			Adopted	Existing
Street	From	To	Plan	Volume
Olympic Parkway	I-805	Oleander Avenue	6-Lane Prime	39,878
Olympic Parkway	Oleander Avenue	Heritage Road	6-Lane Prime	27,223
Marina Parkway	E Street	H Street	4-Lane Class I Collector	3,600
Marina Parkway	H Street	J Street	4-Lane Class I Collector	3,600
Woodlawn	E Street	F Street	4-Lane Class I Collector	11,600
Woodlawn	G Street	H Street	4-Lane Class I Collector	9,300
Broadway	SR-54	C Street	4-Lane Major	16,100
Broadway	C Street	E Street	4-Lane Major	20,015
Broadway	E Street	H Street	4-Lane Major	24,713
Broadway	H Street	L Street	4-Lane Major	24,420
Broadway	L Street	Palomar Street	4-Lane Major	23,368
Broadway	Palomar Street	Main Street	4-Lane Major	15,750
Broadway	Main Street	Southern city limits	4-Lane Major	15,110
Fourth Avenue	SR-54	C Street	4-Lane Class I Collector	36,923
Fourth Avenue	C Street	E Street	4-Lane Class I Collector	17,812
Fourth Avenue	E Street	H Street	4-Lane Class I Collector	17,001
Fourth Avenue	H Street	L Street	4-Lane Class I Collector	16,101
Fourth Avenue	L Street	Palomar Street	4-Lane Class I Collector	14,069
Fourth Avenue	Palomar Street	Main Street	4-Lane Class I Collector	9,843
Fourth Avenue	Main Street	Southern city limits	4-Lane Class I Collector	4,620
Third Avenue	C Street	E Street	4-Lane Class I Collector	7,220
Third Avenue	E Street	H Street	4-Lane Class I Collector	15,632
Third Avenue	H Street	L Street	4-Lane Class I Collector	23,459
Third Avenue	L Street	Palomar Street	4-Lane Class I Collector	21,623
Third Avenue	Palomar Street	Main Street	4-Lane Class I Collector	18,214
Hilltop Drive	Palomar Street	Main Street	4-Lane Class I Collector	10,678
Medical Center Dr.	Telegraph Canyon Rd.	Palomar Street	4-Lane Class I Collector	12,238
Brandywine Drive	Palomar Street	Main Street	4-Lane Class I Collector	7,249
Paseo del Rey	East H Street	Telegraph Canyon Rd.	4-Lane Class I Collector	12,225
Paseo Ranchero	H Street	Telegraph Canyon Rd.	4-Lane Class I Collector	14,380
Heritage Road	Telegraph Canyon Rd.	Olympic Parkway	4-Lane Class I Collector	16,505
Heritage Road	Olympic Parkway	Main Street	4-Lane Class I Collector	15,400
La Media Road	Telegraph Canyon Rd.	Olympic Parkway	4-Lane Class I Collector	13,419
Eastlake Parkway	Otay Lakes Road	Trinidad Cove	4-Lane Class I Collector	3,684
Eastlake Parkway	Trindad Cove	Olympic Parkway	4-Lane Class I Collector	3,684
Eastlake Parkway	Olympic Parkway	Hunte Parkway	4-Lane Class I Collector	17,830
Eastlake Parkway	Hunte Parkway	Otay Valley Road	4-Lane Class I Collector	16,754
Lane Avenue	Proctor Valley Road	Otay Lakes Road	4-Lane Class I Collector	4,268
Hunte Parkway	Proctor Valley Road	Otay Lakes Road	4-Lane Class I Collector	1,400
Hunte Parkway	Otay Lakes Road	Olympic Parkway	4-Lane Class I Collector	5,905
Hunte Parkway	Olympic Parkway	Eastlake Parkway	4-Lane Class I Collector	4,216
Hunte Parkway	SR-125	Eastlake Parkway	4-Lane Class I Collector	61,100
Plaza Bonita Road	Sweetwater Road	Bonita Road	4-Lane Major	11,400

The San Diego Trolley's Blue Line extends through the city parallel to the east side of I-5, with stations at Bayfront/E Street, H Street, and Palomar Street. Park-and-ride lots are provided at each station. Local bus service is provided by Chula Vista Transit (CVT). A bus transfer facility is located at Southwestern College, west of Otay Lakes Road and south of East H Street.

Existing Level of Service

A roadway's capacity is primarily a function of the number of lanes and whether or not the roadway is divided with a median or center turn lane. Typically, the more lanes a roadway has, the greater the capacity would be.

Traffic LOS is a measure of the relative ease or difficulty of traffic movement along segments of roadways and at intersections. It relates to delay in traffic flow, which is a measure of driver discomfort, frustration, fuel consumption, and loss of travel time. LOS is used to describe a roadway's ability to handle the volume of traffic that it carries. There are six defined LOS, A through F, which describe conditions ranging from "ideal" to "worst" as summarized below.

One available method to determine the LOS of an existing roadway segment or to predict the LOS of a planned segment on a daily basis is to compare the actual or projected average daily traffic (ADT) volume of the segment to the established maximum volumes for each LOS grade for the corresponding roadway classification (arterial, collector, etc.). This planning method is most often utilized to predict the performance of existing and planned roadways as far as 20 to 30 or more years into the future. Pursuant to Chula Vista's Growth Management Program and Ordinance, the City monitors the actual performance of designated arterials to determine their LOS based upon observed average travel speed. Although this method is a highly accurate means to determine the current performance of a roadway, this method cannot be utilized to predict the performance of roadways under future conditions. For these reasons, the V/C method (i.e., comparing the predicted ADT to established maximum ADTs for each LOS grade) has been used to predict the performance of existing and planned roadways under the various General Plan Update scenarios analyzed in this EIR. Like all other predictive methods, there is no assurance that the predicted future LOS of a roadway using this method will be an accurate representation of actual future conditions; however, it is widely considered to be the most reliable method currently available for this purpose and, therefore, has been utilized in performing this analysis.

Level of Service (LOS)	Description of Operation
A	Traffic is typically free-flowing at average travel speeds, with very little delay. Vehicles are seldom impeded in their ability to maneuver in the traffic stream. Delays at intersections are minimal.
B	Represents reasonably unimpeded operations at average travel speeds. The ability to maneuver in the traffic stream is slightly restricted but the majority of vehicles do not stop and it is not bothersome.
C	Represents stable operations with acceptable delays; if an intersection is signalized, a few drivers may have to wait through one signal cycle. The ability to change lanes and maneuver may be more restricted than LOS B.
D	Congestion occurs and a small change in volume increases delays substantially during short periods, but excessive backups do not occur.
E	Congestion occurs with extensive delays or one or more signal cycles and low travel speeds occur.
F	Arterial traffic flows at extremely low speeds, intersection congestion occurs with excessive delays; and back ups from other locations restrict or prevent movement.

The maximum acceptable volumes for all existing and proposed street classifications in Chula Vista is presented in Table 5.10-2.

TABLE 5.10-2
STREET SEGMENT PERFORMANCE STANDARDS AND VOLUMES

Street Classification	Acceptable LOS	Acceptable Volume
Prime Arterial	C	70,000
Prime Arterial	C	50,000
Major Street (six lanes)	C	40,000
Major Street (four lanes)	C	30,000
Town Center Arterial	C	50,000
Class I Collector	C	22,000
Gateway Street	D	61,200 (six lanes)
		43,200 (four lanes)
Urban Arterial	D	37,800
Commercial Boulevard	D	33,750
Downtown Promenade	D	33,750 (four lanes)
	D	14,400 (two lanes)

The majority of Circulation Element roadways in the city are currently operating at LOS C or better (see Appendix E). There are 12 roadway segments analyzed for this report that currently meet Growth Management travel speeds; however, these segments operate at LOS D, E, or F based upon the daily volume-to-capacity planning method described above. These include the following:

- H Street, from:
  - I-5 to Broadway (four-lane Major Street): LOS D
  - Hilltop Drive to I-805 (four-lane Major Street): LOS F
  - I-805 to Hidden Vista Drive (seven-lane Prime Arterial): LOS E
  - Hidden Vista Drive to Paseo del Rey (six-lane Prime Arterial): LOS D

- Bonita Road, from:
  - I-805 to Plaza Bonita Road (four-lane Major Street): LOS F
  - Plaza Bonita Road to Willow Street (four-lane Major Street): LOS D
  - Willow Street to Central Avenue (four-lane Major Street): LOS D

- Telegraph Canyon Road, from:
  - I-805 to Crest Drive/Oleander Avenue (seven-lane Prime Arterial): LOS D
  - Crest Drive/Oleander Avenue to Paseo del Rey (six-lane Prime Arterial): LOS F
  - Paseo del Rey to Paseo Ranchero (six-lane Prime Arterial): LOS D

- Otay Lakes Road, from Bonita Road to Avenida del Rey (four-lane Major Street): LOS D

- Third Avenue, from H Street to L Street (four-lane Class I Collector): LOS D

5.10.2 Thresholds of Significance

- Threshold 1: The adoption of the Urban Core Roadway Classifications contained in the proposed General Plan Update would result in a significant impact if adoption of an urban street system would not provide an adequate urban amenities program, and would not facilitate multimodal transportation systems sufficient to allow the City's Urban Core to achieve the mobility required to serve proposed land use densities.

- Threshold 2: A significant impact to circulation would occur if changes to the land use and the circulation plans would result in the following:

  A. For non-Urban Core circulation element roadways (Expressway, Prime Arterial, Major Street, Town Center Arterial, Class I Collector):

    A.1. A roadway segment that currently operates at LOS C or better and with the proposed changes would operate at LOS D or worse at General Plan buildout is considered a significant impact.

A.2. A roadway segment that currently operates at LOS D or E and with the proposed changes would operate at LOS E or F at General Plan buildout respectively, or which operates at LOS D, E, or F and would worsen by 5 percent or more at General Plan buildout is considered a significant impact.

B. For Urban Core Circulation Element roadways (Gateway Street, Urban Arterial, Commercial Boulevard, Downtown Promenade):

B.1. A roadway segment that currently operates at LOS D or better and with the proposed changes would operate at LOS E or F at General Plan buildout is considered a significant impact.

B.2. A roadway segment that currently operates at LOS E would operate at LOS F at General Plan buildout, or which operates at LOS E or F and would worsen by 5 percent or more at General Plan buildout is considered a significant impact.

C. For freeways:

C.1 A freeway segment that currently operates at LOS C or better and with the proposed changes would operate at LOS D, E, or F at General Plan buildout is considered a significant impact.

C.2 A freeway way segment that currently operates at LOS D or E would operate at LOS E or F at General Plan buildout respectively, or which operates at LOS D, E, or F and would worsen by 5 percent or more at General Plan buildout is considered a significant impact.

5.10.3 Impacts

The City is proposing to amend the circulation system as part of the adoption of the General Plan Update. These amendments include the creation of five new roadway classifications, the adoption of nine network changes, and the adoption of a designated transit system and map. These amendments are described below.

5.10.3.1 Threshold 1: Urban Street System Classifications

Threshold 1 states that the adoption of the Urban Core Roadway Classifications contained in the proposed General Plan Update would result in a significant impact if the adoption would not provide an adequate urban amenities program, and would not facilitate multimodal transportation systems in the Urban Core to achieve the mobility required to serve proposed land use densities.

The purpose for establishing Urban Core Roadway Classifications is to create an urban pedestrian-oriented environment, within which slower vehicular speeds are intended, and the ability to walk or use other non-vehicular modes of travel is supported by physical improvements, and mixed land uses which provide essential services in close proximity to residences. The concept of urban mobility and the related urban roadway system is presented in Sections 5.4 and 5.5 of the proposed Land Use and Transportation Element. Slower vehicular speeds result in lesser vehicular LOS which is reflected in the proposed use of LOS D as the long-range planning standard.

The General Plan Update proposes an LOS D for five roadways that are part of the Urban Core Roadway Classification system. Along with the standard of LOS D for Urban Core roadways, the General Plan Update would establish policies which require the provision of an urban amenities program within the Urban Core, to ensure an urban mobility context where pedestrian and transit modes are favored. In support of pedestrians and transit, the urban amenities program is proposed to include requirements for urban parks and plazas, mixed use development, and pedestrian and transit improvements, among others (see LUT Element Section 7.13). Use of this urban level of service standard would allow for a greater degree of vehicular traffic on urban system roadways than would be allowed on roadway segments outside the Urban Core.

The City of Chula Vista's Urban Core is located in the Northwest Planning Area, located south of SR-54, west of I-805, north of L Street, and east of I-5. Land uses within portions of the Urban Core are planned to have greater development intensities than currently exist. This proposed intensification would create a more urban context within the Urban Core. The proposed transportation network takes into account all modes of travel within this urban context—including public transit, bicycles, and pedestrians—as well as the automobile.

Section 9.4 of the proposed Land Use and Transportation Element presents the following vision of the Urban Core:

> The Urban Core Subarea has developed into a vibrant area, with housing, shops, restaurants, entertainment, and activities that attract from eastern Chula Vista and city-wide. Higher density housing, shopping, and job centers located near existing and planned transit stations give people transportation choices, encourage the use of mass transit, and help to reduce vehicular traffic. A network of linked urban parks and plazas creates pleasant pedestrian routes and provides areas for community activities. Increased population (residents and workers) in the Urban Core Subarea has created opportunities for more shops and a variety of restaurants. Entertainment and cultural arts are housed in new and renovated buildings, offering both day and evening activities. The streets

> are bustling with shoppers and people enjoying outdoor dining or heading to entertainment venues.
>
> A grade-separated trolley line at E and H Streets has improved the flow of east-west traffic, while a local shuttle provides frequent service between Urban Core Subarea activity centers. The Bus Rapid Transit (BRT) line allows residents in the East Planning Area convenient access to the Urban Core Subarea.
>
> F Street is a pedestrian-oriented promenade that links Third Avenue, the Civic Center, Broadway, the E Street transit center, and the Bayfront Planning Area with themed landscaping and public art. The freeway crossings of Interstate 5 have been widened to accommodate additional pedestrian use, and entryways into the Urban Core Subarea are enhanced and inviting. Chula Vista's Urban Core Subarea has matured into an urban, pedestrian-oriented, active area that continues to be the primary economic, governmental, and social focal point of the south San Diego County region.

The proposed General Plan Update also includes four primary objectives addressing urban mobility, namely Objectives LUT 26, 47, 48, and 49.

Objective LUT 47 states:

> Establish roadway classifications in the Urban Core that respond to the special operating characteristics of roadways within a more urbanized environment, accommodate slower speeds in pedestrian-oriented areas, and facilitate multi-modal design elements and amenities.

Objective LUT 49 and select associated policies advance urban mobility. Objective LUT 49 states:

> Encourage redevelopment, infill, and new development activities within the Northwest's Urban Core Subarea that would provide a balance of land uses, reinforce its identity as Chula Vista's central core, and complement land uses in other planning areas, including the Bayfront and East Planning Areas.

Objective LUT 49 also establishes design policies to assure that Urban Core development follows specific standards. These design policies include:

> LUT 49.14: Conduct a special study to examine the potential for higher land use intensities and taller buildings along the H Street Transit Focus

Corridor between Interstate 5 and Third Avenue, and which will also address compatibility issues with adjacent stable neighborhoods. The precise boundaries will be established at the time of the study, and all land use policies contained in this General Plan shall apply until modified as a result of study findings and appropriate amendments to this Plan. (see also LUT 2.6).

LUT 49.15 Recognize that different portions of the Urban Core Subarea have a desirable character, and develop specific plans and programs to strengthen and reinforce their uniqueness. Develop land use, density, special design features, and building guidelines for appropriate Focus Areas.

LUT 49.16: Prepare urban form guidelines and standards for development as part of the Urban Core Specific Plan.

LUT 49.17: Establish policies, development standards and/or design guidelines in the Urban Core Specific Plan to address where high-rise buildings should be concentrated, how to establish and/or reinforce pedestrian-scaled development, and how site and building design should respond to public view corridors.

LUT 49.18: With the adoption of the Urban Core Specific Plan, establish design standards for mixed-use development that achieves a high quality pedestrian-scaled environment and promotes side or rear located parking areas, streetfront windows and entries, and public and private open space.

LUT 49.19: With the adoption of the Urban Core Specific Plan, create a pedestrian-oriented realm by requiring retail or public uses at the ground floor of buildings.

LUT 49.20: Encourage the linkage and integration of new development with existing neighborhoods by means of open space areas, parks, and pathways as a means of enhancing pedestrian connections.

LUT 49.21: Where a park, natural open space, or urban open space exists adjacent to or near a transit-oriented development, these features should be incorporated into the development as open space amenities.

LUT 49.22: Require that the ground floor of parking structures located along primary street frontages in pedestrian-oriented districts be designed to promote pedestrian activity and, where appropriate, incorporate retail uses.

LUT 49.23: Specific Plans shall identify building and site design guidelines for commercial or mixed use areas to include the height above which buildings must step back; the location of the building's horizontal articulation, and other design elements.

LUT 49.24: Reinforce or encourage the establishment of a strong pedestrian orientation in designated districts, activity centers, and pedestrian-oriented Focus Areas, so that these areas may serve as a focus of activity for the surrounding community and a focus for investment in the community.

Mobility policies that are tied to this urban development are addressed in Objective LUT 48. Objective LUT 48 states, "Increase mobility for residents and visitors in the Urban Core Subarea." The policies to achieve this objective include:

LUT 48.1: Create safe and convenient pedestrian access to, from, and within the Urban Core Subarea.

LUT 48.2: Provide adequate sidewalk space on heavily traveled pedestrian corridors within the Urban Core Subarea.

LUT 48.3: Provide mid-block pedestrian crossings and sidewalk curb extensions, where feasible, to shorten pedestrian walking distances.

LUT 48.4: Locate secure bicycle parking facilities near transit centers and major public and private buildings.

LUT 48.5: Encourage the establishment of a transit shuttle system that connects the Downtown Third Avenue District to the City's Bayfront Planning Area. Connections with the Civic Center and transit stations on E and H Streets should be considered as priorities.

LUT 48.6: Design and implement a system of landscaped pedestrian paths that link important features within Downtown, especially an F Street Promenade that will link the Bayfront Planning Area with Broadway and Downtown Third Avenue.

The General Plan Update indicates that in order to help promote pedestrian friendliness, these streets would provide, in varying amounts, the following generalized amenities:

- Way finding maps, grated planters, trash receptacles, and benches strategically located throughout the Urban Core Subarea. Streetscapes should be designed with inviting sidewalks that should be passable without having to maneuver around hedges or other obstacles.

- On-street parking, limited driveway cuts, and landscaping or planting strips, which create a buffer between traffic and pedestrians and provide canopy shade. A well-designed streetscape makes people feel comfortable and invites and motivates residents to walk or bike to destinations, such as shopping or work. Urban Core Subarea street design should include mid-block crosswalks and neighborhood passthroughs to future open space areas and common areas. This helps to create a human scale.

- Behind the sidewalk, easily accessible building entrances with minimum building setbacks, windows at street level, and no blank walls on adjacent buildings.

- Distinctive public transit amenities to increase ease of use and attractiveness of neighborhoods. Transit amenities should include next bus information kiosks, bicycle facilities and interconnections to other routes and bikeways, bike racks, lockers and shower facilities. The objective of this design is to reinforce bikes as a mode of transportation connected to and coordinated with other modes and bus lines, to connect people and places through a complete street network that invites walking and bicycling, thereby providing convenient public access.

Finally, Objective LUT 26 stresses the intent of the City to "Establish an Urban Core Improvements Program for the Urban Core Subarea." Policies associated with this objective include:

LUT 26.1: Through the Urban Core Specific Plan, determine an urban framework for streets and gateways, transit accommodation, a network of parks and urban plazas, pedestrian-oriented streets, pedestrian and bicycle linkages, and activity nodes.

LUT 26.2: Establish an Urban Core Improvements Program that addresses the urban framework elements, implements Urban Mobility techniques and parking strategies, determines what is needed in various areas; and sets priorities for implementation.

LUT 26.3: Develop methods to finance the Urban Core Improvements Program, including but not limited to Developer Impact Fees, tax

increment financing (in redevelopment areas), and/or an incentives program.

As part of achieving improved mobility, the General Plan Update proposes to adopt a transit system that is compatible with the RTV established by SANDAG. The RTV includes BRT routes in the city of Chula Vista, as a priority in the Mobility 2030 RTP. The San Diego Trolley Blue Line passes through the western part of the city of Chula Vista along the east side of I-5, with stations at Bayfront/E Street, H Street, and Palomar Street.

Urban Core Circulation Element Context

Transportation planners and traffic engineers historically have been trained in the science of efficiently and safely moving automobiles. For the past 30 years one of the most widely used measures of efficient automobile travel is the concept of LOS. The Highway Capacity Manual[2] defines LOS as "a qualitative measure of operational conditions within a traffic stream, and their perception by motorists and/or passengers". The American Association of State Highway and Transportation Officials (AASHTO)[3] manual states that "highway agencies should provide the highest level of service possible". They suggest that LOS D should be used sparingly in metropolitan areas, with the goal of striving for a minimum of LOS C. Clearly the emphasis is on moving cars.

Increasingly, communities such as Chula Vista are questioning the sustainability of maintaining automobile levels of service in "transit corridors" and "town centers," major centers of economic, social and transportation activity. In fact, the California legislature recently enacted SB 1636 to exempt automobile levels of service standards for Congestion Management Program systems in "infill opportunity zones," areas of concentrated development around transit centers[4]. The Urban Core Circulation Element promotes the use of revised level of service standards for certain corridors and centers served by transit, alternative ways of measuring level of service for vehicles, and possibly establishing level of service criteria and performance measures for other modes of travel. The following steps were taken to develop the Urban Core Circulation Element in western Chula Vista:

[2]Highway Capacity Manual, Special Report 209, Transportation Research Board, 1985.

[3]"A Policy on Geometric Design of Highways and Streets", American Association of State Highway and Transportation Officials, 2001

[4]Consistent with SB 1636, the City of San Diego has established a performance standard of LOS E for streets in their Centre City district.

1. ***Identification of the following context-specific street classifications.*** The following roadway classifications are proposed within the Urban Core and its immediate environs:

   - ***Gateway Street:*** these roadways (segments of Broadway, Fourth Avenue, E Street, H Street, J Street, and L Street) connect the Urban Core to SR-54, I-805, and I-5. These facilities are analogous to six- or four-lane major roads in other parts of the city, but would provide special design features and amenities to encourage access for the full spectrum of travel modes. These streets would be the major entry points to and from the Urban Core, and special landscape and entry treatments would be incorporated into the design. The acceptable capacity for a six-lane Gateway Street is 61,200 ADT and for a four-lane Gateway Street is 43,200 ADT.

   - ***Urban Arterial:*** these roads include portions of E Street, H Street, and Fourth Avenue. In terms of cross section, urban arterials are similar to four-lane major roads in other areas of Chula Vista, but with special features to support multi-modal trip-making, such as wider sidewalks, transit station curb "bulb outs," and pedestrian amenities. The acceptable capacity for an Urban Arterial is 37,800 ADT.

   - ***Commercial Boulevard:*** these streets include segments of Broadway and Third Avenue (north of E Street and South of H Street) and would serve existing and future shopping districts. Design would be generally consistent with four-lane majors in other areas, but with special design features reflecting the multi-modal nature of streets in more urban areas. The acceptable capacity for a Commercial Boulevard is 33,750 ADT.

   - ***Downtown Promenade:*** these roads (including portions of F Street and Third Avenue) would provide access to retail establishments in the heart of the Urban Core. Street cross sections would be similar to a two-lane collector and four-lane collector, but with multi-modal features and amenities that accommodate the surrounding urban context. The acceptable capacity for a Downtown Promenade is 14,400.

   - ***Town Center Arterial:*** The Town Center Arterial is intended for use primarily in the East Planning Area's Otay Ranch Subarea. The Town Center Arterial provides a pair of one-way streets in order to ensure a more efficient traffic flow by eliminating wide arterials, with their inherent long signal cycle lengths and segregated left-turn lanes at major intersections, and it creates a more energized mixed use pedestrian-oriented community within an enlarged urban transit network. The acceptable capacity for a Town Center Arterial is 50,000 ADT.

2. ***Development of capacity standards for the Urban Core Circulation Element.*** The capacities for the Urban Core Circulation Element were developed based on Highway Capacity Manual (HCM) procedures. The capacities were obtained from the *Generalized Planning Analysis*[5] method, which provides a method for estimating 24-hour street segment capacity using *Highway Capacity Manual* (HCM) 2000 procedures[6]. Whereas ADT-based thresholds in the City of Chula Vista, and many other communities, have evolved over time, the Generalized Planning Analysis method provides a scientific method to relate peak hour HCM-calculated results to acceptable ADT volumes on certain classes of roads. The acceptable 24-hour volume is adjusted to account for design elements that move traffic efficiently. These include traffic signal spacing and timing. The results provided by the method were tailored to Urban Core streets to account for peak hour spreading. Because the Urban Core will become a destination rather than a waypoint, the 24-hour volume will be less concentrated in peak commuting hours. The maximum capacities shown in this table assume implementation of traffic and multi-modal improvements.

3. ***Identification of appropriate performance standards for the Urban Core Circulation Element.*** The Urban Core Circulation Element would accommodate all modes of travel (vehicular, transit, bicycling, and walking) and a variety of different trip types (shopping, entertainment, dining, as well as commuting). As discussed above, the existing capacities and performance standards used for streets throughout the City of Chula Vista emphasize vehicular commuting trips, and have the unintended effect of limiting the potential for a more urbanized downtown environment. Accordingly, within the Urban Core and its immediate environs (where the Urban Core Circulation Element is located), the minimum performance standard on the Urban Core Circulation Element is LOS D.

The acceptable capacities for these roadways assume implementation of traffic and multi-modal improvements to accommodate all modes of travel (vehicular, transit, bicycling, and walking) and a variety of different trip types (shopping, entertainment, dining, as well as commuting).

The approach of using a performance standard of LOS D for more urbanized areas is not unique to Chula Vista. Both the City and County of San Diego use LOS D as their performance standard in urbanized and built-out communities. The City of San Diego uses LOS C as the minimum performance standard in newly developing areas. The City of Chula Vista will have the same two-tiered performance standards that are tailored to the context of surrounding development. In addition, the City of San Diego has

[5]Florida Department of Transportation, Updated Jan. 7, 2003

[6]Chapter 15, Urban Streets

established a performance standard of LOS E for streets in their Centre City district. Appendix E of the Traffic Technical Study contains a summary of LOS performance standards for other jurisdictions in the San Diego region.

The adoption of the proposed Urban Core Roadway Classifications as specified in the General Plan Update would not result in a significant impact pursuant to Threshold No. 1 because the policies in the proposed General Plan Update provide for the establishment of an Urban Core Improvement Program (policies associated with Objective LUT 26), provide for adequate mobility (policies associated with Objective LUT 46), and ensure redevelopment, infill, and new development activities within the Northwest's Urban Core Subarea that would provide a balance of land uses (policies associated with Objective LUT 47). The plan, as proposed, would provide an adequate urban amenities program, and facilitates multimodal transportation systems sufficient to allow the Urban Core of the City of Chula Vista to achieve the mobility required to serve proposed land use densities.

Level of Service C is described as follows in previously referenced Table 5.10-2: "(r)epresents stable operations with acceptable delays; if an intersection is signalized, a few drivers may have to wait through one signal cycle. The ability to change lanes and maneuver may be more restricted than LOS B." Level of Service D is described as: "(c)ongestion occurs and a small change in volume increases delays substantially during short periods, but excessive backups do not occur." There are a number of reasons why LOS D is an acceptable performance standard for the Urban Core Circulation Element. Several are related to concepts of urban context and driver expectation. As discussed above, the City of San Diego applies a three-tiered approach, with LOS C in newly developing areas, LOS D in more urbanized locations, and LOS E in the Centre City area. As discussed in the San Diego memo (see Appendix D of the traffic report), drivers in a downtown environment do not expect to pass through built-up areas at high speed. Instead, given the type and intensity of uses, the ability to attract and accommodate visitors becomes a higher priority in the Urban Core or other downtown areas than moving cars. Adhering to an LOS C performance standard would likely require street widening to provide additional capacity, with associated impacts to urban character (e.g., wide, pedestrian-unfriendly streets), not to mention the public costs of acquiring right-of-way.

Level of Service D is widely used in numerous other cities in the region, many with a primarily suburban character. The San Diego Traffic Engineering Council/Institute of Transportation Engineers (SANTEC/ITE) Traffic Impact Study Guidelines have established LOS D as an acceptable performance standard, regardless of urban/suburban/rural locale. The cities of Coronado, El Cajon, Encinitas, Escondido, National City, Poway, San Marcos, Solana Beach, and Vista use this performance standard. Given that LOS D is widely used in the San Diego region as a minimum performance standard and given that the City's existing performance standard of LOS C

is not appropriate for a more urbanized context, the selection of the LOS D performance standard for the Urban Core is appropriate and is implemented in the General Plan.

5.10.3.2 Threshold 2: Circulation Impacts

The project's circulation impacts were determined based on a comparison of long-term future conditions to existing conditions (i.e., "plan-to-ground"). The traffic implications of proposed land use/transportation network alternatives were evaluated using the SANDAG TRANPLAN regional traffic model, which is based on Series 10 employment and population projections for the San Diego region. This computerized model takes land use and transportation network information as inputs and estimates the volumes of traffic on existing and future roadways under long-term future conditions using the four-step Urban Transportation Planning Process. Table 5.10-3 summarizes the land use and network assumptions for each alternative evaluated in the study. The planning "horizon year" for this study is the Year 2030. Regional transportation infrastructure was modeled using SANDAG's "reasonably expected" Mobility 2030 assumptions. The impact analysis assumed that the city was built out in 2030, but that the surrounding area was consistent with the SANDAG land use assumptions for the year 2030.

Threshold 2 states that a significant impact to circulation would occur if the changes in the land uses and the circulation plan for the city resulting from adoption of the proposed General Plan Update result in the following:

A. For non-Urban Core Circulation Element roadways (Expressway, Prime Arterial, Major Street, Town Center Arterial, Class I Collector):

A.1. A roadway segment that currently operates at LOS C or better and with the proposed changes would operate at LOS D or worse at General Plan buildout is considered a significant impact.

A.2. A roadway segment that currently operates at LOS D or E and with the proposed changes would operate at LOS E or F at General Plan buildout, respectively, or which operates at LOS D, E, or F and would worsen by 5 percent or more at General Plan buildout is considered a significant impact.

B. For Urban Core Circulation Element roadways (Gateway Street, Urban Arterial, Commercial Boulevard, Downtown Promenade):

B.1. A roadway segment that currently operates at LOS D or better and with the proposed changes would operate at LOS E or F at General Plan buildout is considered a significant impact.

TABLE 5.10-3
GENERAL PLAN UPDATE TRAFFIC MODEL ASSUMPTIONS

		Land Use Assumptions			Network Assumptions		
	Analysis Scenario	Chula Vista	Study Area	Region	Chula Vista	Study Area	Region
I	Adopted General Plan, Year 2030 (model run 50)	Adopted[1]	2030	2030	Adopted	Toll/4 lanes	Existing, with LRT in Otay Ranch
II	GPU Scenario 1, Year 2030 (model run 52A)	Alt. 1[1]	2030	2030	Proposed w/o La Media[2]	Toll/4 lanes	Existing only
III	GPU Scenario 2, Year 2030 (model run 52B)	Alt. 2[1]	2030	2030	Proposed w/o La Media	Toll/4 lanes	Existing only
IV	GPU Scenario 2, Year 2030 (model run 52C)	Alt. 3[1]	2030	2030	Proposed w/o La Media	Toll/4 lanes	Existing only
V	GPU Preferred Alt., Year 2030 (model run 52D)	Preferred[1]	2030	2030	Proposed w/o La Media	Toll/4 lanes	Existing only
VI	GPU Preferred Alt., Year 2030 (model run 52E)	Preferred[1]	2030	2030	Proposed	Toll/4 lanes	Existing only
VII	Regional Transit Vision, Year 2030 (model run 54)	Preferred[1]	2030	2030	Proposed w/o La Media	Toll/4 lanes	RTV[3]
VIII	GPU Preferred Alt., Buildout (model run 56B)	Preferred[1]	Buildout[4]	2030	Proposed w/o La Media	Freeway/6 and 8 lanes	RTV[3]
IX	GPU Preferred Alt., Buildout with La Media (model run 56C)	Preferred[1]	Buildout[4]	2030	Proposed[5]	Freeway/6 and 8 lanes	RTV[3]
X	GPU Preferred Alt., Buildout proposed uses in Otay Mesa (model run 58C)	Preferred[1]	Buildout[6]	2030	Proposed w/o La Media	Freeway/6 and 8 lanes	RTV[3]
XI	GPU Preferred Alt., Buildout with La Media (model run 56D)	Preferred[1]	Buildout[6]	2030	Proposed w/o La Media	Freeway/6 and 8 lanes	RTV[3]

SOURCE: Kimley-Horn and Associates 2005.

[1]All alternatives assumed 100 percent buildout of planned future land uses in Chula Vista.
[2]Refer to Figure 1.2-1 for proposed circulation element changes to the adopted General Plan.
[3]Refer to Figure 1.2-3 for Regional Transit Vision RTV routes.
[4]Adopted land uses in Otay Mesa.
[5]Proposed circulation element.
[6]Proposed land uses in Otay Mesa.

B.2. A roadway segment that currently operates at LOS E would operate at LOS F at General Plan buildout, or which operates at LOS E or F and would worsen by 5 percent or more at General Plan buildout is considered a significant impact.

C. For freeways:

C.1 A freeway segment that currently operates at LOS C and would operate at LOS D, E, or F at General Plan buildout is considered a significant impact.

C.2 A freeway way segment that currently operates at LOS D or E would operate at LOS E or F at General Plan buildout respectively, or which operates at LOS D, E, or F and would worsen by 5 percent or more at General Plan buildout is considered a significant impact.

The General Plan Update proposes the establishment of Urban Core roadways and includes revisions to the classification of certain non-Urban Core roadways. Figure 5.10-1 shows the proposed non-Urban Core roadway network changes. As depicted in this figure, there are a number of proposed changes that would alter the capacity of the city's roadway network. Figure 5.10-2 presents the proposed General Plan Update roadway classifications.

The following paragraphs summarize the non-Urban Core roadway network changes that have been proposed as part of the General Plan Update in addition to the adoption of the Urban Core roadway system. These are important for the analysis because they affect the capacity of the system and the predicted level of service.

- Removal of Main Street from Heritage Road to La Media Road: This segment has been removed due to the presence of a Multi-Habitat Planning Area of the Multiple Species Conservation Program. Access to the active recreation uses in the Otay Valley will be addressed as individual SPA plans are developed for the area.

- Realignment and reclassification of Rock Mountain Road to connect to Main Street at Heritage Road: This segment is designed and sized to replace the removal of Main Street between Heritage Road and La Media Road (please see Figure 5.10-1) in order to accommodate east/west travel in the southeastern portion of the city. It was classified as a four-lane Class I Collector in the adopted General Plan, but is proposed to be reclassified as a six-lane Prime Arterial from Heritage Road to SR-125, which would increase its LOS C volume from 22,000 to 50,000 ADT.

- Removal of Alta Road south and east of Eastlake Parkway: This segment has been removed to be consistent with the County of San Diego East Otay Mesa Specific Plan, which has removed the portion of the roadway in the unincorporated area.

- Reduction of travel lanes on H Street between Broadway and Hilltop Drive from six to four: This change is necessitated by existing land use patterns along this roadway, which preclude widening without significant property acquisition for right-of-way.

- Removal of East Palomar Street/I-805 interchange: This interchange would be located beneath a high voltage power line. The Public Utilities Commission restricts the operation of traffic signals underneath high power lines. Accordingly, this project has been removed from the Capital Improvement Program and Transportation Development Impact Fee Program. Given the proximity of the East Orange Avenue/Olympic Parkway interchange to this location, a new interchange at East Palomar Street could conflict with Caltrans' standards on interchange spacing and weaving distances.

- Removal of the Woodlawn Avenue connection between F and G Streets: This removal accounts for the construction of buildings in the path of this roadway between F and G Streets.

- Reduction of travel lanes on Otay Lakes Road, from Bonita Road to East H Street, from six to four: This reduction is necessary due to the engineering and environmental considerations. The Preferred Plan forecast volume on this segment is 30,400, or 400 ADT above the LOS C volume for a four-lane Major. Given the nature of fronting land uses, the absence of side friction (limited intersections, limited driveways, and no on-street parking), and improved traffic signal coordination, the additional 400 ADT of demand does not warrant the additional two travel lanes (see Appendix E).

  Pursuant to additional analysis of the buildout conditions, it is anticipated that there would be a reduced volume on this segment of Otay Lakes Road due to the change of SR-125 from a tollway to a freeway. SR-125 is expected to attract volumes from parallel north/south roadways, such as Otay Lakes Road.

- Removal of the Blacksmith Road connection to Proctor Valley Road: This roadway extension would bisect an existing Caltrans open space mitigation area that is to be preserved in perpetuity.

An assessment of the significance of impacts for this threshold involved comparing the predicted level of service for each scenario to the existing level of service on the roadway segment. To assess the significance of circulation impacts resulting from the changes in the land uses and the circulation plan for the city resulting from adoption of the General

Plan Update, 109 roadway segments were evaluated. Table 5.10-4~~3~~ provides the levels of service for these segments for the existing condition, the Preferred Plan, and the three Scenarios. It is the comparison of the Preferred Plan and each of the Scenarios to the existing condition that serves as the basis for the assessment of a potential impact in respect to Threshold 2.

As a result of this analysis, 15 non-Urban Core roadway segments that currently operate at LOS C or better are forecasted to operate at LOS D or worse with the adoption of the Preferred Plan. This is a significant impact. Scenarios 1, 2, and 3 are projected to result in 18, 18, and 19 segments, respectively, that currently operate at LOS C or better and are forecasted to operate at LOS D or worse. This is a significant impact. No Urban Core roadway segments were found to have a significant adverse impact under the Preferred Plan, but a single segment will experience a significant traffic impact under both Scenarios 1 and 2. The following detail provides the explanation for the results of the evaluation of Threshold 2.

A. NON-URBAN CORE ROADWAYS

As discussed above, existing and future levels of service were calculated for each roadway segment evaluated. The future condition was determined for the Preferred Plan and each of the scenarios was evaluated by comparing the existing level of service to the future levels of service by scenario (see Table 5.10-4~~3~~). In addition, all Year 2030 scenarios assume that SR-125 will operate as a tollway. The following results are organized by each component of Threshold 2.

A.1. A roadway segment that currently operates at LOS C or better and with the proposed changes would operate at LOS D or worse at General Plan buildout is considered a significant impact.

Preferred Plan: The following 15 non-Urban Core roadway segments that currently operate at LOS C or better are predicted to operate at LOS D or worse as a result of the adoption of the Preferred Plan and would, therefore, represent a significant impact. Specific levels of service changes for each of the following segments are provided in Table 5.10-4~~3~~.

E Street between Marina Parkway and I-5
H Street between Marina Parkway and I-5
J Street between Marina Parkway and Bay Boulevard
L Street between Hilltop Drive and I-805
Main Street between I-5 and Broadway
Main Street from Broadway to Hilltop Drive
Main Street from Hilltop Drive to I-805
Otay Lakes Road between SR-125 and Eastlake Parkway

TABLE 5.10-4~~3~~
ANALYZED ROADWAY SEGMENTS LEVEL OF SERVICE

Segment				Preferred	Scenario		
Street	From	To	Existing	Plan	1	2	3
Urban Core							
E Street	I-5	Woodlawn Avenue	C	B	C	B	B
E Street	Woodlawn Avenue	Broadway	A	C	**E**	C	C
E Street	Broadway	First Avenue	B	A	A	A	A
E Street	First Avenue	I-805	B	A	A	A	A
F Street	Marina Parkway	Broadway	A	A	B	A	A
F Street	Broadway	Third Avenue	A	C	D	D	C
H Street	I-5	Broadway	D	C	C	C	B
H Street	Broadway	Hilltop Drive	B	D	D	D	C
H Street	Hilltop Drive	I-805	F	C	C	C	C
Broadway	SR-54	C Street	A	A	A	A	A
Broadway	C Street	E Street	A	C	D	**E**	D
Broadway	E Street	H Street	B	D	D	D	D
Broadway	H Street	L Street	B	C	D	C	D
Fourth Avenue	C Street	E Street	B	A	A	A	A
Fourth Avenue	E Street	H Street	B	A	A	A	A
Fourth Avenue	H Street	L Street	A	A	A	A	A
Third Avenue	C Street	E Street	A	A	A	A	A
Third Avenue	E Street	H Street	A	A	A	A	A
Third Avenue	H Street	L Street	D	B	B	B	B
Non-Urban Core							
E Street	Marina Parkway	I-5	A	**F**	**F**	**F**	**F**
H Street	Marina Parkway	I-5	n/a	**F**	**F**	**F**	**F**
H Street	I-805	Hidden Vista Drive	E	E	E	E	E
H Street	Hidden Vista Drive	Paseo del Rey	D	D	D	D	D
H Street	Paseo del Rey	Paseo Ranchero	C	C	C	C	C
H Street	Paseo Ranchero	Otay Lakes Road	A	A	A	A	A
H Street	Otay Lakes Road	SR-125	A	A	A	A	A
Birch Road	La Media	SR-125	n/a	B	B	B	B
Birch Road	SR-125	Eastlake Parkway	n/a	A	A	A	A
J Street	Marina Parkway	I-5	A	**F**	**F**	**F**	**F**
J Street	I-5	Broadway	A	B	C	C	C
L Street	I-5	Broadway	A	A	B	A	A
L Street	Broadway	Hilltop Drive	A	C	C	C	C
L Street	Hilltop Drive	I-805	C	**D**	**E**	**D**	**E**
Palomar Street	I-5	Broadway	B	C	**D**	**D**	**D**
Palomar Street	Broadway	Hilltop	A	B	C	C	C
Palomar Street	Hilltop	I-805	A	A	A	A	A
Palomar Street	I-805	Heritage Road	A	A	A	A	A
Orange Avenue	Palomar Street	Hilltop Drive	A	A	A	A	A
Orange Avenue	Hilltop Drive	I-805	B	B	C	B	C
Main Street	I-5	Broadway	B	**F**	**E**	**F**	**F**
Main Street	Broadway	Hilltop Drive	A	**D**	C	**D**	**E**
Main Street	Hilltop Drive	I-805	A	**E**	**E**	**E**	**F**
Main Street	I-805	Heritage Road	A	C	C	**D**	**D**
Otay Valley Road	La Media	SR-125	n/a	A	A	A	A
Otay Valley Road	SR-125	Eastlake Parkway	n/a	A	A	A	A
Sweetwater Road	Plaza Bonita Road	Plaza Bonita Center Rd.	A	B	C	B	B
Sweetwater Road	Plaza Bonita Center Rd.	Willow Road	A	A	A	A	A
Sweetwater Road	Willow Road	SR-54	A	A	A	A	A

TABLE 5.10-4~~3~~
ANALYZED ROADWAY SEGMENTS LEVEL OF SERVICE
(continued)

Segment				Preferred	Scenario		
Street	From	To	Existing	Plan	1	2	3
Bonita Road	I-805	Plaza Bonita Road	F	**F**	**F**	**F**	**F**
Bonita Road	Plaza Bonita Road	Willow Street	D	D	**D**	D	**D**
Bonita Road	Willow Street	Central Avenue	D	**E**	**E**	**E**	**E**
Bonita Road	Central Avenue	Sweetwater Road	B	A	A	A	A
Central Avenue	Sweetwater Road	Bonita Road	A	A	A	A	A
Central Avenue	Bonita Road	Corral Canyon Road	A	A	A	A	A
Proctor Valley Rd.	Mount Miguel Road	Hunte Parkway	A	A	A	A	A
Telegraph Canyon Rd.	I-805	Oleander Avenue	F	E	**F**	**F**	**F**
Telegraph Canyon Rd.	Oleander Avenue	Paseo del Rey	E	**F**	**F**	**F**	**F**
Telegraph Canyon Rd.	Paseo del Rey	Paseo Ranchero	D	**E**	**E**	**E**	**E**
Telegraph Canyon Rd.	Paseo Ranchero	Otay Lakes Road	B	A	B	B	B
Otay Lakes Road	Bonita Road	Avenida del Rey	D	D	C	C	C
Otay Lakes Road	Avenida del Rey	H Street	C	B	B	B	B
Otay Lakes Road	H Street	Telegraph Canyon Rd.	B	A	A	A	A
Otay Lakes Road	Telegraph Canyon Rd.	SR-125	B	C	C	C	C
Otay Lakes Road	SR-125	Eastlake Parkway	B	**D**	**E**	**E**	**E**
Otay Lakes Road	Eastlake Parkway	Lane Avenue	A	**D**	**D**	**D**	**D**
Otay Lakes Road	Lane Avenue	Hunte Parkway	A	A	A	A	A
Olympic Parkway	I-805	Oleander Avenue	B	**D**	**D**	**D**	**D**
Olympic Parkway	Oleander Avenue	Heritage Road	A	C	**D**	C	**D**
Olympic Parkway	Heritage Road	La Media	n/a	C	C	C	C
Olympic Parkway	La Media	SR-125	n/a	A	B	A	B
Olympic Parkway	SR-125	Eastlake Parkway	n/a	A	A	A	A
Olympic Parkway	Eastlake Parkway	Hunte Parkway	n/a	A	A	A	A
Rock Mountain Rd.	Heritage Road	La Media	n/a	B	B	B	B
Rock Mountain Rd.	La Media	SR-125	n/a	B	C	C	B
Marina Parkway	E Street	J Street	A	**E**	**E**	**E**	**E**
Broadway	L Street	Palomar Street	B	C	**D**	C	C
Broadway	Palomar Street	Main Street	A	C	C	C	C
Broadway	Main Street	Southern city limits	A	B	B	B	B
Fourth Avenue	SR-54	C Street	C	B	B	B	B
Fourth Avenue	L Street	Palomar Street	A	A	B	B	B
Fourth Avenue	Palomar Street	Main Street	A	A	A	A	A
Fourth Avenue	Main Street	Southern city limits	A	A	A	A	A
Third Avenue	L Street	Palomar Street	C	**D**	**D**	**D**	**D**
Third Avenue	Palomar Street	Main Street	B	C	C	C	**D**
Medical Center Dr.	Telegraph Canyon Rd.	Palomar Street	A	A	A	A	A
Brandywine Drive	Palomar Street	Main Street	A	A	A	A	A
Paseo del Rey	East H Street	Telegraph Canyon Rd.	A	A	A	A	A
Paseo Ranchero	H Street	Telegraph Canyon Rd.	A	C	**D**	**D**	**D**
Heritage Road	Telegraph Canyon Rd.	Olympic Parkway	B	B	B	B	B
Heritage Road	Olympic Parkway	Main Street	A	A	A	A	B
Heritage Road	Main Street	Southern city limits	n/a	A	A	A	A
La Media Road	Telegraph Canyon Rd.	Olympic Parkway	A	A	A	A	A
La Media Road	Olympic Parkway	Rock Mountain Road	n/a	A	A	A	A
La Media Road	Rock Mountain Road	Otay Valley Road	n/a	A	A	A	A
La Media Road	Otay Valley Road	Southern city limits	n/a	n/a	n/a	n/a	n/a
Eastlake Parkway	SR-125	Otay Lakes Road	n/a	A	A	A	A
Eastlake Parkway	Otay Lakes Road	Trinidad Cove	A	C	C	C	C

TABLE 5.10-4~~3~~
ANALYZED ROADWAY SEGMENTS LEVEL OF SERVICE
(continued)

Segment				Preferred	Scenario		
Street	From	To	Existing	Plan	1	2	3
Eastlake Parkway	Trindad Cove	Olympic Parkway	A	A	A	A	A
Eastlake Parkway	Olympic Parkway	Hunte Parkway	B	B	A	B	B
Eastlake Parkway	Hunte Parkway	Otay Valley Road	B	**D**	**D**	**D**	C
Lane Avenue	Proctor Valley Road	Otay Lakes Road	A	**D**	**D**	**D**	**D**
Hunte Parkway	Proctor Valley Road	Otay Lakes Road	A	A	A	A	A
Hunte Parkway	Otay Lakes Road	Olympic Parkway	A	A	A	A	A
Hunte Parkway	Olympic Parkway	Eastlake Parkway	A	A	A	A	A
Hunte Parkway	Eastlake Parkway	SR-125	-	**D**	**E**	**E**	**E**
Plaza Bonita Road	Sweetwater Road	Bonita Road	A	A	A	A	A

NOTE: Bold type and shaded areas represent a significant impact.

Otay Lakes Road between Eastlake Parkway and Lane Avenue
Olympic Parkway between I-805 and Oleander
Third Avenue between L Street and Palomar Street
Eastlake Parkway between Hunte Parkway and Otay Valley Road
Lane Avenue between Proctor Valley Road and Otay Lakes Road
Hunte Parkway from Eastlake Parkway to SR-125
Marina Parkway between E street and J Street

Scenario 1: The following 18 roadway segments that currently operate at LOS C or better are predicted to operate at LOS D or worse as a result of the adoption of the Scenario 1 and would, therefore, represent a significant adverse impact.

E Street between Marina Parkway and I-5
H Street between Marina Parkway and I-5
J Street between Marina Parkway and Bay Boulevard
L Street between Hilltop Drive and I-805
Palomar Street from I-5 to Broadway
Main Street from I-5 to Broadway
Main Street from Hilltop Drive to I-805
Otay Lakes Road between SR-125 and Eastlake Parkway
Otay Lakes Road between Eastlake Parkway and Lane Avenue
Olympic Parkway between I-805 and Oleander Avenue
Olympic Parkway between Oleander Avenue and Heritage Road
Broadway between L Street and Palomar Street
Third Avenue between L Street and Palomar Street
Paseo Ranchero between H Street and Telegraph Canyon Road
Eastlake Parkway between Hunte Parkway and Otay Valley Road
Lane Avenue between Proctor Valley Road and Otay Lakes Road
Hunte Parkway from SR-125 to Hunte Parkway
Marina Parkway between E Street and J Street

Scenario 2: The following 18 non-Urban Core roadway segments that currently operate at LOS C or better are predicted to operate at LOS D or worse as a result of the adoption of the Scenario 2 and would, therefore, represent a significant impact.

E Street between Marina Parkway and I-5
H Street between Marina Parkway and I-5
J Street between Marina Parkway and Bay Boulevard
L Street between Hilltop and I-805
Palomar Street from I-5 to Broadway
Main Street between I-5 and Broadway
Main Street from Broadway to Hilltop Drive
Main Street from Hilltop Drive to I-805

Main Street between I-805 and Heritage Road
Otay Lakes Road between SR-125 and Eastlake Parkway
Otay Lakes Road between Eastlake Parkway and Lane Avenue
Olympic Parkway between I-805 and Oleander Avenue
Third Avenue between L Street and Palomar Street
Paseo Ranchero between H Street and Telegraph Canyon Road
Eastlake Parkway between Hunte Parkway and Otay Valley Road
Lane Avenue between Proctor Valley Road and Otay Lakes Road
Hunte Parkway from SR-125 to Eastlake Parkway
Marina Parkway between E Street and J Street

Scenario 3: The following 19 non-Urban Core roadway segments that currently operate at LOS C or better are predicted to operate at LOS D or worse as a result of the adoption of the Scenario 3 and would, therefore, represent a significant impact.

E Street between Marina Parkway and I-5
H Street between Marina Parkway and I-5
J Street between Marina Parkway and Bay Boulevard
L Street between Hilltop Drive and I-805
Palomar Street from I-5 to Broadway
Main Street between I-5 and Broadway
Main Street from Broadway to Hilltop Drive
Main Street from Hilltop Drive to I-805
Main Street between I-805 and Heritage Road
Otay Lakes Road between SR-125 and Eastlake Parkway
Otay Lakes Road between Eastlake Parkway and Lane Avenue
Olympic Parkway between I-805 and Oleander Avenue
Olympic Parkway between Oleander Avenue and Heritage Road
Third Avenue between L Street and Palomar Street
Third Avenue between Palomar Street and Main Street
Paseo Ranchero between H Street and Telegraph Canyon Road
Lane Avenue between Proctor Valley Road and Otay Lakes Road
Hunte Parkway from SR-125 to Eastlake Parkway
Marina Parkway between E Street and J Street

A.2. A roadway segment that currently operates at LOS D or E and would operate at LOS E or F at General Plan buildout, respectively, or which operates at LOS D, E, or F and would worsen by 5 percent or more at General Plan buildout is considered a significant impact.

Preferred Plan: The following four non-Urban Core roadway segments that currently operate at LOS D, E, or F are predicted to worsen by 5 percent or more as a

result of the adoption of the Preferred Plan and would, therefore, represent a significant impact.

Bonita Road between I-805 and Plaza Bonita Road
Bonita Road between Willow Street and Central Avenue
Telegraph Canyon Road between Paseo del Rey and Paseo Ranchero
Telegraph Canyon Road between Paseo Ranchero and Otay Lakes Road

Scenario 1: The following six non-Urban Core roadway segments that currently operate at LOS D, E, or F are predicted to worsen by 5 percent or more as a result of the adoption of the Scenario 1 and would, therefore, represent a significant impact.

Bonita Road between I-805 and Plaza Bonita Road
Bonita Road between Plaza Bonita Road and Willow Street
Bonita Road between Willow Street and Central Avenue
Telegraph Canyon Road between I-805 and Oleander Avenue
Telegraph Canyon Road between Paseo del Rey and Paseo Ranchero
Telegraph Canyon Road between Paseo Ranchero and Otay Lakes Road

Scenario 2: The following five non-Urban Core roadway segments that currently operate at LOS D, E, or F are predicted to worsen by 5 percent or more as a result of the adoption of the Scenario 2 and would, therefore, represent a significant impact.

Bonita Road between I-805 and Plaza Bonita Road
Bonita Road between Willow Street and Central Avenue
Telegraph Canyon Road between I-805 and Oleander Avenue
Telegraph Canyon Road between Paseo del Rey and Paseo Ranchero
Telegraph Canyon Road between Paseo Ranchero and Otay Lakes Road

Scenario 3: The following six non-Urban Core roadway segments that currently operate at LOS D, E, or F are predicted to worsen by 5 percent or more as a result of the adoption of the Scenario 3 and would, therefore, represent a significant impact.

Bonita Road between I-805 and Plaza Bonita Road
Bonita Road between Willow Street and Central Avenue
Bonita Road between Willow Street and Central Avenue
Telegraph Canyon Road between I-805 and Oleander
Telegraph Canyon Road between Paseo del Rey and Paseo Ranchero
Telegraph Canyon Road between Paseo Ranchero and Otay Lakes Road

B. URBAN CORE ROADWAYS

B.1. A roadway segment that currently operates at LOS D or better and with the proposed changes would operate at LOS E or F at General Plan buildout is considered a significant impact. Specific levels of service changes for each of the following segments are provided in Table 5.10-4~~3~~.

Preferred Plan: All segments operate at LOS D or better.

Scenario 1: The following roadway segment currently operates at LOS D or better, but would decline to LOS E or worse:

E Street from Woodlawn Avenue to Broadway

Scenario 2: The following roadway segment currently operates at LOS D or better, but would decline to LOS E or worse:

Broadway from C Street to E Street

Scenario 3: All segments operate at LOS D or better.

B.2. A roadway segment that currently operates at LOS E would operate at LOS F at General Plan buildout, or which operates at LOS E or F and would worsen by 5 percent or more at General Plan buildout is considered a significant impact.

The only segments operating at LOS E or worse are described as impacts under criterion B1 above. There are no impacts under this criterion.

C. FREEWAYS

The following freeways were considered in the traffic analysis: I-5 and I-805 and State Routes 125 and 54. These highways were divided into 24 segments and levels of service were calculated for each segment. Table 5.10-5~~4~~ presents the levels of service by scenario for these segments. Under the Preferred Plan, all but five segments represent a significant traffic impact. Since the freeway system is developed and managed by Caltrans, the City has only limited ability to affect the level of congestion on these roadways.

C.1. A freeway segment that currently operates at LOS C or better and with the proposed changes would operate at LOS D, E, or F at General Plan buildout is considered a significant impact.

TABLE 5.10-54
FREEWAY SEGMENTS WITH SIGNIFICANT CIRCULATION IMPACTS

Street	From	To	Existing	Preferred Plan	Scenario 1	Scenario 2	Scenario 3
I-5	SR-54	E Street	C	**F**	**F**	**F**	**F**
I-5	E Street	H Street	D	**F**	**F**	**F**	**F**
I-5	H Street	J Street	D	**F**	**F**	**F**	**F**
I-5	J Street	L Street	D	**F**	**F**	**F**	**F**
I-5	L Street	Palomar Street	D	**F**	**F**	**F**	**F**
I-5	Palomar	Main Street	D	**F**	**F**	**F**	**F**
I-805	SR-54	Bonita Road	F	**F**	**F**	**F**	**F**
I-805	Bonita Road	H Street	F	**F**	**E**	**E**	**E**
I-805	H Street	Telegraph Canyon Rd	C	**D**	**D**	**D**	**D**
I-805	Telegraph Canyon Road	Orange Avenue	C	**D**	C	**D**	C
I-805	Orange Avenue	Main Street	B	**E**	**D**	**D**	**D**
SR-125	SR-54	Mount Miguel Road	NA	**F**	**F**	**F**	**F**
SR-125	Mount Miguel	H Street	NA	**F**	**F**	**F**	**F**
SR-125	H Street	Otay Lakes Road	NA	C	**D**	**D**	**D**
SR-125	Otay Lakes Road	Olympic Parkway	NA	C	B	B	B
SR-125	Olympic Parkway	Birch Road	NA	B	B	B	B
SR-125	Birch Road	Rock Mountain Road	NA	B	B	B	B
SR-125	Rock Mountain Road	Otay Valley Road	NA	C	B	B	B
SR-54	I-5	National City Blvd.	C	**E**	**F**	**F**	**F**
SR-54	National City Blvd.	Highland Avenue	D	**F**	**F**	**F**	**F**
SR-54	Highland Avenue	I-805	D	**F**	**F**	**F**	**F**
SR-54	I-805	Plaza Bonita Center Way	F	**F**	**F**	**F**	**F**
SR-54	Plaza Bonita Center Way	Woodman Street	F	**F**	**F**	**F**	**F**
SR-54	Woodman Street	Briarwood Road	F	**F**	**F**	**F**	**F**

NOTE: Bold type and shaded areas represent a significant impact.

Preferred Plan: The following freeway segments that currently operate at LOS C or better are predicted to operate at LOS D or worse as a result of the adoption of the Preferred Plan and would, therefore, represent a significant impact:

I-5 between SR-54 and E Street
I-805 between H Street and Telegraph Canyon Road
I-805 between Telegraph Canyon Road and Orange Avenue
I-805 between Orange Avenue and Main Street
SR-125 between SR-54 and Mount Miguel Road
SR-125 between Mount Miguel Road and H Street
SR-54 between I-5 and National City Boulevard

Scenario 1: The following freeway segments that currently operate at LOS C or better are predicted to operate at LOS D or worse as a result of the adoption of Scenario 1 and would, therefore, represent a significant impact.

I-5 between SR-54 and E Street
I-805 between H Street and Telegraph Canyon Road
I-805 between Orange Avenue and Main Street
SR-125 between SR-54 and Mount Miguel Road
SR-125 between Mount Miguel Road and H Street
SR-125 between H Street and Otay Lakes Road
SR-54 between I-5 and National City Boulevard

Scenario 2: The following freeway segments that currently operate at LOS C or better are predicted to operate at LOS D or worse as a result of the adoption of Scenario 2 and would, therefore, represent a significant impact.

I-5 between SR-54 and E Street
I-805 between H Street and Telegraph Canyon Road
I-805 between Orange Avenue and Main Street
I-805 between Telegraph Canyon Road and Orange Avenue
SR-125 between SR-54 and Mount Miguel Road
SR-125 between Mount Miguel Road and H Street
SR-125 between H Street and Otay Lakes Road
SR-54 between I-5 and National City Boulevard

Scenario 3: The following freeway segments that currently operate at LOS C or better are predicted to operate at LOS D or worse as a result of the adoption of the Scenario 3 and would, therefore, represent a significant impact.

I-5 between SR-54 and E Street
I-805 between H Street and Telegraph Canyon Road
I-805 between Orange Avenue and Main Street

SR-125 between SR-54 and Mount Miguel Road
SR-125 between Mount Miguel Road and H Street
SR-125 between H Street and Otay Lakes Road
SR-54 between I-5 and National City Boulevard

C.2. A freeway segment that currently operates at LOS D or E would operate at LOS E or F at General Plan buildout respectively, or which operates at LOS D, E, or F and would worsen by 5 percent or more at General Plan buildout is considered a significant impact.

Preferred Plan, Scenario 1, Scenario 2, and Scenario 3: The following freeway segments that currently operate at LOS D, E, or F are predicted to worsen by 5 percent or more as a result of the adoption of the Preferred Plan or any of the Scenarios and would, therefore, represent a significant impact.

I-5 between E Street and H Street
I-5 between H Street and J Street
I-5 between J Street and L Street
I-5 between L Street and Palomar Street
I-5 between Palomar Street and Main Street
I-805 between SR-54 and Bonita Road
SR-54 between National City Boulevard and Highland Avenue
SR-54 between Highland Avenue and I-805
SR-54 between I-805 and Plaza Bonita Center Way
SR-54 between Plaza Bonita Center Way and Woodman Street
SR-54 between Woodman Street and Briarwood Road

In addition, the Preferred Plan (only) will have a significant impact on the following freeway segment:

I-805 between Bonita Road and H Street

5.10.4 Level of Significance Prior to Mitigation

5.10.4.1 Threshold 1: Urban Core Roadways

Threshold 1 states that the adoption of the Urban Core Roadway Classifications specified in the General Plan Update would result in a significant impact if adoption of an urban roadway system would not provide an adequate urban amenities program, and would not facilitate multimodal transportation systems sufficient to allow the Urban Core of the City of Chula Vista to achieve the mobility required to serve proposed land use densities.

The adoption of the urban roadway system is considered to be self-mitigating because the policies in the proposed General Plan Update provide for the establishment of an Urban

Core Improvement Program (policies associated with Objective LUT 26), provide for adequate mobility (policies associated with Objective LUT 47), and ensure redevelopment, infill, and new development activities within the Northwest's Urban Core Subarea would provide a balance of land uses. The adoption of the Urban Core Roadway Classifications (policies associated with Objective LUT 46) as specified in the General Plan Update would not result in a significant impact because the plan, as proposed, would provide an adequate urban amenities program, and would facilitate multimodal transportation systems sufficient to allow the Urban Core of the City of Chula Vista to achieve the mobility required to serve proposed land use densities.

Specifically, Policy LUT 49.15 would require the preparation of urban form guidelines and standards for development as part of the Urban Core Specific Plan, and Policy LUT 49.16 would require the establishment of policies, development standards, and/or design guidelines in the Urban Core Specific Plan to address where high-rise buildings should be concentrated, how to establish and/or reinforce pedestrian-scaled development, and how site and building design should respond to public view corridors. Policy LUT 49.17 would ensure the establishment of design standards for mixed-use development that achieves a high-quality pedestrian-scaled environment and promotes side or rear located parking areas, street-front windows and entries, and public and private open space, and Policy LUT 49.18 would create a pedestrian-oriented realm by requiring ground-floor retail or public uses as a requirement of the adoption of the Urban Core Specific Plan.

Mobility is assured through compliance with the policies associated with Objective LUT 48 with the development and implementation of the Urban Core Specific Plan. Policy LUT 48.2 would require the provision of adequate sidewalk space on heavily traveled pedestrian corridors within the Urban Core Subarea. Policy LUT 48.3 would provide for mid-block pedestrian crossings and sidewalk curb extensions, where feasible, to shorten pedestrian walking distances, and Policy LUT 48.4 would require the location of secure bicycle parking facilities near transit centers and major public and private buildings.

Finally, Objective LUT 26 stresses the intent of the City to "Establish an Urban Core Improvements Program for the Urban Core Subarea." Policies associated with this objective include:

LUT 26.1: Through the Urban Core Specific Plan, determine an urban framework for streets and gateways, transit accommodation, a network of parks and urban plazas, pedestrian-oriented streets, pedestrian and bicycle linkages, and activity nodes.

LUT 26.2: Establish an Urban Core Improvements Program that addresses the urban framework elements, implements Urban Mobility techniques

and parking strategies, determines what is needed in various areas, and sets priorities for implementation.

LUT 26.3: Develop methods to finance the Urban Core Improvements Program, including but not limited to Developer Impact Fees, tax increment financing (in redevelopment areas), and/or an incentives program.

These policies, that are to be implemented with the establishment and development of the Urban Core Specific Plan, would provide an adequate urban amenities program, and would facilitate multimodal transportation systems sufficient to allow the Urban Core of the City of Chula Vista to achieve the mobility required to serve proposed land use densities.

5.10.4.2 Threshold 2: Circulation Impacts

Threshold 2 indicates that a significant impact to circulation would occur if the changes in the land uses and the circulation plan for the city resulting from adoption of the General Plan Update would cause non-Urban Core Circulation Element roadways that currently operate at LOS C or better to operate at LOS D or worse or would cause a non-Urban Core roadways that currently operate at LOS D or E to operate at LOS E or F, or which operates at LOS D, E, or F and would worsen by 5 percent.

Threshold 2 also states that for Urban Core Circulation Element roadways, a roadway segment that currently operates at LOS D or better and with the proposed changes would operate at LOS E or F at General Plan buildout is considered a significant impact, as is a roadway segment that currently operates at LOS E or F and would worsen by 5 percent or more, or a segment currently at LOS E declining to LOS F.

A. NON-URBAN CORE ROADWAYS

The Preferred Plan and each of the Scenarios represent a significant impact to non-Urban Core Circulation Element roadways because several roadway segments that currently operate at LOS C or better are predicted to operate at LOS D or worse, and other segments that currently operate at LOS D, E, or F are predicted to worsen by 5 percent or more with the proposed changes. For the Preferred Plan, 15 non-Urban Core roadway segments were determined to have a significant impact with respect to Threshold 2. Scenario 1, Scenario 2, and Scenario 3 are predicted to result in significant impacts to the 18, 18, and 19 segments, respectively.

B. URBAN CORE ROADWAYS

Scenarios 1 and 2 will have a significant impact on one Urban Core roadway segment.

C. FREEWAYS

Under the Preferred Plan, all but five freeway segments would be significantly impacted. These include segments of Interstates 5 and 805 and State Routes 125 and 54. Since the freeway system is developed and managed by Caltrans, the City has only limited ability to affect the level of congestion on these roadways.

5.10.5 Mitigation Measures

5.10.5.1 Threshold 1: Urban Core Roadways

The GPU does not result in significant impacts on Urban Core Roadways pursuant to Threshold 1 because the policies set forth in the proposed General Plan Update provide for the establishment of an Urban Core Improvement Program (policies associated with Objective 26), provide for adequate mobility (policies associated with Objective 48), and ensure redevelopment, infill, and new development activities within the Northwest's Urban Core Subarea that would provide a balance of land uses (policies associated with Objective 49). The plan, as proposed, would provide an adequate urban amenities program, and facilitates multimodal transportation systems sufficient to allow the Urban Core of the City of Chula Vista to achieve the mobility required to serve proposed land use densities.

5.10.5.2 Threshold 2: Circulation Impacts to Urban and Non-Urban Core Roadways.

Table 5.10-6~~5~~ provides a list of measures or operational improvements that would lessen the Circulation Element impacts identified in this report associated with Threshold 2, but because the circulation impacts are defined based on roadway capacity, only measures that increase capacity are available to avoid those effects. The adoption of the following measures provides a means to ensure that roadway improvements are provided in accordance with need. Because the measures specified in Table 5.10-6~~5~~ are operational and would not increase 24-hour roadway capacity, they are insufficient to avoid the impacts identified above.

5.10-1 Prior to issuance of building permits, individual projects shall either contribute to the existing Traffic Signal Fee Program for applicable projects in Chula Vista or secure and construct the improvements specified in Table 5.10-~~5~~6 that are within the area of benefit to the satisfaction of the City Engineer.

For projects in eastern Chula Vista, the existing Transportation Development Impact Fee (TDIF) program and the Traffic Signal Fee Program collects fees from proposed developments on an Equivalent Dwelling Unit (EDU) basis and allocates the funds to construct needed transportation infrastructure in eastern Chula Vista. The Growth Management Program monitors traffic flow on key

TABLE 5.10-6~~5~~
MITIGATION FOR SIGNIFICANT CIRCULATION IMPACTS

Street	From	To	Mitigation	Mitigation Required For:			
				Preferred Plan	Scenario 1	Scenario 2	Scenario 3
E Street	Marina	I-5	Given the short length of this segment and its proximity to a freeway interchange, no feasible mitigation has been identified. Impact is significant and unmitigated.	**X**	**X**	**X**	**X**
E Street	Woodlawn	Broadway	Given the short length of this segment and its proximity to a freeway interchange, no feasible mitigation has been identified. Impact is significant and unmitigated.		**X**		
H Street	Marina	I-5	Given the short length of this segment and its proximity to a freeway interchange, no feasible mitigation has been identified. Impact is significant and unmitigated.	**X**	**X**	**X**	**X**
J Street	Marina	I-5	Given the short length of this segment and its proximity to a freeway interchange, no feasible mitigation has been identified. Impact is significant and unmitigated.	**X**	**X**	**X**	**X**
Marina Parkway	E	J	Provide operational improvements (e.g., traffic signal coordination, parking and driveway limitations, intersection geometric improvements) to improve north/south progression on this segment	**X**	**X**	**X**	**X**
L Street	Hilltop	I-805	Provide operational improvements (e.g., traffic signal coordination, parking and driveway limitations, intersection geometric improvements) to improve east/west progression on this segment	**X**	**X**	**X**	**X**
Palomar Street	I-5	Broadway	Provide operational improvements (e.g., traffic signal coordination, parking and driveway limitations, intersection geometric improvements) to improve east/west progression on this segment		**X**	**X**	**X**

TABLE 5.10-6~~5~~
MITIGATION FOR SIGNIFICANT CIRCULATION IMPACTS
(continued)

Street	From	To	Mitigation	Mitigation Required For:			
				Preferred Plan	Scenario 1	Scenario 2	Scenario 3
Main Street	I-5	Broadway	Provide operational improvements (e.g., traffic signal coordination, parking and driveway limitations, intersection geometric improvements) to improve east/west progression on this segment	**X**	**X**	**X**	**X**
Main Street	Broadway	Hilltop	Provide operational improvements (e.g., traffic signal coordination, parking and driveway limitations, intersection geometric improvements) to improve east/west progression on this segment	X		**X**	**X**
Main Street	Hilltop	I-805	Provide operational improvements (e.g., traffic signal coordination, parking and driveway limitations, intersection geometric improvements) to improve east/west progression on this segment	X	**X**	**X**	**X**
Main Street	I-805	Heritage	Provide operational improvements (e.g., traffic signal coordination, parking and driveway limitations, intersection geometric improvements) to improve east/west progression on this segment			**X**	**X**
Otay Lakes Road	SR-125	Eastlake Parkway	This segment is classified as a seven-lane facility; no feasible improvements are available. Impact is significant and unmitigated	**X**	**X**	**X**	**X**
Otay Lakes Road	Eastlake Parkway	Lane Avenue	This segment is classified as a six-lane facility; no feasible improvements are available. Impact is significant and unmitigated.	**X**	**X**	**X**	**X**
Olympic Parkway	I-805	Oleander	Provide operational improvements (e.g., traffic signal coordination, parking and driveway limitations, intersection geometric improvements) to improve east/west progression on this segment	**X**	**X**	**X**	**X**
Olympic Parkway	Oleander	Heritage	Provide operational improvements (e.g., traffic signal coordination, parking and driveway limitations, intersection geometric improvements) to improve east/west progression on this segment		**X**		**X**
Broadway	L Street	Palomar	Provide operational improvements (e.g., traffic		**X**		

TABLE 5.10-6~~5~~
MITIGATION FOR SIGNIFICANT CIRCULATION IMPACTS
(continued)

Street	From	To	Mitigation	Mitigation Required For:			
				Preferred Plan	Scenario 1	Scenario 2	Scenario 3
			signal coordination, parking and driveway limitations, intersection geometric improvements) to improve north/south progression on this segment.				
Broadway	C	E	Provide operational improvements (e.g., traffic signal coordination, parking and driveway limitations, intersection geometric improvements) to improve north/south progression on this segment.			X	
Third Avenue	L Street	Palomar	Provide operational improvements (i.e., traffic signal coordination) to improve north/south progression on this segment	**X**	X	X	**X**
Third Avenue	Palomar	Main	Provide operational improvements (e.g., traffic signal coordination, parking and driveway limitations, intersection geometric improvements) to improve north/south progression on this segment				**X**
Paseo Ranchero	H Street	Telegraph Canyon	Provide operational improvements (e.g., traffic signal coordination, parking and driveway limitations, intersection geometric improvements) to improve north/south progression on this segment		**X**	**X**	**X**
Eastlake Parkway	Hunte Parkway	Otay Valley Road	Provide operational improvements (e.g., traffic signal coordination, parking and driveway limitations, intersection geometric improvements) to improve north/south progression on this segment	**X**	**X**	**X**	
Lane Avenue	Proctor Valley	Otay Lakes Road	Provide intersection improvements at the Lane Avenue intersections with Proctor Valley Road and Otay Lakes Road to improve north/south traffic flow on this link	**X**	**X**	**X**	**X**

TABLE 5.10-6~~5~~
MITIGATION FOR SIGNIFICANT CIRCULATION IMPACTS
(continued)

Street	From	To	Mitigation	Mitigation Required For:			
				Preferred Plan	Scenario 1	Scenario 2	Scenario 3
Bonita Road	I-805	Plaza Bonita Road	This segment is classified as a four-lane facility; no feasible improvements are available. Impact is significant and unmitigated.	**X**	**X**	**X**	**X**
Bonita Road	Plaza Bonita Road	Willow Street	Provide operational improvements (e.g., traffic signal coordination, parking and driveway limitations, intersection geometric improvements) to improve east/west progression on this segment		**X**		**X**
Bonita Road	Willow Street	Central Avenue	Provide operational improvements (e.g., traffic signal coordination, parking and driveway limitations, intersection geometric improvements) to improve east/west progression on this segment	**X**	**X**	**X**	**X**
Telegraph Canyon Road	I-805	Crest/ Oleander	Provide operational improvements (e.g., traffic signal coordination, parking and driveway limitations, intersection geometric improvements) to improve east/west progression on this segment		**X**	**X**	**X**
Telegraph Canyon Road	Crest/ Oleander	Paseo del Rey	Provide operational improvements (e.g., traffic signal coordination, parking and driveway limitations, intersection geometric improvements) to improve east/west progression on this segment	**X**	**X**	**X**	**X**
Telegraph Canyon Road	Paseo del Rey	Paseo Ranchero	Provide operational improvements (e.g., traffic signal coordination, parking and driveway limitations, intersection geometric improvements) to improve east/west progression on this segment	**X**	**X**	**X**	**X**
Hunte Parkway	Eastlake Parkway	SR-125	Provide operational improvements (e.g., traffic signal coordination, parking and driveway limitations, intersection geometric improvements) to improve east/west progression on this segment	**X**	**X**	**X**	**X**

NOTE: Bold type and shaded areas represent a significant impact.

arterial streets, and provides a means to "meter" the rate of development in order to limit traffic congestion. All three of these existing programs are in place to ensure that the direct traffic impacts of individual projects or the cumulative impacts associated with planned growth are disclosed and mitigated or avoided in accordance with CEQA.

5.10.2 For impacts to the freeway segments listed in Table 5.10-5~~4~~, in order to mitigate impacts of the General Plan Update, the freeways will need to be widened to provide between one and three additional general purpose lanes (or the equivalent capacity in HOV and/or managed lanes), depending on the segment. Since the freeway system is developed and managed by Caltrans, the City has only limited ability to affect the level of congestion on these roadways, as such, mitigation is not within the authority of the City of Chula Vista sufficient to avoid the cumulative contribution to traffic on these roadways and the impact remains significant.

Improvement to Mitigate Impacts*

Freeway	Scenario 1	Scenario 2	Scenario 3	Scenario 4
I-5	2	2	2	2
I-805	2	2	2	3
SR-125	1	1	1	1
SR-54	1	1	1	1

*Number of additional general purpose lanes or equivalent capacity in HOV or managed lanes

5.10.6 Level of Significance After Mitigation

Threshold 1: The adoption of the urban street system does not result in a significant impact on mobility. No mitigation is proposed.

Threshold 2: Many of the above-described improvements are operational in nature, and will improve arterial progression during the peak commuting hours. This is likely to translate into higher vehicles speeds and possibly an improvement in LOS on certain segments. While operational improvements will not increase the 24-hour capacity of a segment, which is based on the number of lanes, they will improve traffic flow and reduce peak hour congestion. Operational improvements would reduce impacts but not to a level less than significant. All roadway segments identified in Tables 5.10-~~3~~4 ~~-~~and 5.10-4 as having a significant impact before mitigation will have a significant impact after mitigation, although the intensity of this impact will in most cases be reduced.

5.11 Air Quality

5.11.1 Existing Conditions

5.11.1.1 Regulatory Plans and Policies

Federal Regulations

Ambient Air Quality Standards (AAQS) represent the maximum levels of background pollution considered safe, with an adequate margin of safety, to protect the public health and welfare. The federal Clean Air Act (CAA) was enacted in 1970 and amended in 1977 and 1990 [42 U.S.C. 7401] for the purposes of protecting and enhancing the quality of the nation's air resources to benefit public health, welfare, and productivity. In 1971, in order to achieve the purposes of Section 109 of the Clean Air Act [42 U.S.C. 7409], the U.S. Environmental Protection Agency (EPA) developed primary and secondary national ambient air quality standards (NAAQS).

Six pollutants of primary concern are designated: ozone, carbon monoxide, sulfur dioxide, nitrogen dioxide, lead, and suspended particulates (PM_{10}). The primary NAAQS must "…in the judgment of the Administrator, based on such criteria and allowing an adequate margin of safety, are requisite to protect the public health…." and the secondary standards must "…protect the public welfare from any known or anticipated adverse effects associated with the presence of such air pollutant in the ambient air" (42 U.S.C. 7409(b)(2)). The primary standards were established, with a margin of safety, considering long-term exposure for the most sensitive groups in the general population (i.e., children, senior citizens, and people with breathing difficulties). The current state and federal ambient air quality standards are presented in Table 5.11-1. Table 5.11-2 presents a brief summary of the principal sources of each criteria pollutant. Also shown in Table 5.11-2 are the potential health effects associated with exposure to elevated concentrations of the original six criteria pollutants. It is in consideration of these potential health effects that the pollutant concentration thresholds identified in the AAQS were established. Project conformance to the AAQS is discussed in section 5.11.3.3 of this report and health risks due to specific emitters are presented in section 5.11.3.4.

While emission-control programs have created a substantial improvement in regional air quality within the last several decades, clean air standards are still often exceeded in parts of the San Diego Air Basin (SDAB). If an air basin is not in federal attainment for a particular pollutant, the basin is classified as marginal, moderate, serious, severe, or extreme.

In order to meet federal air quality standards in California, the California Air Resources Board (CARB) required each air district to develop its own strategy for achieving the NAAQS. The San Diego Air Pollution Control District (San Diego APCD) prepared the 1991/1992 Regional Air Quality Strategy (RAQS) in response to the requirements set forth

TABLE 5.11-1
AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards[1]		Federal Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Ozone (O_3)	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	0.12 ppm (235 µg/m^3)[8]	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	–		0.08 ppm (157 µg/m^3)		
Respirable Particulate Matter (PM_{10})	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetic Analysis
	Annual Arithmetic Mean	20 µg/m^3		50 µg/m^3		
Fine Particulate Matter ($PM_{2.5}$)	24 Hour	No Separate State Standard		65 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetic Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	15 µg/m^3		
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m^3)	Non-dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m^3)	None	Non-dispersive Infrared Photometry (NDIR)
	1 Hour	20 ppm (23 mg/m^3)		35 ppm (40 mg/m^3)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		–	–	–
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	–	Gas Phase Chemilumine-scence	0.053 ppm (100 µg/m^3)	Same as Primary Standard	Gas Phase Chemiluminescence
	1 Hour	0.25 ppm (470 µg/m^3)		–		
Lead	30 days average	1.5 µg/m^3	AIHL Method 54 (12/74) Atomic Absorption	–	–	High Volume Sampler and Atomic Absorption
	Calendar Quarter	–		1.5 µg/m^3	Same as Primary Standard	
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	–	Fluorescence	0.030 ppm (80 µg/m^3)	–	Pararosoaniline
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (365 µg/m^3)	–	
	3 Hour	–		–	0.5 ppm (1300 µg/m^3)	
	1 Hour	0.25 ppm (665 µg/m^3)		–	–	
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per kilometer –visibility of 10 miles or more (0.07 – 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape.		No Federal Standards		
Sulfates	24 Hour	25 µg/m^3	Ion Chroma-tography*	No Federal Standards		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence	No Federal Standards		
Vinyl Chloride[9]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chroma-tography	No Federal Standards		
See also footnotes on next page.						

TABLE 5.11-1
AMBIENT AIR QUALITY STANDARDS
(continued)

ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter.

[1]California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter—PM_{10}, $PM_{2.5}$, and visibility reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standrads in Section 70200 of Title 17 of the California Code of Regulations.

[2]National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest eight-hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when 99 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact U.S. EPA for further clarification and current federal policies.

[3]Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25º C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25º C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[4]Any equivalent procedure which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.

[5]National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

[6]National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[7]Reference method as described by the EPA. An “equivalent method” of measurement may be used but must have a “consistent relationship to the reference method” and must be approved by the EPA.

[8]New federal 8-hour ozone and fine particulate matter standards were promulgated by U.S. EPA on July 18, 1997. Contact U.S. EPA for further clarification and current federal policies.

[9]The ARB has identified lead and vinyl chloride as “toxic air contaminants” with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

TABLE 5.11-2
CRITERIA POLLUTANTS - SOURCES AND HEALTH EFFECTS

Pollutant	Characteristics	Major Sources	Health Effects
Ozone (O_3)	A highly reactive photochemical pollutant that is formed at ground level from emissions of volatile organic compounds (VOC) and nitrogen oxides (NOx) in the presence of sunlight. Ozone is a major component of photochemical smog.	Combustion sources such as engines in automobiles and factories, and evaporation of solvents and fuels.	• Eye irritation • Respiratory function impairment
Carbon Monoxide (CO)	An odorless, colorless and poisonous gas. It is formed during the incomplete combustion of fuels.	Automobile exhaust, combustion of fuels, combustion of wood in woodstoves and fireplaces.	• Increase of carboxyhemoglobin - Impairment of oxygen transport in the bloodstream • Aggravation of cardiovascular disease • Impairment of central nervous system function • Fatigue, headache, confusion, dizziness • Can be fatal in the case of very high concentrations in enclosed places
Sulfur Dioxide (SO_2)	A colorless gas with a pungent, irritating odor.	Diesel vehicle exhaust, oil-powered power plants, industrial processes.	• Aggravation of chronic obstruction lung disease • Increased risk of acute and chronic respiratory disease
Nitrogen Dioxide (NO_2)	Reddish-brown gas that discolors the air. It is formed during combustion.	Automobile and diesel truck exhaust, industrial processes, fossil-fueled power plants	• Increased risk of acute and chronic respiratory disease

TABLE 5.11-2
CRITERIA POLLUTANTS - SOURCES AND HEALTH EFFECTS
(continued)

Pollutant	Characteristics	Major Sources	Health Effects
Particulate Matter (PM_{10} & $PM_{2.5}$)	Solid and liquid particles of dust, soot, aerosols, and other matter that are small enough to remain suspended in the air for a long period of time.	Combustion, automobiles, field burning, factories, and unpaved roads. Diesel engines for $PM_{2.5}$.Also a result of photochemical processes.	• Aggravation of respiratory effects like asthma and emphysema • May cause heart and lung problems • May carry toxic materials deep into the respiratory system
Lead (Pb)	A toxic heavy metal found in dust and soils.	Lead gasoline additives, metal refineries, manufacture of lead storage batteries, paint	• Brain and other nervous system damage • Carcinogenic • Digestive and other health problems

in Assembly Bill (AB) 2595. The California Clean Air Act (CCAA) was signed into law on September 30, 1988, and became effective on January 1, 1989. The RAQS draft was adopted, with amendments, on June 30, 1992 (County of San Diego 1992). Attached as part of the RAQS are the transportation control measures (TCM) prepared by SANDAG in accordance with the CCAA and adopted by SANDAG on March 27, 1992. The required triennial updates of the RAQS and corresponding TCM were adopted in 1995, 1998, 2001, and 2004. The RAQS and TCM plan set forth the steps needed to accomplish attainment of state and federal ambient air quality standards.

The San Diego APCD has also established a set of rules and regulations initially adopted on January 1, 1969, which are periodically reviewed and updated. The rules and regulations define requirements regarding stationary sources of air pollutants and fugitive dust. These rules and regulations are available for review on the agency's website (www.sdapcd.co.san-diego.ca.us).

Local agencies can control neither the source nor the transportation of pollutants from outside the SDAB. The San Diego APCD's policy, therefore, has been to control local sources effectively enough to reduce locally produced contamination to clean air standards. Through the use of air pollution control measures outlined in the RAQS, the San Diego APCD has effectively reduced air pollutant levels in the SDAB.

State Regulations

The U.S. EPA allows states the option to develop different (stricter) standards. The state of California generally has set more stringent limits on the six pollutants of national concern (see Table 5.11-1).

The CCAA requires that districts implement regulations to reduce emissions from mobile sources through the adoption and enforcement of transportation control measures. As a state serious ozone non-attainment area, San Diego is subject to various requirements including the following (County of San Diego 1998):

- Five percent annual reduction in hydrocarbons and oxides of nitrogen emissions from 1987 until standards are attained. If this reduction cannot be obtained, all feasible measures must be implemented.

- Air quality permitting program requiring: (1) Best Available Control Technology (BACT) on new and modified equipment that emits 10 or more pounds per day of nonattainment pollutants or precursors, and (2) emission offsets for all increases in emissions of nonattainment pollutants or precursors at sources with emissions of nonattainment pollutants or precursors of 15 or more tons per year.

TOXIC AIR CONTAMINANTS - DIESEL EMISSIONS

In 1983, the California Legislature enacted a program to identify the health effects of Toxic Air Contaminants (TACs) and to reduce exposure to these contaminants to protect the public health (AB 1807: Health and Safety Code sections 39650-39674). The Legislature established a two-step process to address the potential health effects from TACs. The first step is the risk assessment (or identification) phase. The second step is the risk management (or control) phase of the process.

Diesel-exhaust particulate matter emissions have since been established as TACs. Diesel emissions generated within the city and surrounding areas pose a potential hazard to residents and visitors. Following the identification of diesel particulate matter as an air toxic in 1998, the CARB has worked on developing strategies and regulations aimed at reducing the risk from diesel particulate matter. The overall strategy for achieving these reductions is found in the "Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles" (State of California 2000a). A stated goal of the plan is to reduce the cancer risk statewide arising from exposure to diesel particulate matter 75 percent by 2010 and 85 percent by 2020. A number of programs and strategies to reduce diesel particulate matter that have been or are in the process of being developed include (State of California 2005):

The Carl Moyer Program: This program, administered by the CARB, was initially approved in February 1999 and was revised in November 2000. It provides grants to private companies, public agencies, or individuals operating heavy-duty diesel engines to cover an incremental portion of the cost of cleaner on-road, off-road, marine, locomotive, and agricultural irrigation pump engines.

California Diesel Fuel Regulations: The California Diesel Fuel Regulations (13 CCR 2281-2285 and 17 CCR 93114) set limits on the aromatic hydrocarbon and sulfur content for diesel fuel marketed in California. Under these rules, starting in June 2006 in accordance with the phase-in schedule, vehicular diesel fuel must not have a sulfur content that exceeds 15 parts per million by weight. The regulations also specify that on or after October 1, 1993, the aromatic hydrocarbon content of vehicular diesel fuel must not exceed 10 percent by volume.

On-Road Heavy-Duty Diesel New Engine Program: This program develops strategies and regulations to reduce diesel emissions from new on-road diesel powered equipment. Emission control regulations have been coordinated with the U.S. EPA and require that new engines manufactured in and subsequent to 2004 meet new emissions requirements for particulates and other pollutants.

Heavy-Duty Diesel In-Use Strategies Program: The goal of this program is to develop and implement strategies for reducing diesel emissions from existing on- and

off-road diesel engines. The Retrofit Assessment section is responsible for the development and implementation of procedures for assessing, recommending, and approving emission control devices. The Retrofit Implementation section is responsible for developing plans for retrofitting on- and off-road engines with emission reducing technologies. To date plans being developed or implemented have targeted solid waste collection vehicles, on-road heavy-duty public fleet vehicles, and fuel delivery trucks. Generally these plans require that a percentage of the fleet, based on age of the vehicles, be retrofitted on a predetermined schedule.

Other programs include:

Off-Road Mobile Sources Emission Reduction Program: The goal of this program is to develop regulations to control emissions from diesel, gasoline, and alternative-fueled off-road mobile engines. These sources include a range of equipment from lawn mowers to construction equipment to locomotives.

Heavy-Duty Vehicle Inspection and Periodic Smoke Inspection Program: This program provides periodic inspections to ensure that truck and bus fleets do not emit excessive amounts of smoke.

Lower-Emission School Bus Program: Under this program, and in coordination with the California Energy Commission, the CARB is developing guidelines to provide criteria for the purchase of new school buses and the retro-fit of existing school buses to reduce particulate matter emissions.

As an ongoing process, the CARB will continue to establish new programs and regulations for the control of diesel particulate emissions as appropriate. The continued development and implementation of these programs and policies will ensure that the public exposure to diesel particulate matter will continue to decline.

STATE IMPLEMENTATION PLAN

The State Implementation Plan (SIP) is the document that sets forth the state's strategies for achieving air quality standards. The San Diego APCD is the agency that regulates air quality in the SDAB and is responsible for preparing and implementing the portion of the SIP applicable to the SDAB. As indicated above, the RAQS and TCM plan developed by the San Diego APCD and SANDAG set forth the steps needed to accomplish attainment of state and federal ambient air quality standards. The San Diego APCD adopts rules, regulations, and programs to attain state and federal air quality standards, and appropriates money (including permit fees) to achieve these objectives.

Regional Transportation Plan/Regional Transportation Improvement Program

SANDAG serves as the region's transportation planning agency. SANDAG also carries out a portion of the air quality planning functions for the San Diego region. The CAA requires that federally supported transportation projects be consistent with the SIP. This requirement is referred to as transportation conformity [42 U.S.C. 7506(c)]. Conformity ensures that new transportation projects do not jeopardize air quality in non-attainment areas and that federal funding and approval are given to transportation activities that are consistent with air quality goals. SANDAG must show that the Regional Transportation Plan (RTP) and the Regional Transportation Improvement Program (RTIP) are in conformity with the SIP for meeting air quality standards. The most recent RTP, Mobility 2030 (SANDAG 2003), includes an air quality conformity analysis.

Local Regulations (Chula Vista)

The City of Chula Vista has developed a number of strategies and plans aimed at improving air quality. The City is a part of the Cities for Climate Protection Program headed by the International Council of Local Environmental Initiatives (ICLEI). In November 2002, Chula Vista adopted the Carbon Dioxide (CO_2) Reduction Plan in order to lower the community's major greenhouse gas emissions, strengthen the local economy, and improve the global environment. The CO_2 Reduction Plan focuses on reducing fossil fuel consumption and decreasing reliance on power generated by fossil fuels (City of Chula Vista 2002b). A reduction in the usage of power generated by fossil fuels would result in a decrease in the total amount of air pollutants that are emitted into the atmosphere.

In addition, the City's Growth Management Ordinance and Growth Management Program require an Air Quality Improvement Plan (AQIP) to be prepared for all major development projects. A major development project is defined as a project that would develop 50 or more dwelling units. The purpose and role of the AQIPs is to reduce air emissions and energy use resulting from major development projects through improved project design and construction of structures that exceed mandated energy code requirements.

As future individual projects that would develop 50 or more dwelling units are brought forward under the proposed General Plan, those individual projects would be required to prepare an AQIP for their development. Preparation and implementation of an AQIP for each major development project ensures that the development will fulfill the requirements of the City's Growth Management Ordinance. The AQIP Guidelines establish the process for AQIP compliance.

AQIPs provide an analysis of air pollution impacts that would result from a project and to require the best available design to reduce vehicle trips, improve traffic flow, and other means of reducing emissions. To meet the AQIP requirement, developers must either

participate in the City's Greenstar Program or evaluate the project using the CO_2 INDEX model as outlined in the AQIP Guidelines.

5.11.1.2 Existing Citywide Conditions

Climate

Air quality is a function of both the rate and location of pollutant emissions and how meteorological conditions and topographic features influence these pollutants. Atmospheric conditions such as wind speed and direction and air temperature gradients interact with the physical features of the landscape to determine the movement and dispersal of air pollutants, and consequently affect air quality.

The climate of coastal southern California, including Chula Vista, is determined largely by an area of high pressure that is almost always present off the west coast of North America. High-pressure systems are characterized by an upper layer of dry air that warms as it descends. This warm, dry air acts as a lid, restricting the mobility of the cool, ocean-modified air located near the surface creating an inversion or a reversal of the typical decreasing temperature with height structure of the atmosphere.

Moisture trapped in the cool, lowest layer of the atmosphere forms clouds that make up what is referred to as the "marine layer." The marine layer is the prominent weather feature in the SDAB, an area that is defined roughly by the boundary of San Diego County. The temperature inversion associated with the marine layer also plays an important role in determining the quality of the air in the SDAB. During the summer and fall, emissions generated in the region combine with abundant sunshine under the restraining influences of topography and an inversion to create conditions that are conducive to the formation of photochemical pollutants, such as ozone, and secondary particulates, such as sulfates and nitrates. As a result, the quality of the air in the SDAB is often the poorest during the warm summer and fall months.

According to the Western Regional Climate Center, over 90 percent of the yearly total precipitation in Chula Vista occurs during the period of November through April. During these months, the area of high pressure in the eastern Pacific is occasionally displaced allowing for storms to spread unsettled weather including precipitation into southern California. The increase in the mixing of the atmosphere and the rainfall associated with these storms provides Chula Vista with better air quality than is experienced during the summer months.

The prevailing wind in Chula Vista is from the west. As a result, the temperature and moisture content of the air near the ground is strongly influenced by the cool waters of the Pacific Ocean to the west. Occasionally when high pressure is centered near the Great Basin, hot, dry winds called Santa Ana winds develop over southern California. These winds blow

from the east or offshore and can bring some of the warmest temperatures of the year to Chula Vista. Santa Ana wind events occur most often during winter months and can allow pollutant-laden air from the Los Angeles area to be drawn southward into the SDAB as the Santa Ana condition breaks down. Santa Ana conditions can also produce some of the poorest air quality days of the year in Chula Vista.

Air Pollutants

In response to the federal CAA of 1970, the U.S. EPA developed primary and secondary national ambient air quality standards (national standards) for six pollutants of primary concern (criteria pollutants): ozone, carbon monoxide, sulfur dioxide, nitrogen dioxide, lead, and suspended particulates of 10 microns or less in diameter (PM_{10}).

Criteria pollutants and other meteorological conditions are measured by the San Diego APCD at 10 monitoring stations within the SDAB. The Chula Vista monitoring station is located at 80 East J Street in Chula Vista and the Otay Mesa monitoring station is located at 1100 Paseo International in the city of San Diego. The Chula Vista monitoring station is located within the plan area and the Otay Mesa monitoring station is located near the western boundary of the East Otay Mesa Specific Plan Area outside the General Plan area (Figure 5.11-1).

Table 5.11-3 summarizes the number of days per year during which state and federal standards were exceeded in the SDAB overall during the years 2000 to 2004. Table 5.11-4 presents the attainment status of the SDAB with respect to both the state and primary national standards for each of the criteria pollutants. Table 5.11-5 provides a summary of measurements of ozone, carbon monoxide, 10-micron particulate matter (PM_{10}), and 2.5-micron particulate matter ($PM_{2.5}$) taken at the Chula Vista monitoring station. Table 5.11-6 provides a summary of measurements of ozone, carbon monoxide, and PM_{10} taken at the Otay Mesa monitoring station ($PM_{2.5}$ is not monitored at the Otay Mesa station).

OZONE

Ozone represents one of the primary air pollution problems in the SDAB. Ozone, or smog, is mainly a concern during the daytime in summer months because sunlight plays an important role in its formation. Nitrogen oxides and hydrocarbons (reactive organic gases) are known as the chief “precursors” of ozone. These compounds react in the presence of sunlight to produce ozone. The SDAB is currently designated a state “serious” non-attainment area for ozone as well as a federal non-attainment area for the eight-hour ozone standard. Ozone concentration measurements recorded in the SDAB dating back to the late 1970s show a distinctive downward trend with occasional peaks due primarily to meteorological influences (County of San Diego 2001a).

TABLE 5.11-3
AMBIENT AIR QUALITY SUMMARY – SAN DIEGO AIR BASIN

Pollutant	Average Time	California Ambient Air Quality Standards[a]	Attainment Status	National Ambient Air Quality Standards[b]	Attainment Status[c]	Maximum Concentration[d]					Number of Days Exceeding State Standard[d]					Number of Days Exceeding National Standard[d]				
						2000	2001	2002	2003	2004	2000	2001	2002	2003	2004	2000	2001	2002	2003	2004
O_3	1 hour	0.09 ppm	N	0.12 ppm	M	0.12	0.14	0.12	0.13	0.13	24	29	15	24	12	0	2	0	1	1
O_3	8 hours	N/A	N/A	0.08 ppm	**	0.11	0.12	0.10	0.10	0.10	N/A	N/A	N/A	N/A	N/A	16	17	13	6	8
CO	1 hour	20 ppm	A	35 ppm	A	9.3	8.5	Na	Na	Na	0	0	Na	Na	Na	0	0	Na	Na	Na
CO	8 hours	9.0 ppm	A	9 ppm	A	5.9	5.1	4.7	10.6	4.1	0	0	0	1	0	0	0	0	1	0
NO_2	1 hour	0.25 ppm	A	N/A	N/A	.117	.148	.126	.148	.125	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A
NO_2	Annual	N/A	N/A	0.053 ppm	A	.020	.018	.018	.019	.017	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A
SO_2	1 hour	25 pphm	A	N/A	N/A	5.8	6.0	Na	Na	Na	N/A	N/A	Na	Na	Na	0	0	Na	Na	Na
SO_2	24 hours	4 pphm	A	14 pphm	A	1.1	1.4	Na	Na	Na	0	0	Na	Na	Na	0	0	Na	Na	Na
SO_2	Annual	N/A	N/A	3 pphm	A	0.4	0.4	Na	Na	Na	N/A	N/A	Na	Na	Na	N/A	N/A	Na	Na	Na
PM_{10}	24 hours	50 $\mu g/m^3$	N	150 $\mu g/m^3$	U	139	107	130	280	79	111*	129*	173*	151*	Na	0	0	0	9	Na
PM_{10}	Annual	30 $\mu g/m^3$	N	50 $\mu g/m^3$	A	47	49	50	52	53	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
$PM_{2.5}$	24 hours	N/A	N/A	65 $\mu g/m^3$	**	66.3	60.0	Na	Na	Na	N/A	N/A	Na	Na	Na	1	0	Na	Na	Na
$PM_{2.5}$	Annual	N/A	N/A	15 $\mu g/m^3$	**	15.8	17.7	Na	Na	Na	N/A	N/A	Na	Na	Na	N/A	N/A	Na	Na	Na

SOURCES: State of California 2004a.

[a]California standards for ozone, carbon monoxide (except at Lake Tahoe), sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, and PM_{10} are values that are not to be exceeded. Some measurements gathered for pollutants with air quality standards that are based upon 1-hour, 8-hour, or 24-hour averages, may be excluded if the CARB determines they would occur less than once per year on average.

[b]National standards other than for ozone and particulates, and those based on annual averages or annual arithmetic means are not to be exceeded more than once a year. The 1-hour ozone standard is attained if, during the most recent 3-year period, the average number of days per year with maximum hourly concentrations above the standard is equal to or less than one.

[c]A = attainment; M = maintenance; N = non-attainment; U = unclassifiable; N/A = not applicable; ** = Attainment status to be determined

[d]N/A = not applicable; Na = data not available

ppm = parts per million, pphm = parts per hundred million, $\mu g/m^3$ = micrograms per cubic meter

*Calculated days = Calculated days are the estimated number of days that a measurement would have been greater than the level of the standard had measurements been collected every day. The number of days above the standard is not necessarily the number of violations of the standard for the year.

TABLE 5.11-4
SAN DIEGO COUNTY'S FEDERAL AND STATE DESIGNATIONS FOR EACH OF THE CRITERIA POLLUTANTS

Criteria Pollutant	Federal Designation	State Designation
Ozone (one hour)	Attainment	Nonattainment
Ozone (eight hour)	Nonattainment	No state standard
Carbon Monoxide	Attainment	Attainment
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
Lead	Attainment	Attainment
PM 10[1]	Unclassifiable	Nonattainment
PM 2.5[2]	Attainment	Nonattainment

SOURCE: County of San Diego Air Pollution Control District, February 2005 and US EPA 2005

[1]particulate matter of 10 microns or less in diameter.
[2]particulate matter of 2.5 microns or less in diameter.

TABLE 5.11-5
SUMMARY OF AIR QUALITY MEASUREMENTS RECORDED AT THE CHULA VISTA MONITORING STATION

Pollutant/Standard	2000	2001	2002	2003	2004
Ozone					
Days State Standard Exceeded (0.09 ppm)	0	2	1	0	1
Days National Standard Exceeded (0.12 ppm)*	0	0	0	0	0
Max. 1-hr (ppm)	0.091	0.102	0.115	0.075	0.097
Days Federal 8-hour Standard Exceeded (0.08 ppm)	0	0	0	0	1
Max. 8-hr (ppm)	0.077	0.079	0.073	0.056	0.087
Carbon Monoxide					
Days State 8-hour Standard Exceeded (9.0 ppm)	0	0	0	0	0
Days National 8-hour Standard Exceeded (9 ppm)*	0	0	0	0	0
State Max. 8-hr (ppm)	3.35	4.64	2.61	5.40	2.48
National Max. 8-hr (ppm)	3.14	4.65	2.61	5.40	2.48
Nitrogen Dioxide					
Days State 1-hour Standard Exceeded (0.25 ppm)	0	0	0	0	0
Max. 1-hr (ppm)	0.072	0.071	0.093	0.102	0.072
National Annual Average (0.053 ppm)	0.017	0.017	0.018	0.018	0.016
PM_{10}					
Days State Standard Exceeded ($\mu g/m^3$)†	6	6	6	12	N/A
Days National Standard Exceeded ($\mu g/m^3$)*	0	0	0	0	N/A
State Max. Daily ($\mu g/m^3$)	54.0	66.0	52.0	78.0	45.0
National Max. Daily ($\mu g/m^3$)	52.0	64.0	50.0	75.0	44.0
State Annual Average ($\mu g/m^3$)	N/A	28.6	27.1	27.6	N/A
National Annual Average ($\mu g/m^3$)	N/A	27.8	26.5	27.0	N/A
$PM_{2.5}$					
Days Federal 24-hour Standard Exceeded (65 $\mu g/m^3$)	0	0	0	1	0
State Max. Daily ($\mu g/m^3$)	40.5	41.0	41.0	239.2	32.7
National Max. Daily ($\mu g/m^3$)	40.5	41.0	41.0	239.2	32.7
State Annual Average ($\mu g/m^3$)	N/A	N/A	13.9	14.4	N/A
National Annual Average ($\mu g/m^3$)	13.1	15.5	13.9	14.4	N/A

SOURCE: State of California 2005: http://www.arb.ca.gov.

*National Standard refers to the primary federal standard. In the case of ozone and PM_{10}, the secondary federal standards are the same as the primary federal standards. There are no secondary federal standards for carbon monoxide.

†Calculated days - Measurements are typically collected every six days. Calculated days are the estimated number of days that a measurement would have been greater than the level of the standard had measurements been collected every day. The number of days above the standard is not necessarily the number of violations of the standard for the year.

Lead concentrations in the SDAB have not exceeded the state or federal standard during at least the past 10 years.

N/A – information not available.

TABLE 5.11-6
SUMMARY OF AIR QUALITY MEASUREMENTS RECORDED AT THE OTAY MESA MONITORING STATION

Pollutant/Standard	2000	2001	2002	2003	2004
Ozone					
Days State Standard Exceeded (0.09 ppm)	0	0	2	1	1
Days National Standard Exceeded (0.12 ppm)*	0	0	0	0	0
Max. 1-hr (ppm)	0.084	0.086	0.108	0.097	0.095
Days Federal 8-hour Standard Exceeded (0.08 ppm)	0	0	1	0	0
Max. 8-hr (ppm)	0.060	0.074	0.087	0.076	0.077
Carbon Monoxide					
Days State 8-hour Standard Exceeded (9.0 ppm)	0	0	0	0	0
Days National 8-hour Standard Exceeded (9 ppm ppm)†	0	0	0	0	0
State Max. 8-hr (ppm)	5.86	3.91	4.68	4.85	4.11
National Max. 8-hr (ppm)	5.86	3.91	4.68	4.85	4.11
Nitrogen Dioxide					
Days State 1-hour Standard Exceeded (0.25 ppm)	0	0	0	0	0
Max. 1-hr (ppm)	0.112	0.148	0.126	0.148	0.125
National Annual Average (0.053 ppm)	0.020	0.021	0.021	0.020	0.023
PM_{10}					
Days State Standard Exceeded (50 $\mu g/m^3$)†	109	129	173	151	N/A
Days National Standard Exceeded (150 $\mu g/m^3$)*	0	0	0	0	N/A
State Max. Daily ($\mu g/m^3$)	136	106	131	133	81
National Max. Daily ($\mu g/m^3$)	139.0	107.0	130	130	79
State Annual Average ($\mu g/m^3$)	44.5	47.4	52.4	52.6	N/A
National Annual Average ($\mu g/m^3$)	45.2	49.1	54.9	52.1	N/A

SOURCE: State of California 2005:http://www.arb.ca.gov.

*National Standard refers to the primary federal standard. In the case of ozone and PM_{10}, the secondary federal standards are the same as the primary federal standards. There are no secondary federal standards for carbon monoxide.

†Calculated days - Measurements are typically collected every six days. Calculated days are the estimated number of days that a measurement would have been greater than the level of the standard had measurements been collected every day. The number of days above the standard is not necessarily the number of violations of the standard for the year.

Lead concentrations in the SDAB have not exceeded the state or federal standard during at least the past 10 years.

$PM_{2.5}$ data not available for this monitoring station.

About half of smog-forming emissions in the SDAB are generated by motor vehicles. Population growth in the San Diego region has resulted in a large increase in the number of automobiles operating on area roadways. In addition, the occasional transport of smog-filled air from Los Angeles only adds to the SDAB's ozone problem. More strict automobile emission controls, including more efficient automobile engines, have played a large role in the steady decrease in ozone levels.

Ozone concentrations in the SDAB have generally declined as can be seen in the data recorded during the past five years as presented in Table 5.11-3. In fact, the criteria for attainment of the national one-hour ozone standard was satisfied at the end of 2001 when ozone levels exceeded the national ozone standard of 0.12 parts per million (ppm) only four times during the period of 2000 to 2004 (also see footnote "b" of Table 5.11-3). The SDAB was formally designated a federal attainment area for the one-hour ozone standard on July 28, 2003. The state ozone standard was exceeded on 24, 29, 15, 24, and 12 days, respectively, during the same time period. This also reveals a general downward trend in the ozone concentrations in the SDAB.

The national ozone standard was not exceeded at either the Chula Vista monitoring station or the Otay Mesa monitoring station during the five-year period of 2000 to 2004 (see Tables 5.11-5 and 5.11-6). The stricter state standard for ozone was exceeded at the Chula Vista monitoring station on 2 days in 2001, 1 day in 2002, and 1 day in 2004. The standard was not exceeded at the Chula Vista monitoring station in 2000 or 2003. The state standard for ozone was exceeded at the Otay Mesa monitoring station on 2 days in 2002, 1 day in 2003, and 1 day in 2004. The standard was not exceeded at the Otay Mesa monitoring station in 2000 or 2001 (State of California 2005).

As indicated, not all of the ozone within the SDAB is derived from local sources. Under certain meteorological conditions such as during Santa Ana wind events, ozone and other pollutants are transported from the Los Angeles Basin and combine with ozone formed from local emissions sources to produce elevated ozone levels in the SDAB. According to SANDAG, on average, approximately 42 percent of the days that ozone concentrations exceeded the state standard between 1987 and 1994 were attributable to pollution transported from Los Angeles (SANDAG 1994:249-250). More recent data suggests that this percentage is even higher. According to the San Diego APCD, ozone transported into the SDAB from the South Coast Air Basin (Los Angeles-San Bernardino-Riverside-Orange area) was the primary cause for the SDAB exceeding national ozone thresholds on 27 of a total of 33 days from 1994 to 1998 (County of San Diego 2000). The San Diego APCD further explains that the two days in which the national one-hour standard was exceeded in 2001 were both caused by ozone-rich air transported from the South Coast Air Basin (County of San Diego 2001a).

The national eight-hour ozone standard was exceeded in the SDAB on 16 days in 2000, 17 days in 2001, 13 days in 2002, 6 days in 2003, and 8 days in 2004 (see Table 5.11-3). At the

Chula Vista monitoring station for the period from 2000 through 2004 the national eight-hour ozone standard was exceeded only once in 2004, while for the same period the eight-hour ozone standard was exceeded only once in 2002 at the Otay Mesa station (see Tables 5.11-5 and 5.11-6).

On April 30, 2004, the U.S. EPA listed the final designations for the eight-hour ozone standard in the Federal Register (EPA 2004a), which became effective June 15, 2004. San Diego County is considered a non-attainment area for ozone based on this new standard. The San Diego APCD has three years (by 2007) to formulate a strategy for attaining the eight-hour standard. The strategy must then be approved by the EPA. Using the discretion provided by Section 172(a)(1) of the CAA, the EPA has chosen not to classify the basin (e.g., moderate, serious, etc.). For areas subject to Subpart 1, consistent with Section 172(a)(2)(A) of the CAA, the period of attainment will be no more than five years from the effective date of designation (U.S. EPA 2004b). Consequently, the SDAB must demonstrate attainment by June 15, 2009. If warranted, the EPA may grant an extension of the attainment date to no more than 10 years after designation, which would be June 15, 2014.

Actions that have been taken in the SDAB to reduce ozone concentrations include:

- **TCMs if vehicle travel and emissions exceed attainment demonstration levels.** TCMs are strategies that will reduce transportation-related emissions by reducing vehicle use or improving traffic flow.

- **Enhanced motor vehicle inspection and maintenance program.** The smog check program monitors the amount of pollutants automobiles produce. One focus of the program is identifying "gross polluters" or vehicles that exceed two times the allowable emissions for a particular model. Regular maintenance and tune-ups, changing the oil, and checking tire inflation can improve gas mileage and lower air pollutant emissions. It can also reduce traffic congestion due to preventable breakdowns, further lowering emissions.

- **Old car buy-back and retrofit programs.** The old car buy-back program is an incentive program offered by the San Diego APCD to purchase older, more polluting vehicles (1985 and older) and scrap them, thereby getting them off the road. Old car sellers are paid $600 for vehicles built prior to 1975 and $500 for 1975-1985 cars and trucks. There is also a retrofit program designed to retrofit 1975-1980 vehicles with a new technology upgrade kit that reduces smog-forming emissions.

- **Clean-fuel vehicle program.** Cleaner vehicles and fuels will result in continued reductions in vehicle pollutant emissions despite increases in travel.

CARBON MONOXIDE

The SDAB is classified as a state and federal attainment area for carbon monoxide (County of San Diego 1998). Until 2003 no violations of the state standard for CO had been recorded in the SDAB since 1991 and no violations of the national standard had been recorded in the SDAB since 1989. As seen in Table 5.11-3, both the federal and state eight-hour CO standards were exceeded in the county on one day in 2003. This exceedance occurred on October 28, 2003, at a time when major wildfires were raging throughout the county. Consequently, this exceedance was likely caused by the wildfires and would be considered beyond the control of the SDAPCD.

Small-scale, localized concentrations of carbon monoxide above the state and national standards have the potential to occur at intersections with stagnation points such as those that occur on major highways and heavily traveled and congested roadways. Localized high concentrations of CO are referred to as "CO hot spots" and are a concern at congested intersections when automobile engines burn fuel less efficiently and their exhaust contains more CO.

PARTICULATES (PM_{10})

Particulate matter is a complex mixture of very tiny solid or liquid particles composed of chemicals, soot, and dust. Sources of PM_{10} emissions in the SDAB consist mainly of urban activities, dust suspended by vehicle traffic, and secondary aerosols formed by reactions in the atmosphere. Ten microns is about one-seventh the diameter of a human hair. In general, particulate concentrations near residential sources are typically greater during the coldest months of the year, when more fireplaces are in use and when meteorological conditions such as inversions prevent the dispersion of directly emitted contaminants.

Until 2003 the national standards for PM_{10} had never been exceeded in the SDAB since the standards were established. The EPA has designated the SDAB unclassifiable for PM_{10}. The unclassifiable designation is given to areas that cannot be classified on the basis of available information as meeting or not meeting the national primary or secondary ambient air quality standard for that pollutant (U.S. EPA 2002).

In 2003 the measured federal PM_{10} standard was exceeded twice. These two exceedances result in a calculated number of days that the federal standard was exceeded of approximately nine days for the year (see Table 5.11-3). The first exceedance occurred on October 29, 2003, at a time when major wildfires were raging throughout the county. The second exceedance occurred on November 23, 2003, during high winds, which caused large amounts of ash from the previous fires to be resuspended.

Consequently, these exceedances were likely caused by or were a subsequent result of the wildfires and would be beyond the control of the SDAPCD. As such, these events likely

would be covered under the U.S. EPA's Natural Events Policy that permits, under certain circumstances, the exclusion of air quality data attributable to uncontrollable natural events (e.g., volcanic activity, wildland fires, and high wind events).

State PM_{10} standards set by the CARB in 1983 were 50 $\mu g/m^3$ for a 24-hour average and 30 $\mu g/m^3$ for an annual average. In 2002, pursuant to the Children's Environmental Health Protection Act, the CARB revised the annual average standard for PM_{10} to 20 $\mu g/m^3$ (State of California 2003). The Children's Environmental Health Protection Act required a review of all of California's health-based ambient air quality standards to determine if they adequately protect public health, especially the health of infants and children. In addition to the two federal exceedances in 2003, the more strict state standards for PM_{10} historically have not been met. As a result, the SDAB is designated a state non-attainment area for PM_{10}.

Table 5.11-3 shows that the state PM_{10} standard was exceeded in the SDAB each year from 2000 through 2003 (data for 2004 are not currently available). The number of days that the state standard was exceeded increased slightly over the four-year period with the state standard being exceeded on a calculated 151 days in 2003. Calculated days of exceedance are the estimated number of days that a measurement would have been greater than the level of the standard had measurements been collected every day. At the Chula Vista monitoring station, the calculated number of days that the state PM_{10} standard was calculated to be exceeded on 6 days in 2000, 6 days in 2001, 6 days in 2002, and 12 days in 2003 (see Table 5.11-5). Data are not currently available for 2004. At the Otay Mesa monitoring station, the state PM_{10} standard was calculated to be exceeded on 109 days in 2000, 129 days in 2001, 173 days in 2002, and 151 days in 2003 (see Table 5.11-6). Data are also not currently available for 2004 at this station.

The large number of exceedences of the state PM_{10} standard at the Otay Mesa monitoring station is likely due to the proximity of the station to the U.S./Mexican border. According to Mahmood Hossain, Senior Chemist with the San Diego APCD, the Otay Mesa monitoring station is located in an area with a large amount of vehicular traffic associated with the border crossing (Hossain, pers. com. 2003). According to Mr. Hossain, there is a truck stop, intense construction, and several unpaved roads near the Otay Mesa monitoring station, all of which would tend to produce high, localized PM_{10} concentrations. For these reasons, the relocation of the Otay Mesa monitoring station is currently being considered by the San Diego APCD (Hossain, pers. com. 2003).

PARTICULATES ($PM_{2.5}$)

In 1997, the U.S. EPA established a new federal air quality standard for fine particulate matter, or $PM_{2.5}$. These standards include an annual arithmetic mean of 15 $\mu g/m^3$ and a 24-hour concentration of 65 $\mu g/m^3$. Although the state has not established a separate 24-hour standard for $PM_{2.5}$, it has established an annual arithmetic mean of 12 $\mu g/m^3$. $PM_{2.5}$ are particles that measure 2.5 microns or less in diameter. As a result of their small size, $PM_{2.5}$

particles can be inhaled deeply into the lungs. $PM_{2.5}$ is predominantly produced from combustion sources such as gasoline and diesel engines and industrial facilities. Emissions of organic gases, nitrogen oxides (NOx), sulfur oxides (SOx), and ammonia produced at these sources react in the atmosphere and form such tiny particles. $PM_{2.5}$ can remain suspended in the air for long periods and can travel great distances (County of San Diego 2001a).

Basinwide summaries for $PM_{2.5}$ are currently not available. At the Chula Vista monitoring station, for the period from 2000 through 2004 the federal $PM_{2.5}$ standard was exceeded on only one day in 2003 (see Table 5.11-5). As also seen in Table 5.11-5 the state annual arithmetic average standard has been routinely exceeded. $PM_{2.5}$ data are not collected at the Otay Mesa monitoring station.

A list of recommended designations was due to the EPA by February 15, 2004. The CARB supplied monitoring data for the years 2000 through 2002 to the EPA on February 11, 2004. The EPA reviewed the designation recommendations, made some modifications, and on January 5, 2005 listed the final designations in the Federal Register (EPA 2004c). These designations will become effective April 5, 2005. That portion of the SDAB containing the project site has been designated a attainment area for the federal $PM_{2.5}$ standard (U.S. EPA 2004c).

NITROGEN DIOXIDE, SULFUR DIOXIDE, AND LEAD

The national and state standards for NO_2, SO_2, and lead are being met in the SDAB, and the latest pollutant trends suggest that these standards will not be exceeded in the foreseeable future.

ODORS

Odors are one of the most obvious forms of air pollution to the general public. While offensive odors seldom cause physical harm, they can present a significant problem for both the source and the surrounding community. Offensive odors may cause agitation, anger, and concern to the public about the possibility of health effects, especially in residential neighborhoods located near sources. Most people respond to offensive odors as objectionable if they are sensed over the duration of a single human breath, typically two to five seconds.

Sources

The San Diego APCD has permit authority over most types of stationary emission sources in the SDAB. The San Diego APCD exercises permit authority through its Rules and Regulations. Permits are the primary means for the APCD to assure that polluting operations are controlled to the maximum degree technically and economically feasible and do not interfere with the attainment and maintenance of healthful air quality.

Since 1990, the San Diego APCD has monitored air toxics at sampling sites in Chula Vista and El Cajon. These locations are considered to be the most appropriate in the San Diego region for toxic sampling because they are nearby and downwind of large, concentrated areas of industrial, transportation, and other air pollutant sources. Results from the monitoring show that overall emissions of air toxics have been declining, with a 75-percent reduction in estimated industrial air toxic emissions since the early 1990s (County of San Diego 2004).

Information about facilities in the San Diego region that release the largest amount of toxic air contaminants is available from the San Diego APCD. The San Diego APCD provides the information on their website and in an annual report titled "Air Toxics 'Hot Spots' Program Report for San Diego County." The CARB lists more than 700 compounds to be assessed under the Air Toxics "Hot Spots" program. The list includes potentially carcinogenic substances as well as compounds that may cause health problems such as respiratory irritation or central nervous system depression.

Figure 5.11-2 presents the location of facilities in Chula Vista that release the largest amount of toxic air contaminants and their proximity to residences, schools, and hospitals located in and near the plan area. Corresponding Table 5.11-7 shows the street address of each facility and a number that can be used to locate these facilities on Figure 5.11-2.

Update Areas

As shown on Figure 5.11-2, there are no large air emission sources located within the Northwest Planning Area. Two large air emission sources, Rohr Industries/BF Goodrich and Southbay Boat Yard, occur outside and west of the Northwest Planning Area. Three large air emission sources are situated within the Southwest Planning Area: Hanson Aggregates/Nelson & Sloan, Marine Service Commercial Diving Company, and Costco Gasoline Facility #405. The South Bay Power Plant, a large air emission source, is located outside and east of the Southwest Planning Area. One large air emission source, the Otay Landfill, is located within the East Planning Area.

5.11.2 Thresholds of Significance

The proposed General Plan Update would result in a significant impact to air quality if it would:

- Threshold 1: Conflict with or obstruct implementation of the applicable air quality plan.
- Threshold 2: Violate any air quality standard or contribute substantially to an existing or projected air quality violation.

TABLE 5.11-7
FACILITIES IN CHULA VISTA MONITORED BY THE SAN DIEGO APCD FOR LARGE AMOUNTS OF TOXIC AIR CONTAMINANTS

Number	Facility	Location
1	Costco Gasoline Facility #405	1144 Broadway
2	Costco Wholesale	895 H Street East
3	Hanson Aggregates/Nelson & Sloan	7th & Main Streets
4	Marine Service Commercial Diving Company	609 Anita Street
5	Otay Landfill/Ogden Power Pacific, Inc.	Otay Landfill
6	Otay Water District	10391 Otay Lakes Road
7	Otay Water District	2406 Otay Lakes Road
8	Otay Water District	10770 Proctor Valley Road
9	Rohr Industries/BF Goodrich	850 Lagoon Drive
10	Sharp Chula Vista Medical Center	751 Medical Center Court
11	South Bay Power Plant	990 Bay Boulevard
12	Southbay Boat Yard	997 G Street
13	Wood Craft Company	1675 Brandywine Avenue

- Threshold 3: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

- Threshold 4: Expose sensitive receptors to substantial pollutant concentrations.

- Threshold 5: Create objectionable odors affecting a substantial number of people.

5.11.3 Impacts

5.11.3.1 Threshold 1: Conflict with or Obstruct Implementation of the Applicable Air Quality Plan

As noted above, the SIP is the document that sets forth the state's strategies for achieving air quality standards. The San Diego APCD is the agency that regulates air quality in the SDAB and is responsible for preparing and implementing the portion of the SIP applicable to the SDAB. The RAQS and TCM plan developed by the San Diego APCD and SANDAG set forth the steps needed to accomplish attainment of state and federal ambient air quality standards. The San Diego APCD adopts rules, regulations, and programs to attain state and federal air quality standards, and appropriates money (including permit fees) to achieve these objectives.

In order to meet federal air quality standards in California, the CARB required each air district to develop its own strategy for achieving the NAAQS. The San Diego APCD prepared the 1991/1992 RAQS in response to the requirements set forth in the CCAA. Attached as part of the RAQS is the TCM plan prepared by SANDAG. The RAQS and TCM plan set forth the steps needed to accomplish attainment of state and federal ambient air quality standards.

Threshold 1 is assessed with respect to conformance with these plans. The basis for these plans is the distribution of population in the region as projected by SANDAG. Growth forecasting is based in part on the land uses established by the General Plan. Amending the General Plan to increase development potential would, necessarily, result in an inconsistency between the air quality strategy (that is based on the existing plan) and the amended plan.

The current RAQS are based on the adopted General Plan. Because the proposed land use changes would be inconsistent with the adopted General Plan upon which the RAQS was based, the General Plan Update would not conform to the current RAQS. If a project is inconsistent with the City's General Plan, it is not consistent with the growth assumptions in the RAQS. Consequently, the proposed General Plan Update would conflict with the adopted air plan.

The City has a CO_2 Reduction Plan that aims to reduce CO_2 emissions to 80 percent of 1990 levels by the year 2010. The plan established 20 action measures in order to achieve this goal. Several of those measures are directly supported by the proposed General Plan Update. These include:

- Enhanced pedestrian connections to transit
- Increased housing density near transit
- Site design with transit orientation
- Increased land use mix
- Bicycle lanes, paths, and routes
- Increased employment density near transit

By supporting these goals the proposed GPU promotes, and does not obstruct the CO_2 reduction plan.

5.11.3.2 Threshold 2: Violate Any Air Quality Standard or Contribute Substantially to an Existing or Projected Air Quality Violation

Several facilities in Chula Vista are monitored by San Diego APCD for large amounts of toxic air contaminants. As shown in Figure 5.11-2, there are no large air emission sources located within the Northwest Update Area. Two of these large air emission sources, Rohr Industries/BF Goodrich and Southbay Boat Yard, occur outside and to the west of the Northwest Update Area. Three of these air emission sources are within the Southwest Planning Area: Hanson Aggregates/Nelson & Sloan, Marine Service Commercial Diving Company, and Costco Gasoline Facility #405. The South Bay Power Plant, a large air emission source, is located outside, but immediately west of the Southwest Update area. One large air emission source, the Otay Landfill, is located to the west of the East Update Area.

The proposed amendments to the General Plan would not directly affect these emitters, and the scenarios would not differ in their effects. As such, the General Plan Update would not directly contribute to any existing air quality violations.

Each of the proposed scenarios would permit industrial development in the Montgomery Subarea and the Otay Ranch Subarea. It is possible that industries that generate air pollutants would be developed within these areas. Without appropriate controls, air emissions associated with planned industrial uses could represent a significant adverse air quality impact.

The potential for development under the Preferred Plan or any of the Scenarios to result in a land use that would violate an air quality standard or contribute to an existing violation is self-mitigating through the adoption and compliance with Policy EE 6.4. That policy states:

> Avoid siting new or re-powered energy generation facilities, and other major toxic air emitters within 1,000 feet of a sensitive receiver, or the placement of a sensitive receiver within 1,000 feet of a major toxic emitter.

Further, AB 2588 requires any new facility proposed that would have the potential to emit toxic air contaminants to assess air toxic problems that may result from their facility's emissions. The law requires larger industrial facilities to provide information regarding emission inventories and health risk assessments. If adverse health impacts exceeding public notification levels are identified, the facility must provide public notice, and if the facility poses a potentially significant public health risk, the facility must submit a risk reduction audit and plan to demonstrate how the facility will reduce health risks.

5.11.3.3 Threshold 3: Result in a Cumulatively Considerable Net Increase of Any Criteria Pollutant for which the Project Region is Non-Attainment under an Applicable Federal or State Ambient Air Quality Standard

The region is in attainment for all criteria pollutants except ozone, PM_{10}, and $PM_{2.5}$ (see Table 5.11-4). The SDAB is non-attainment for the 8-hour federal ozone standard. Because ozone is not emitted directly but forms in the atmosphere, it is more a regional concern than it is a direct effect of individual projects. As noted above, ozone pollution, or smog, is mainly a concern during the daytime in summer months because sunlight plays an important role in its formation. Nitrogen oxides and hydrocarbons (reactive organic gases) are known as the chief "precursors" of ozone. These compounds react in the presence of sunlight to produce ozone. For PM_{10}, the region has a federal designation of Unclassifiable and is non-attainment of the State standard, while the region is designated as attainment for the federal and non-attainment for the State $PM_{2.5}$ standards.

Construction

Air pollutants generated by the construction of projects that conform to the General Plan would vary depending upon the number of projects occurring simultaneously, and the size of each individual project. Pollutants result from dust raised during demolition and grading, emissions from construction vehicles, chemicals used during construction, and ultimately emissions generated during operation of approved uses.

Fugitive dust emissions vary greatly during construction and are dependent on the amount and type of activity, silt content of the soil, and the weather. Vehicles moving over paved and unpaved surfaces, demolition, excavation, earth movement, grading, and wind erosion from exposed surfaces are all sources of fugitive dust. Construction operations are subject to the requirements established in Regulation 4, Rules 52 and 54, of the San Diego APCD's rules and regulations.

The exact number and timing of all development projects that could occur under the proposed General Plan Update are unknown. However, given the predominantly developed nature of the western portion of the city of Chula Vista, it can be assumed that western Chula Vista would experience relatively small projects in terms of land area, most of which would involve the demolition of existing structures and improvements. Conversely, in the eastern portions of the city many development projects would be relatively large, involving undeveloped land and little, if any, demolition of existing structures and improvements. The range of these different types of projects is great.

To illustrate the range of potential air effects from projects that could occur in the city, two types of speculative projects were evaluated. These hypothetical projects include a one-acre multi-family residential project that may be typical in western Chula Vista and the development of a large scale SPA plan that could occur in the east. The one-acre multi-family development is assumed to consist of the demolition of an existing structure with a volume of approximately 50,000 cubic feet and the construction of a 20-unit multi-family structure. The large SPA plan type development is assumed to consist of the development of 2,500 single-family units, a 450-student elementary school, and a 1,200-student high school on undeveloped land.

Table 5.11-8 shows the anticipated emissions from each of these projects assuming that the duration of construction is 12 months.

TABLE 5.11-8
YEARLY CONSTRUCTION EMISSIONS
(pounds/year)

Pollutant	Small Multi-Family Project	Large SPA Plan Project
ROG	1,860	385,120
NO_x	8,400	1,176,360
CO	8,180	1,145,180
SO_2	0	20
PM_{10} – total	400	71,660
PM_{10} – exhaust	280	53,080
PM_{10} – fugitive dust	120	18,580

To estimate the effects of such projects over the 25-year horizon of the General Plan Update it was assumed that 10 SPA-sized projects could be implemented, and that an average of approximately five projects equivalent to the 20-unit multi-family project could occur yearly.

The City of Chula Vista uses the South Coast Air Quality Management District (SCAQMD) quarterly construction thresholds shown in Table 5.11-9 to assess the significance of air quality impacts. Table 5.11-9 shows the average quarterly emissions using the above assumptions.

TABLE 5.11-9
AVERAGE QUARTERLY EMISSIONS
(tons/quarter)

Pollutant	Small Multi-Family Project	Five Small Multi-Family Projects	Large SPA Plan Projects*	Total	Threshold†
ROG	0.23	1.16	16.05	17.21	2.5
NOx	1.05	5.25	49.02	54.27	2.5
CO	1.02	5.11	47.72	52.83	24.75
SO_2	0	0	0	0	6.75
PM_{10} – total	0.05	0.25	2.99	3.24	6.75
PM_{10} – exhaust	0.04	0.18	2.21	2.39	--
PM_{10} – fugitive dust	0.02	0.08	0.77	0.85	--

*Assumes 1 project every three years.
†Threshold for individual projects.

As seen from Table 5.11-9, small individual projects are not expected to exceed the thresholds of significance. The large SPA level project is anticipated to generate emissions during construction that are potentially significant, and if the smaller projects were considered as a single project, they too might exceed the quarterly thresholds.

These projects are illustrative only. Approval of the proposed General Plan Update would not permit the construction of any individual project, and no specific development details are available. The thresholds presented above are applied on a project-by-project basis and are not used for assessment of regional planning impacts. The information is presented to illustrate the potential scope of air impacts for projects that could be reviewed under the proposed plan.

The County is not in attainment for Ozone or the state PM_{10} and $PM_{2.5}$ standard and is unclassifiable for the federal PM_{10} standard. Clearly, there is the potential for future projects that would conform to the Preferred Plan or any of the Scenarios to contribute to cumulatively considerable emissions should multiple projects be implemented simultaneously. Should three small projects or one large SPA Plan project be initiated in any given year, it is anticipated that the construction of those projects would result in a potentially cumulatively considerable increase in criteria air pollutant emissions.

Operation

For comparative purposes, an assessment of the anticipated air emissions resulting from buildout of the preferred alternative in the year 2030 was prepared using the URBEMIS2002 computer program (Yolo-Solano Air Quality Management District 2003). The URBEMIS2002 program is a tool used to estimate air emissions resulting from land development projects in the state of California. The model generates emissions from three basics sources: construction sources, area sources (e.g., fireplaces, natural gas heating, etc.), and operational sources (e.g., traffic).

Inputs to URBEMIS2002 include such parameters as the air basin containing the project, land uses, trip generation rates, trip lengths, vehicle fleet mix (i.e., percentage autos, medium truck, etc.), trip distribution (i.e., percent home to work, etc.), season, and ambient temperature, as well as other parameters. A detailed description of the URBEMIS2002 model and its use may be found in the URBEMIS2002 User's Guide that may be obtained from the CARB web site at http://www.arb.ca.gov/planning/urbemis/urbemis2002/urbemis2002.htm.

Using the land use designations for the Preferred Plan and each of the Scenarios, along with trip generation rates developed by SANDAG (SANDAG 2002), as well as URBEMIS2002 defaults for other parameters, average daily emissions were estimated using URBEMIS2002 assuming buildout of the Preferred Plan and Scenarios in the year 2030. The results of the modeling, which include both mobile and area source emissions, are shown in Table 5.11-10. As seen in Table 5.11-10, with the exception of PM_{10} and SO_X, emissions are anticipated to be less than those that would occur under existing conditions. (Compared to the adopted General Plan (see Chapter 10), these pollutants are projected to be reduced).

While construction activities may have relatively short-term air quality impacts, increases in multi-family residential use and improvements in reducing motor vehicle emissions are predicted to result in an improvement in air quality from non-construction daily operations in the year 2030 relative to existing conditions.

5.11.3.4 Threshold 4: Expose Sensitive Receptors to Substantial Pollutant Concentrations

In December 2004, the SDAPCD published the 2003 Air Toxics "Hot Spots" Program Report for San Diego County. This report demonstrates SDAPCD's compliance with the California Air Toxics "Hot Spots" Information and Assessment Act (AB 2588) that was enacted in 1987. The law requires larger industrial facilities to provide information regarding emission inventories and health risk assessments. If adverse health impacts exceeding public notification levels are identified, the facility must provide public notice, and if the facility poses a potentially significant public health risk, the facility must submit a risk reduction audit and plan to demonstrate how the facility will reduce health risks.

The following five facilities in the City of Chula Vista that have prepared health risk assessments in conformance with this program:

1. BF Goodrich/Rohr Industries
2. Hanson Aggregates at 7th and Main
3. Hanson Aggregates at Rock Mountain
4. Duke Energy, South Bay Power Plant (SBPP)
5. Ogden Power Pacific at the Otay Landfill

TABLE 5.11-10
AVERAGE DAILY EMISSIONS TO THE SAN DIEGO AIR BASIN
RESULTING FROM BUILDOUT OF THE GENERAL PLAN
(pounds per day)

	Existing Condition (2005)			Scenario 1 (2030)			Scenario 2 (2030)			Scenario 3 (2030)			Preferred Alternative (2030)		
Season/ Pollutant	Mobile Sources	Area Sources	Total[1]	Mobile Sources	Area Sources	Total[1]	Mobile Sources	Area Sources	Total[1]	Mobile Sources	Area Sources	Total[1]	Mobile Sources	Area Sources	Total[1]
Summer															
CO	276,810	1,009	277,819	108,917	802	109,720	107,037	813	107,851	111,003	787	111,790	96,225	821	97,046
NOx	28,005	1,132	29,137	9,509	1,219	10,727	9,340	1,241	10,581	9,693	1,198	10,892	8,381	1,256	9,638
ROG	20,747	3,778	24,525	8,739	5,465	14,204	8,605	5,625	14,230	8,891	5,367	14,258	7,784	5,741	13,525
SO_X[2]	244	17	261	318	10	328	312	10	322	324	10	334	280	10	290
PM_{10}	23,872	3	23,875	55,604	3	55,607	54,622	3	54,625	56,686	3	56,688	49,028	3	49,031
Winter															
CO	307,557	8,216	315,773	112,588	11,913	124,502	110,619	12,258	122,877	114,748	11,698	126,446	99,340	12,510	111,850
NOx	42,538	1,204	43,742	14,243	1,329	15,572	13,991	1,355	15,345	14,519	1,307	15,826	12,555	1,373	13,928
ROG	25,033	10,739	35,773	10,036	15,773	25,809	9,860	16,238	26,097	10,229	15,489	25,718	8,852	16,576	25,428
SO_X[2]	243	12	255	312	18	330	306	19	325	318	18	336	275	19	294
PM_{10}	23,872	1,063	24,935	55,604	1,564	57,168	54,622	1,610	56,232	56,686	1,536	58,221	49,028	1,644	50,672

Table 5.11-11 provides the results of these health risk assessments. This table presents the maximum lifetime cancer risk, cancer burden, and chronic and acute Total Health Hazards Index (THI) for each facility. Public notification and risk reduction requirements are based on these levels. Public notification is required if the maximum incremental cancer risk is 10 in 1,000,000 or greater and a significant risk is defined as 100 in 1,000,000. In addition public notification is required and a significant risk is determined if the cancer burden, chronic THI or acute THI, is 1.0 or greater.

TABLE 5.11-11
HEALTH RISK ASSESSMENT RESULTS

Facility	Maximum Lifetime Cancer Risk (per million)	Lifetime Cancer Burden	Chronic THI*	Acute THI*
BF Goodrich/Rohr Industries	7.7	<0.1	<0.1	<0.1
Hanson Aggregates, 7th & Main	4.2	<0.1	<0.1	<0.1
Hanson Aggregates, Rock Mountain	2.1	<0.1	<0.1	0.1
Duke Energy, SBPP	2.1	<0.1	<0.1	0.34
Ogden Power Pacific, Otay Landfill	1.0	<0.1	0.92	0.21

*THI = total health hazards index

None of the Chula Vista facilities addressed in the Program Report are required to perform Public Notification or Risk Reduction. All are below the Public Notification and Risk Mitigation levels.

In addition to the facilities addressed in the Program Report, a health risk assessment was conducted for the Otay Landfill as part of the environmental review process for the proposed expansion of the landfill. The health risk assessment is included in the Technical Appendices for the Final Environmental Impact Report for the Otay Landfill Development and Expansion Plan, and has been incorporated by reference in Section 1.4 of this EIR. This health risk assessment indicated that the incremental excess cancer risk of 10 in 1,000,000 was limited to an area within 1,000 feet of the landfill. The County's environmental impact report for the landfill expansion indicated that:

> The project carcinogenic risk isopleth indicating a 10 in one million carcinogenic risk for a residential receptor does not extend beyond the 1,000-foot nuisance easement/buffer except to the southeast of the landfill. Since the area to the south of the facility is zoned for industrial use, no residential receptors will be located in this area (County of San Diego 2000:2-44).

Subsequent to that analysis a site specific analysis was conducted for a property to the north west of the landfill. The analysis, Health Risk and Nuisance Analyses, Two Land Parcels Adjacent to Otay Landfill, Chula Vista, California was performed by Environ in May, 2005, and has been incorporated by reference in Section 1.4 of this EIR. The analysis evaluated the potential human health risks as well as nuisance issues such as dust deposition and odor,

for two parcels of land adjacent to the Otay Landfill to the north assuming future potential uses as residential, industrial, and/or as a community park. The analysis indicated that for these limited properties no adverse health risk would occur. In these areas, the incremental excess cancer risk was below 10 in 1,000,000. In the remainder of the area adjacent to the landfill, the 1,000-foot nuisance easement/buffer still reflects the conclusion drawn in the County's environmental impact report.

In addition to pollutants from fixed sources, traffic on area roads emit TACs. Diesel-exhaust particulate matter emissions are TACs. These emissions pose a potential hazard to residents. As detailed above, a number of strategies have been developed and are being implemented to reduce diesel particulate matter and lower health risks. CARB reports that health risks can be as high as 1,700 cancers in a million at 20 meters from a high-volume freeway.

The Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles prepared by the California Air Resources Board estimated that the statewide outdoor population-weighted concentration of diesel PM would decrease by 50 percent from 1990 concentrations in the year 2010 and by 60 percent by the year 2020. Furthermore, programs are being implemented that have a stated goal to reduce the cancer risk statewide arising from exposure to diesel particulate matter 75 percent by 2010 and 85 percent by 2020. As a result, although health risks are substantial, future conditions under which the proposed General Plan Update would be developed would see a reduction in those effects. Placement of sensitive uses near high-volume freeways, however, represents a significant adverse air quality impact. Lessening this effect would require improvements in the control technologies for diesel engines as described in the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles, actions outside the control of the City of Chula Vista.

The potential for development under the Preferred Plan or any of the Scenarios to expose sensitive receptors to substantial pollutant concentrations is self-mitigated because the adoption of Policies EE 6.4 and EE 6.10 will avoid the effect. Policy EE 6.4 states:

> Avoid siting new or re-powered energy generation facilities, and other major toxic air emitters within 1,000 feet of a sensitive receiver, or the placement of a sensitive receiver within 1,000 feet of a major toxic emitter.
>
> Policy EE 6.10 is as follows:
>
> The siting of new sensitive receivers within 500 feet of highways resulting from development or redevelopment projects shall require the preparation of a health risk assessment as part of the CEQA review of the project. Attendant health risks identified in the HRA shall be feasibly mitigated to the maximum extent practicable in accordance with CEQA, in order to help ensure that applicable federal and state standards are not exceeded.

In addition to consideration of the California Air Toxics "Hot Spots" Information and Assessment Act (AB 2588) and the effects of diesel particulates, a carbon monoxide hot spot model was conducted for the Preferred Plan and all three scenarios for a select number of intersections in the city. This model was prepared in accordance with the Transportation Project-Level Carbon Monoxide Protocol established by Caltrans (1997). The procedure followed is detailed in Appendix B of that protocol.

Five intersections were modeled. The intersections include:

- Willow Street and Bonita Road
- Broadway and H Street
- Melrose and Orange Avenue
- Otay Lakes Road and Eastlake Parkway
- Paseo del Rey and Telegraph Canyon Road

These intersections were selected as examples of intersections at different places in the city and represented a range of traffic volumes and configurations. The traffic volumes, intersection configuration, and cruise speeds were provided by the City of Chula Vista. Concentrations were calculated for 20 receptors for each intersection. The basic configuration of the intersections and the receptor locations for a typical intersection is illustrated in Figure 5.11-3.

The detailed modeling assumptions and results are provided in Appendix F. The results of the calculations for the Preferred Plan and all three Scenarios are presented in the following tables. Table 5.11-12 provides the combination of the maximum CO concentration from the intersections modeled and the maximum intersection contribution as measured at the Chula Vista monitoring station for a winter condition. The summer concentrations for these conditions are provided in Table 5.11-13.

For the Preferred Plan, the maximum predicted one-hour CO concentration is 6.6 ppm which occurred in the winter and the maximum predicted eight-hour CO concentration is 5.3 ppm and also occurs in the winter. All three Scenarios had the same maximum predicted one-hour CO concentration of 6.7 ppm and the same maximum predicted eight-hour concentration of 5.4 ppm, which both occur in the winter. These concentrations do not exceed the California or federal ambient air quality standards for carbon monoxide, and demonstrates that future traffic volumes can operate without exposing people to substantial CO concentrations. The hot spot analysis conducted for the Preferred Plan and all three Scenarios is based on traffic parameters projected for buildout conditions. The potential for hot spot impacts resulting from future conditions will depend upon the specific conditions at a given time. The actual future performance of an intersection will depend upon the timing of development and the timing of roadway and intersection improvements. Avoiding

TABLE 5.11-12
TOTAL WINTER CO CONCENTRATIONS AT MODELED RECEIVERS

	Willow St./Bonita Rd.		Broadway Ave./H St.		Melrose Ave./Orange Ave.		Otay Lakes Rd./Eastlake Parkway		Paseo del Rey/Telegraph Canyon Rd.	
Receivers	1-hour CO Concentration Due to Traffic (ppm)	8-hour CO Concentration Due to Traffic (ppm)	1-hour CO Concentration Due to Traffic (ppm)	8-hour CO Concentration Due to Traffic (ppm)	1-hour CO Concentration Due to Traffic (ppm)	8-hour CO Concentration Due to Traffic (ppm)	1-hour CO Concentration Due to Traffic (ppm)	8-hour CO Concentration Due to Traffic (ppm)	1-hour CO Concentration Due to Traffic (ppm)	8-hour CO Concentration Due to Traffic (ppm)
Preferred Plan										
1	6.2	5.0	6.3	5.0	6.1	4.9	6.3	5.0	6.3	5.0
2	6.3	5.0	6.6	5.3	6.2	5.0	6.5	5.2	6.5	5.2
3	6.2	5.0	6.6	5.3	6.2	5.0	6.6	5.3	6.5	5.2
4	6.3	5.0	6.6	5.3	6.2	5.0	6.5	5.2	6.5	5.2
5	6.3	5.0	6.6	5.3	6.2	5.0	6.6	5.3	6.5	5.2
6	6.2	5.0	6.4	5.1	6.1	4.9	6.4	5.1	6.3	5.0
7	6.3	5.0	6.4	5.1	6.2	5.0	6.4	5.1	6.4	5.1
8	6.4	5.1	6.6	5.3	6.3	5.0	6.6	5.3	6.6	5.3
9	6.3	5.0	6.6	5.3	6.3	5.0	6.6	5.3	6.5	5.2
10	6.4	5.1	6.6	5.3	6.3	5.0	6.5	5.2	6.5	5.2
11	6.4	5.1	6.6	5.3	6.3	5.0	6.6	5.3	6.6	5.3
12	6.2	5.0	6.3	5.0	6.2	5.0	6.3	5.0	6.4	5.1
13	6.0	4.8	6.3	5.0	6.1	4.9	6.2	5.0	6.0	4.8
14	6.1	4.9	6.6	5.3	6.3	5.0	6.3	5.0	6.1	4.9
15	6.1	4.9	6.6	5.3	6.3	5.0	6.4	5.1	6.2	5.0
16	6.1	4.9	6.6	5.3	6.3	5.0	6.4	5.1	6.2	5.0
17	6.0	4.8	6.6	5.3	6.3	5.0	6.3	5.0	6.0	4.8
18	5.9	4.7	6.3	5.0	6.1	4.9	6.1	4.9	5.9	4.7
19	6.1	4.9	6.6	5.3	6.4	5.1	6.4	5.1	6.2	5.0
20	6.1	4.9	6.5	5.2	6.3	5.0	6.4	5.1	6.2	5.0
Scenario 1										
1	6.2	5.0	6.3	5.0	6.1	4.9	6.3	5.0	6.3	5.0
2	6.3	5.0	6.6	5.3	6.2	5.0	6.6	5.3	6.5	5.2
3	6.2	5.0	6.6	5.3	6.2	5.0	6.6	5.3	6.5	5.2
4	6.3	5.0	6.6	5.3	6.2	5.0	6.6	5.3	6.5	5.2
5	6.3	5.0	6.6	5.3	6.2	5.0	6.7	5.4	6.5	5.2
6	6.2	5.0	6.3	5.0	6.1	4.9	6.4	5.1	6.3	5.0
7	6.3	5.0	6.3	5.0	6.2	5.0	6.4	5.1	6.4	5.1
8	6.5	5.2	6.6	5.3	6.3	5.0	6.6	5.3	6.6	5.3
9	6.4	5.1	6.6	5.3	6.3	5.0	6.6	5.3	6.5	5.2
10	6.4	5.1	6.6	5.3	6.3	5.0	6.6	5.3	6.5	5.2

TABLE 5.11-12
TOTAL WINTER CO CONCENTRATIONS AT MODELED RECEIVERS
(continued)

	Willow St./Bonita Rd.		Broadway Ave./H St.		Melrose Ave./Orange Ave.		Otay Lakes Rd./Eastlake Parkway		Paseo del Rey/Telegraph Canyon Rd.	
Receivers	1-hour CO Concentration Due to Traffic (ppm)	8-hour CO Concentration Due to Traffic (ppm)	1-hour CO Concentration Due to Traffic (ppm)	8-hour CO Concentration Due to Traffic (ppm)	1-hour CO Concentration Due to Traffic (ppm)	8-hour CO Concentration Due to Traffic (ppm)	1-hour CO Concentration Due to Traffic (ppm)	8-hour CO Concentration Due to Traffic (ppm)	1-hour CO Concentration Due to Traffic (ppm)	8-hour CO Concentration Due to Traffic (ppm)
Scenario 1 (cont.)										
11	6.4	5.1	6.6	5.3	6.3	5.0	6.6	5.3	6.6	5.3
12	6.2	5.0	6.3	5.0	6.2	5.0	6.4	5.1	6.4	5.1
13	6.0	4.8	6.3	5.0	6.1	4.9	6.2	5.0	6.0	4.8
14	6.1	4.9	6.6	5.3	6.3	5.0	6.4	5.1	6.2	5.0
15	6.1	4.9	6.6	5.3	6.3	5.0	6.4	5.1	6.2	5.0
16	6.1	4.9	6.6	5.3	6.3	5.0	6.4	5.1	6.2	5.0
17	6.0	4.8	6.6	5.3	6.3	5.0	6.3	5.0	6.0	4.8
18	5.9	4.7	6.3	5.0	6.1	4.9	6.2	5.0	5.9	4.7
19	6.1	4.9	6.6	5.3	6.4	5.1	6.4	5.1	6.2	5.0
20	6.1	4.9	6.5	5.2	6.4	5.1	6.4	5.1	6.2	5.0
Scenario 2										
1	0.4	0.32	0.5	0.4	0.3	0.24	0.5	0.4	0.5	0.4
2	0.5	0.4	0.8	0.64	0.4	0.32	0.8	0.64	0.7	0.56
3	0.4	0.32	0.8	0.64	0.4	0.32	0.8	0.64	0.7	0.56
4	0.5	0.4	0.8	0.64	0.4	0.32	0.8	0.64	0.7	0.56
5	0.5	0.4	0.8	0.64	0.4	0.32	0.9	0.72	0.7	0.56
6	0.4	0.32	0.6	0.48	0.3	0.24	0.6	0.48	0.5	0.4
7	0.5	0.4	0.6	0.48	0.4	0.32	0.6	0.48	0.6	0.48
8	0.7	0.56	0.8	0.64	0.5	0.4	0.8	0.64	0.8	0.64
9	0.6	0.48	0.8	0.64	0.5	0.4	0.8	0.64	0.7	0.56
10	0.6	0.48	0.8	0.64	0.5	0.4	0.8	0.64	0.7	0.56
11	0.6	0.48	0.8	0.64	0.5	0.4	0.8	0.64	0.8	0.64
12	0.4	0.32	0.5	0.4	0.4	0.32	0.6	0.48	0.6	0.48
13	0.2	0.16	0.5	0..4	0.3	0.24	0.4	0.32	0.2	0.16
14	0.3	0.24	0.8	0.64	0.5	0.4	0.6	0.48	0.3	0.24
15	0.3	0.24	0.8	0.64	0.5	0.4	0.6	0.48	0.4	0.32
16	0.3	0.24	0.8	0.64	0.5	0.4	0.6	0.48	0.4	0.32
17	0.2	0.16	0.8	0.64	0.5	0.4	0.5	0.4	0.2	0.16
18	0.1	0.08	0.6	0.48	0.3	0.24	0.4	0.32	0.1	0.08
19	0.3	0.24	0.8	0.64	0.6	0.48	0.6	0.48	0.4	0.32
20	0.3	0.24	0.7	0.56	0.6	0.48	0.6	0.48	0.4	0.32

TABLE 5.11-12
TOTAL WINTER CO CONCENTRATIONS AT MODELED RECEIVERS
(continued)

	Willow St./Bonita Rd.		Broadway Ave./H St.		Melrose Ave./Orange Ave.		Otay Lakes Rd./Eastlake Parkway		Paseo del Rey/Telegraph Canyon Rd.	
Receivers	1-hour CO Concentration Due to Traffic (ppm)	8-hour CO Concentration Due to Traffic (ppm)	1-hour CO Concentration Due to Traffic (ppm)	8-hour CO Concentration Due to Traffic (ppm)	1-hour CO Concentration Due to Traffic (ppm)	8-hour CO Concentration Due to Traffic (ppm)	1-hour CO Concentration Due to Traffic (ppm)	8-hour CO Concentration Due to Traffic (ppm)	1-hour CO Concentration Due to Traffic (ppm)	8-hour CO Concentration Due to Traffic (ppm)
Scenario 3										
1	6.2	5.0	6.3	5.0	6.1	4.9	6.3	5.0	6.3	5.0
2	6.3	5.0	6.5	5.2	6.2	5.0	6.6	5.3	6.5	5.2
3	6.2	5.0	6.5	5.2	6.2	5.0	6.6	5.3	6.5	5.2
4	6.3	5.0	6.5	5.2	6.2	5.0	6.6	5.3	6.5	5.2
5	6.2	5.0	6.5	5.2	6.2	5.0	6.7	5.4	6.5	5.2
6	6.2	5.0	6.3	5.0	6.1	4.9	6.4	5.1	6.3	5.0
7	6.3	5.0	6.3	5.0	6.2	5.0	6.4	5.1	6.4	5.1
8	6.4	5.1	6.5	5.2	6.3	5.0	6.6	5.3	6.6	5.3
9	6.3	5.0	6.5	5.2	6.3	5.0	6.6	5.3	6.5	5.2
10	6.4	5.1	6.5	5.2	6.3	5.0	6.6	5.3	6.5	5.2
11	6.4	5.1	6.5	5.2	6.3	5.0	6.6	5.3	6.6	5.3
12	6.2	5.0	6.3	5.0	6.2	5.0	6.4	5.1	6.4	5.1
13	6.0	4.8	6.2	5.0	6.1	4.9	6.2	5.0	6.0	4.8
14	6.1	4.9	6.5	5.2	6.3	5.0	6.4	5.1	6.2	5.0
15	6.1	4.9	6.5	5.2	6.3	5.0	6.4	5.1	6.2	5.0
16	6.1	4.9	6.5	5.2	6.3	5.0	6.4	5.1	6.2	5.0
17	6.0	4.8	6.5	5.2	6.3	5.0	6.3	5.0	6.0	4.8
18	5.9	4.7	6.3	5.0	6.1	4.9	6.2	5.0	5.9	4.7
19	6.1	4.9	6.5	5.2	6.4	5.1	6.4	5.1	6.2	5.0
20	6.1	4.9	6.5	5.2	6.4	5.1	6.4	5.1	6.2	5.0

NOTE: This table provides the combination of the maximum CO concentration from the intersections modeled and the maximum intersection contribution as measured at the Chula Vista monitoring station.

TABLE 5.11-13
TOTAL SUMMER CO CONCENTRATIONS AT MODELED RECEIVERS

	Willow St./Bonita Rd.		Broadway Ave./H St.		Melrose Ave./Orange Ave.		Otay Lakes Rd./Eastlake Pkway		Paseo del Rey/Telegraph Canyon Rd.	
Receivers	1-hour CO Concentration Due to Traffic (ppm)	8-hour CO Concentration Due to Traffic (ppm)	1-hour CO Concentration Due to Traffic (ppm)	8-hour CO Concentration Due to Traffic (ppm)	1-hour CO Concentration Due to Traffic (ppm)	8-hour CO Concentration Due to Traffic (ppm)	1-hour CO Concentration Due to Traffic (ppm)	8-hour CO Concentration Due to Traffic (ppm)	1-hour CO Concentration Due to Traffic (ppm)	8-hour CO Concentration Due to Traffic (ppm)
Preferred Plan										
1	3.2	2.3	3.4	2.5	3.1	2.3	3.3	2.4	3.4	2.5
2	3.3	2.4	3.7	2.7	3.2	2.3	3.6	2.5	3.6	2.7
3	3.2	2.3	3.7	2.7	3.2	2.3	3.6	2.5	3.5	2.6
4	3.3	2.4	3.7	2.7	3.2	2.3	3.6	2.5	3.5	2.6
5	3.3	2.4	3.7	2.7	3.2	2.3	3.7	2.7	3.6	2.7
6	3.2	2.3	3.4	2.5	3.1	2.3	3.4	2.5	3.4	2.5
7	3.3	2.4	3.4	2.5	3.2	2.3	3.4	2.5	3.5	2.6
8	3.5	2.6	3.7	2.7	3.3	2.4	3.7	2.7	3.7	2.7
9	3.4	2.5	3.7	2.7	3.3	2.4	3.7	2.7	3.6	2.7
10	3.4	2.5	3.7	2.7	3.3	2.4	3.6	2.7	3.6	2.7
11	3.4	2.5	3.7	2.7	3.3	2.4	3.7	2.7	3.7	2.7
12	3.2	2.3	3.4	2.5	3.2	2.3	3.4	2.5	3.4	2.5
13	3.0	2.2	3.3	2.4	3.1	2.3	3.1	2.3	3.0	2.2
14	3.1	2.3	3.7	2.7	3.3	2.4	3.4	2.5	3.1	2.3
15	3.1	2.3	3.7	2.7	3.3	2.4	3.4	2.5	3.1	2.3
16	3.1	2.3	3.7	2.7	3.3	2.4	3.4	2.5	3.2	2.3
17	2.9	2.1	3.7	2.7	3.4	2.5	3.3	2.4	3.0	2.2
18	2.8	2.0	3.4	2.5	3.1	2.3	3.1	2.3	2.9	2.1
19	3.0	2.2	3.7	2.7	3.4	2.5	3.4	2.5	3.1	2.3
20	3.0	2.2	3.6	2.5	3.4	2.5	3.4	2.5	3.2	2.3
Scenario 1										
1	3.2	2.6	3.3	2.6	3.1	2.5	3.3	2.6	3.4	2.7
2	3.3	2.6	3.7	3.0	3.2	2.6	3.7	3.0	3.6	2.9
3	3.2	2.6	3.7	3.0	3.2	2.6	3.7	3.0	3.5	2.8
4	3.3	2.6	3.7	3.0	3.2	2.6	3.7	3.0	3.6	2.9
5	3.3	2.6	3.7	3.0	3.2	2.6	3.8	3.0	3.6	2.9
6	3.2	2.6	3.4	2.7	3.1	2.5	3.4	2.7	3.4	2.7
7	3.3	2.6	3.4	2.7	3.2	2.6	3.4	2.7	3.5	2.8
8	3.5	2.8	3.7	3.0	3.3	2.6	3.7	3.0	3.7	3.0
9	3.4	2.7	3.7	3.0	3.3	2.6	3.7	3.0	3.6	2.9
10	3.4	2.7	3.7	3.0	3.3	2.6	3.6	2.9	3.6	2.9

TABLE 5.11-13
TOTAL SUMMER CO CONCENTRATIONS AT MODELED RECEIVERS
(continued)

	Willow St./Bonita Rd.		Broadway Ave./H St.		Melrose Ave./Orange Ave.		Otay Lakes Rd./Eastlake Pkway		Paseo del Rey/Telegraph Canyon Rd.	
Receivers	1-hour CO Concentration Due to Traffic (ppm)	8-hour CO Concentration Due to Traffic (ppm)	1-hour CO Concentration Due to Traffic (ppm)	8-hour CO Concentration Due to Traffic (ppm)	1-hour CO Concentration Due to Traffic (ppm)	8-hour CO Concentration Due to Traffic (ppm)	1-hour CO Concentration Due to Traffic (ppm)	8-hour CO Concentration Due to Traffic (ppm)	1-hour CO Concentration Due to Traffic (ppm)	8-hour CO Concentration Due to Traffic (ppm)
Scenario 1 (cont.)										
11	3.5	2.8	3.7	3.0	3.3	2.6	3.7	3.0	3.7	3.0
12	3.2	2.6	3.4	2.7	3.2	2.6	3.4	2.7	3.4	2.7
13	3.0	2.4	3.3	2.6	3.1	2.5	3.2	2.6	3.0	2.4
14	3.1	2.5	3.6	2.9	3.3	2.6	3.4	2.7	3.1	2.5
15	3.1	2.5	3.7	3.0	3.4	2.7	3.4	2.7	3.2	2.6
16	3.1	2.5	3.7	3.0	3.3	2.6	3.4	2.7	3.2	2.6
17	2.9	2.3	3.7	3.0	3.4	2.7	3.3	2.6	3.0	2.4
18	2.8	2.2	3.4	2.7	3.1	2.5	3.1	2.5	2.9	2.3
19	3.0	2.4	3.6	2.9	3.4	2.7	3.4	2.7	3.2	2.6
20	3.0	2.4	3.6	2.9	3.4	2.7	3.5	2.8	3.2	2.6
Scenario 2										
1	3.2	2.6	3.4	2.7	3.1	2.5	3.3	2.6	3.4	2.7
2	3.3	2.6	3.7	3.0	3.2	2.6	3.7	3.0	3.6	2.9
3	3.2	2.6	3.7	3.0	3.2	2.6	3.7	3.0	3.5	2.8
4	3.3	2.6	3.7	3.0	3.2	2.6	3.7	3.0	3.5	2.8
5	3.3	2.6	3.7	3.0	3.2	2.6	3.8	3.0	3.6	2.9
6	3.2	2.6	3.4	2.7	3.1	2.5	3.4	2.7	3.4	2.7
7	3.3	2.6	3.4	2.7	3.2	2.6	3.4	2.7	3.5	2.8
8	3.5	2.8	3.7	3.0	3.3	2.6	3.7	3.0	3.7	3.0
9	3.4	2.7	3.7	3.0	3.3	2.6	3.7	3.0	3.6	2.9
10	3.4	2.7	3.7	3.0	3.3	2.6	3.6	2.9	3.6	2.9
11	3.4	2.7	3.7	3.0	3.3	2.6	3.7	3.0	3.7	3.0
12	3.2	2.6	3.4	2.7	3.2	2.6	3.4	2.7	3.4	2.7
13	3.0	2.4	3.3	2.6	3.1	2.5	3.2	2.6	3.0	2.4
14	3.1	2.5	3.7	3.0	3.3	2.6	3.4	2.7	3.1	2.5
15	3.1	2.5	3.7	3.0	3.3	2.6	3.4	2.7	3.2	2.6
16	3.1	2.5	3.7	3.0	3.3	2.6	3.4	2.7	3.2	2.6
17	2.9	2.3	3.7	3.0	3.4	2.7	3.3	2.6	3.0	2.4
18	2.8	2.2	3.4	2.7	3.1	2.5	3.1	2.5	2.9	2.3
19	3.0	2.4	3.7	3.0	3.4	2.7	3.4	2.7	3.2	2.6
20	3.0	2.4	3.6	2.9	3.4	2.7	3.5	2.8	3.2	2.6

TABLE 5.11-13
TOTAL SUMMER CO CONCENTRATIONS AT MODELED RECEIVERS
(continued)

	Willow St./Bonita Rd.		Broadway Ave./H St.		Melrose Ave./Orange Ave.		Otay Lakes Rd./Eastlake Pkway		Paseo del Rey/Telegraph Canyon Rd.	
Receivers	1-hour CO Concentration Due to Traffic (ppm)	8-hour CO Concentration Due to Traffic (ppm)	1-hour CO Concentration Due to Traffic (ppm)	8-hour CO Concentration Due to Traffic (ppm)	1-hour CO Concentration Due to Traffic (ppm)	8-hour CO Concentration Due to Traffic (ppm)	1-hour CO Concentration Due to Traffic (ppm)	8-hour CO Concentration Due to Traffic (ppm)	1-hour CO Concentration Due to Traffic (ppm)	8-hour CO Concentration Due to Traffic (ppm)
Scenario 3										
1	3.2	2.6	3.3	2.6	3.1	2.5	3.3	2.6	3.4	2.7
2	3.3	2.6	3.6	2.9	3.3	2.6	3.7	3.0	3.6	2.9
3	3.2	2.6	3.6	2.9	3.2	2.6	3.7	3.0	3.5	2.8
4	3.3	2.6	3.6	2.9	3.2	2.6	3.7	3.0	3.6	2.9
5	3.3	2.6	3.6	2.9	3.2	2.6	3.8	3.0	3.6	2.9
6	3.2	2.6	3.3	2.6	3.1	2.5	3.4	2.7	3.4	2.7
7	3.3	2.6	3.3	2.6	3.2	2.6	3.4	2.7	3.5	2.8
8	3.5	2.8	3.6	2.9	3.3	2.6	3.7	3.0	3.7	3.0
9	3.4	2.7	3.6	2.9	3.3	2.6	3.7	3.0	3.6	2.9
10	3.4	2.7	3.6	2.9	3.3	2.6	3.6	2.9	3.6	2.9
11	3.4	2.7	3.6	2.9	3.3	2.6	3.7	3.0	3.7	3.0
12	3.2	2.6	3.3	2.6	3.2	2.6	3.4	2.7	3.4	2.7
13	3.0	2.4	3.3	2.6	3.1	2.5	3.2	2.6	3.0	2.4
14	3.1	2.5	3.6	2.9	3.3	2.6	3.4	2.7	3.1	2.5
15	3.1	2.5	3.6	2.9	3.4	2.7	3.4	2.7	3.2	2.6
16	3.1	2.5	3.6	2.9	3.4	2.7	3.4	2.7	3.2	2.6
17	2.9	2.3	3.6	2.9	3.4	2.7	3.3	2.6	3.0	2.4
18	2.8	2.2	3.3	2.6	3.1	2.5	3.1	2.5	2.9	2.3
19	3.0	2.4	3.5	2.8	3.4	2.7	3.4	2.7	3.2	2.6
20	3.0	2.4	3.5	2.8	3.4	2.7	3.5	2.8	3.2	2.6

NOTE: This table provides the combination of the maximum CO concentration from the intersections modeled and the maximum intersection contribution as measured at the Chula Vista monitoring station.

impacts will depend upon the effective design and operation of each intersection. The potential for development under the Preferred Plan or any of the Scenarios to expose sensitive receptors to substantial pollutant concentrations resulting from CO hotspots is self-mitigated because the adoption of Policy LUT 14.2 will avoid the effect. Policy LUT 14.2 states:

> Optimize and maintain the performance of the traffic signal system and the street system, to facilitate traffic flow and to minimize vehicular pollutant emission levels.

5.11.3.5 Threshold 5: Create Objectionable Odors Affecting a Substantial Number of People

There are no specific policies contained in the proposed General Plan Update that address odors. Each of the scenarios is considered to have the same effect regarding the potential exposure of people to odor. There are no known odor generators in the Northwest or the Southwest Planning Areas. The Otay Landfill is an odor generator in the East Planning Area. While the proposed land use changes would not create objectionable odors, the proposed increase in residential density downwind of the landfill would expose more people to objectionable odors, particularly in Scenarios 2 and 3 due to proposed residential use adjacent to the landfill.

The Preferred Plan and Scenario 1 do not represent a significant odor impact because they do not place residential uses adjacent to the Otay Landfill. Scenarios 2 and 3 do present a significant odor impact because they place residential use within 1,000 feet of the landfill.

5.11.4 Level of Significance Prior to Mitigation

Threshold 1: Conflict with or obstruct implementation of the applicable air quality plan

Threshold 1 represents a significant adverse impact. Although measures, such as pedestrian trails, on-street bicycle paths, and an emphasis on public transit, have been incorporated into the proposed General Plan Update to lessen air quality impacts, because the General Plan Update is not consistent with the growth assumptions used to develop the RAQS, there is a conflict with an applicable plan. It should be noted, however, that the nature of the General Plan Update's land use plan and policies could very well represent an improvement to air quality, in that it stresses walkable communities and transit oriented/mixed use development. Furthermore, it is likely that with the next regional growth forecasts conducted by SANDAG and the associated air quality management plan that air quality improvements will be forecast.

Each of the General Plan Update scenarios represent a potential increase in development and population in the plan area. By changing land use designations, the General Plan Update

would no longer be in conformance with the growth projections used by SANDAG as the basis for the adopted air quality management plan. As such, until revisions are made to the SANDAG plan that reflect the General Plan Update scenario that is ultimately approved, this is a significant adverse air quality impact.

Threshold 2: Violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Each of the proposed scenarios permits industrial development in the Montgomery Subarea and the Otay Ranch Subarea. It is possible that the ultimate use of these areas would include industries that generate air pollutants. Without appropriate controls, air emissions associated with planned industrial uses could represent a significant adverse air quality impact. In addition, the Southbay Power Plant and the Goodrich facility in the Bayfront Planning Area are also potential emitters: health risk assessments demonstrating compliance with air standards have been prepared for these facilities.

The potential for development under the Preferred Plan or any of the Scenarios to result in a land use that would violate an air quality standard or contribute to an existing violation is self-mitigating because Policy EE 6.4 avoids the placement of a sensitive receiver within 1,000 feet of major toxic air emitters.

Threshold 3: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

The Preferred Plan and any of the Scenarios are anticipated to result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment. As shown on Table 5.11-10, the proportional increase in multi-family units to single-family units--and resulting decrease in number of vehicle trips per unit--and the anticipated improvement in motor vehicle emissions result in an expected decrease in pollutants over existing conditions for all pollutants except SO_2 and PM_{10}. Since the region is not in compliance with the PM_{10} standard, and because the average daily emission is anticipated to increase, impacts are significant, until the region is in compliance.

Threshold 4: Expose sensitive receptors to substantial pollutant concentrations.

The potential for development under the Preferred Plan or any of the Scenarios to expose sensitive receptors to substantial pollutant concentrations is self-mitigated and not significant because of Policy EE 6.4 of the proposed General Plan Update avoids the placement of a sensitive receiver within 1,000 feet of major toxic air emitters and Policy EE 6.10 requires analysis of health risk resulting from new development or redevelopment projects within 500 feet of a highway. In addition, pollutant concentrations resulting from CO hotspots is self-mitigated and not significant because the adoption of Policy LUT 14.2 requires the

optimization and maintenance the performance of the traffic signal system and the street system, to facilitate traffic flow and to minimize vehicular pollutant emission levels.

Threshold 5: Create objectionable odors affecting a substantial number of people.

The Preferred Plan and Scenario 1 do not represent a significant odor impact because they do not place residential uses adjacent to the Otay Landfill. Scenarios 2 and 3 do present a significant odor impact because they place residential use within 1,000 feet of the landfill.

5.11.5 Mitigation Measures

Threshold 1: Conflict with or obstruct implementation of the applicable air quality plan.

Because the significant air impact stems from an inconsistency between the proposed General Plan Update and the adopted General Plan upon which the RAQS were based, the only measure that can lessen the Threshold 1 effect is the revision of the RAQS based on the updated General Plan. This effort is the responsibility of SANDAG and San Diego APCD and is outside the jurisdiction of the City. As such, no mitigation is available to the City.

Threshold 2: Violate any air quality standard or contribute substantially to an existing or projected air quality violation.

The potential for development under the Preferred Plan or any of the Scenarios to result in a land use that would violate an air quality standard or contribute to an existing violation is self-mitigating through adoption and compliance with Policy EE 6.4. No additional mitigation is required.

Threshold 3: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

Since the region is not in compliance with the PM_{10} standard and because the average daily emission is anticipated to increase, impacts are significant. PM_{10} emissions result from construction of projects and from daily operations in the City. The latter is primarily a result of vehicle traffic on area roads. Mitigation is achievable for fugitive dust from construction activities, but the only measures that would reduce those emissions from daily operations are those that reduce miles traveled on area roads. As noted in the above analysis, the General Plan Update includes measures aimed at promoting pedestrian activity and reducing trip lengths.

5.11-1 Mitigation of PM_{10} impacts requires active dust control during construction. As a matter of standard practice, the City shall require the following standard construction measures during construction to the extent applicable:

1. All unpaved construction areas shall be sprinkled with water or other acceptable San Diego APCD dust control agents during dust-generating activities to reduce dust emissions. Additional watering or acceptable APCD dust control agents shall be applied during dry weather or windy days until dust emissions are not visible.

2. Trucks hauling dirt and debris shall be properly covered to reduce windblown dust and spills.

3. A 20-mile-per-hour speed limit on unpaved surfaces shall be enforced.

4. On dry days, dirt and debris spilled onto paved surfaces shall be swept up immediately to reduce resuspension of particulate matter caused by vehicle movement. Approach routes to construction sites shall be cleaned daily of construction-related dirt in dry weather.

5. On-site stockpiles of excavated material shall be covered or watered.

6. Disturbed areas shall be hydroseeded, landscaped, or developed as quickly as possible and as directed by the City and/or APCD to reduce dust generation.

7. To the maximum extent feasible:

   Heavy-duty construction equipment with modified combustion/fuel injection systems for emissions control shall be utilized during grading and construction activities.

   Catalytic reduction for gasoline-powered equipment shall be used.

8. Equip construction equipment with prechamber diesel engines (or equivalent) together with proper maintenance and operation to reduce emissions of nitrogen oxide, to the extent available and feasible.

9. Electrical construction equipment shall be used to the extent feasible.

10. The simultaneous operations of multiple construction equipment units shall be minimized (i.e., phase construction to minimize impacts).

With the application of these measures, significant impacts resulting from projected PM_{10} impacts from construction would be mitigated. Impacts resulting from daily operation would remain significant until the region is determined to be in compliance with the standard.

Threshold 4: Expose sensitive receptors to substantial pollutant concentrations.

The potential for development under the Preferred Plan or any of the Scenarios to expose sensitive receptors to substantial pollutant concentrations is self-mitigated and not significant because of Policy EE 6.4 of the proposed General Plan Update avoids the placement of a sensitive receiver within 1,000 feet of major toxic air emitters and Policy EE 6.10 requires analysis of health risk resulting from new development or redevelopment projects within 500 feet of a highway. In addition, pollutant concentrations resulting from CO hotspots is self-mitigated and not significant because the adoption of Policy LUT 14.2 requires the optimization and maintenance the performance of the traffic signal system and the street system, to facilitate traffic flow and to minimize vehicular pollutant emission levels. No additional mitigation is required.

~~The potential for development under the Preferred Plan or any of the Scenarios to result in a land use that would violate an air quality standard or contribute to an existing violation is self-mitigating through adoption and compliance with Policy EE 6.4. No additional mitigation is required.~~

Threshold 5: Create objectionable odors affecting a substantial number of people.

No odor impacts are anticipated as a result of the Preferred Plan or Scenario 1. Significant impacts would occur with the approval of Scenario 2 or 3 as a result of the placement of residential uses within the 1,000-foot buffer of the Otay Landfill.

5.11-2 No residential use shall be permitted or constructed within 1,000 feet of the Otay Landfill while the landfill is open and operating, unless a project specific analysis is completed demonstrating to the satisfaction of the Environmental Review Coordinator that odor effects are below the odor thresholds for common compounds emitted by the landfill for less than two percent of the time. One such compound would be hydrogen sulfide with an odor threshold of .0045 ppm.

5.11.6 Level of Significance After Mitigation

Because of the plan inconsistency and the timing of revisions to the RAQS, and until such time that the region is in attainment of the Ozone, PM_{10}, and $PM_{2.5}$ standards, the impact based on Threshold 1 would remain significant and unmitigated. Because operational impacts resulting from particulates for which the region is not in conformance, air impacts as addressed in Threshold 3 remain significant and not mitigated.

5.12 Noise

5.12.1 Existing Conditions

5.12.1.1 Fundamentals of Noise

Simply stated, noise is unwanted sound. Sound is caused by minute pressure variations in the air—above and below static atmospheric pressure—that are sensed by the human ear. The number of these minute pressure variations over time is referred to as the frequency of the sound.

Sound in the ambient environment is composed of a wide range of frequencies. Because the human ear is not equally sensitive at all frequencies, two different noises that have the same sound pressure level (SPL) may be perceived as having different levels of loudness. Therefore, the SPL is not a measure of the loudness of a sound. In order to obtain levels that more closely approximate the perceived loudness of noise by humans, *frequency-weighting* of the sound level is used.

The most common frequency-weighting used for assessment of noise in the ambient environment is *A-weighting*. A-weighting is a frequency correction that often correlates well with the subjective response of humans to noise.

The noise at any given location is a function of the noise produced by the source, the propagation path between the source and the receiver, and the sensitivity of the receiver. To reduce noise levels at a sensitive receiver, the only available techniques are to reduce the noise of the source, to interrupt the propagation path between the source and the receiver, or to increase the distance between the source and the receiver. The propagation path is simply the path that the sound travels between its source and the receiver.

The actual impact of noise is not a function of loudness alone. The time of day which noise occurs and the duration of the noise are also important. In addition, most noise that lasts for more than a few seconds is variable in its intensity. Consequently, there are a variety of metrics used to discuss sound and noise levels. Sound varies from instant to instant. In describing sound, it is necessary to refer to the time over which it occurs. The L_{eq} is the equivalent steady state sound level which in a stated period of time would contain the same acoustical energy as the time-varying sound level during the same period.

Other measures which will be important for this discussion include the community noise equivalent level (CNEL), the sound exposure level (SEL), the maximum noise level (L_{max}), and the level that is exceeded a given amount of time ($L_{(n)}$).

The evaluation of the effects of noise in Chula Vista must consider the sound pressure levels to which people will be exposed, the duration of those levels, and the time of day at which

they occur. While people respond differently to specific noise situations, overall response is primarily a factor of these three main elements.

The following metrics can be used to describe the potential annoyance that community residents might experience due to noise:

Equivalent-continuous sound level (average sound level [L_{eq}]): The L_{eq} is the level of a steady sound which, in a stated period of time, contains the same acoustical energy as the actual time-varying sound during the same stated period. Typically, the L_{eq} is reported for one-hour periods and is referenced as $L_{eq(h)}$.

Community noise equivalent level (CNEL): The CNEL is a 24-hour A-weighted decibel average sound level [dB(A) L_{eq}] from midnight to midnight obtained after the addition of 5 dB to sound levels occurring between 7:00 P.M. and 10:00 P.M. and 10 dB to the sound levels occurring between 10:00 P.M. and 7:00 A.M. A-weighting is a frequency correction that often correlates well with the subjective response of humans to noise. Adding 5 dB and 10 dB to the evening and nighttime hours accounts for the added sensitivity of humans to noise during these time periods.

The CNEL is often used as a measure of the cumulative noise impact for various land uses because it correlates well with the results of surveys of annoyance. It also permits comparison with noise impacts from other community sources.

Sound exposure level (SEL): The sound exposure level is a measure of single noise events, such as aircraft flyovers. It is the A-weighted sound level integrated over the duration of the event and normalized to one second. Because the total energy of an event is normalized to a one-second period, regardless of the length of the event, it is useful for comparing single events. Louder events have a greater SEL than quieter ones and events that last longer in time have a greater SEL than do shorter ones.

Given the equal energy principal outlined above, the SEL can provide a basis for evaluating the relative effect of different noise events, factoring out the duration of the event. It should be noted, however, that the reported SEL is not a noise level that is heard, but the result of a calculation that places all the energy of the event into a one-second period.

Maximum noise level (L_{max}): The L_{max} is the greatest sound level measured on a sound level meter during a time interval or event. A sound level meter samples sound at a fixed rate, that is periodically at a regular interval. The maximum noise level measured by the meter depends upon the time constant that the meter is set for. When a meter is set to *slow* the time constant is one second, when the meter is set to *fast* the time constant is 0.125 second.

The most obvious factor affecting noise levels is the distance from a noise source to a receptor. The manner in which noise reduces with distance depends on the following factors:

- Geometric spreading from point and line sources
- Ground absorption
- Atmospheric effects and refraction
- Shielding by natural and man-made features, noise barriers, diffraction, and reflection

Sound from a small localized source (approximating a "point" source), such as a generator or piece of construction equipment, radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level decreases or drops off at a rate of 6 dB(A) for each doubling of the distance (6 dB(A)/DD).

Traffic noise is not a single, stationary point source of sound. The movement of the vehicles makes the source of the sound appear to emanate from a line (line source) rather than a point when viewed over some time interval.

When the intervening ground between a line source and a receiver is reflective, such as parking lots or smooth bodies of water, changes in noise levels with distance (drop-off rate) is simply the geometric spreading of the line source or 3 dB(A)/DD (6 dB(A)/DD for a point source). If there is an absorptive ground surface such as soft dirt, grass, or scattered bushes and trees, an excess ground attenuation value of 1.5 dB(A)/DD is normally added to the hard site drop-off rate. When added to the hard site drop-off rate this results in an overall drop-off rate of 4.5 dB(A)/DD for a line source (7.5 dB(A)/DD for a point source).

In the outdoor environment, a change in noise level is perceived by the average person as follows:

3 dB(A) barely perceptible
5 dB(A) readily perceptible
10 dB(A) perceived as a doubling or halving of noise.

5.12.1.2 Regulatory Plans and Policies

Section 19.689 of the Chula Vista Municipal Code (Noise Control Ordinance) contains noise performance standards. These performance standards generally apply to stationary sources of noise (i.e., noise sources other than transportation related) and are stated as the maximum permissible sound level that can be produced by a noise generator at a receiving property

boundary. Table 5.12-1 shows the exterior noise limits of the Noise Control Ordinance. These levels are applied to both environmental and nuisance noise sources as defined by the ordinance.

TABLE 5.12-1
EXTERIOR NOISE LIMITS

	Noise Level [dB(A)]	
Receiving Land Use Category	10 P.M. to 7 A.M. (Weekdays) 10 P.M. to 8 A.M. (Weekends)	7 A.M. to 10 P.M. (Weekdays) 8 A.M. to 10 P.M. (Weekends)
All residential (except multiple dwelling)	45	55
Multiple dwelling residential	50	60
Commercial	60	65
Light industry – I-R and I-L zone	70	70
Heavy industry – I zone	80	80

NOTES:
Environmental Noise – L_{eq} in any hour.
Nuisance Noise – Not to be exceeded any time.

5.12.1.3 Existing Citywide Conditions

Noise levels within Chula Vista generally are dominated by traffic-generated noise. Other noise sources in the city include:

- The San Diego Trolley;
- Rail freight service provided by the San Diego & Imperial Valley Railroad (operates at night when trolley is not in service);
- Coors Amphitheater (operates on a periodic basis during the summer concert season);
- Aircraft operations associated with Brown Field and nearby military facilities (located outside the General Plan area limits);
- Operations at the Otay Landfill (located within the General Plan area but outside the city boundaries);
- The South Bay Power Plant;
- Chula Vista Generating Station (Chula Vista I); and
- Various commercial and industrial operations throughout the city.

In order to provide a qualitative assessment of the variability of existing noise levels throughout the plan area, a series of 23 daytime noise measurements ranging from 20 to 30 minutes in duration were made throughout the plan area. In addition to the 23 short-term measurements, two 24-hour measurements were also taken within the plan area. The measurement locations shown in Figure 5.12-1 were chosen to obtain existing noise levels in order to characterize the existing ambient noise conditions.

Table 5.12-2 presents the results of the noise measurements. As seen from Table 5.12-2, the measured short-term noise levels ranged from approximately 49 to 73 dB(A) L_{eq} with the loudest levels occurring in the more urbanized portions of the study area.

The two 24-hour noise measurements were taken to obtain the existing CNEL at two locations within the city. Measurement Location A is adjacent to residential uses near the junction of SR-54 and I-805. This location is approximately 760 feet west of the I-805 centerline and approximately 1,700 feet south of the SR-54 centerline. Table 5.12-3 contains the results of the measurements at this location. For the 24-hour period from 2:00 P.M. on January 15, 2003 to 2:00 P.M. on January 16, 2003, the measured CNEL at this location was 72. The second 24-hour measurement location (Location B) was between I-5 and the trolley tracks. At this location I-5 is depressed relative to the measurement location and the trolley tracks. Consequently, although background noise levels are primarily due to traffic on I-5, this location was used to estimate noise due to the trolley operations. The noise meter was placed approximately 29 feet to the west of the westernmost trolley track or approximately 45 feet back from the centerline between the two trolley tracks. Northbound trolleys generally use the eastern tracks while southbound trolleys generally use the western tracks. Table 5.12-3 contains the results of the measurements at this location.

As indicated, existing noise levels within the plan area are primarily due to traffic on area roadways but are also comprised of other sources. A brief discussion of each of these sources follows.

Traffic

Traffic noise occurs adjacent to every roadway and is directly related to the volume, speed, and mix of vehicles on a given roadway.

The Federal Highway Administration (FHWA) Noise Prediction Model (1979), with the California Vehicle Noise Emission Levels (Calveno) (California Department of Transportation 1983), was used to estimate roadway traffic noise within the plan area. The FHWA model takes into account the mix, speed, and volume of vehicles; roadway gradient; relative distances between sources, barriers, and receivers; and shielding provided by intervening terrain or structures.

TABLE 5.12-2
SHORT-TERM NOISE MEASUREMENT RESULTS

Location	Date	Duration (Minutes)	Average Noise Level [dB(A)]	Traffic Noise Sources	Distance from Source	Noise Level at 50 Feet from Source [dB(A)]
1	12/30/2002	20	66.1	Fourth Avenue	50 feet from centerline	66.1
2	12/30/2002	30	60.6	I-5 on/off ramps	74 feet from centerline	62.3
3	12/30/2002	20	69.1	E Street	32.5 feet from centerline	67.2
4	12/30/2002	20	66.0	Third Avenue*	49 feet from centerline	65.9
				Park Way	50 feet from centerline	
5	12/30/2002	30	69.9	Third Avenue	48 feet from centerline	69.7
6	12/30/2002	30	69.6	H Street*	58 feet from centerline	70.2
				Woodlawn	42 feet from centerline	
7	12/30/2002	20	69.8	Broadway	57 feet from centerline	70.9
8	12/31/2002	20	63.4	J Street	50.5 feet from centerline	64.4
9	12/31/2002	20	68.5	Nacion	28 feet from centerline	N/a
				I-805*	440 feet from centerline	
10	12/31/2002	20	71.3	L Street	67.5 feet from centerline	72.6
11	12/31/2002	20	70.9	Main Street	42.5 feet from centerline	70.2
				Fourth Avenue	42.5 feet from centerline	
12	12/31/2002	30	64.7	Palomar Street*	83 feet from centerline	66.9
				Industrial Blvd	31 feet from centerline	
				Trolley	32 feet from center of near trolley tracks	
13	1/2/2003	30	54.2	Bonita Road	460 feet from centerline	63.8
14	1/2/2003	30	71.0	H Street	66 feet from centerline	72.2
15	1/2/2003	30	68.3	H Street	85.5 feet from centerline	72.2
				Paseo Ranchero	89.5 feet from centerline	
16	1/2/2003	20	67.5	Palomar Street	50 feet from centerline	65.3

TABLE 5.12-2
SHORT-TERM NOISE MEASUREMENT RESULTS
(continued)

Location	Date	Duration (Minutes)	Average Noise Level [dB(A)]	Traffic Noise Sources	Distance from Source	Noise Level at 50 Feet from Source [dB(A)]
				Hilltop	30 feet from centerline	
17	1/9/2003	20	60.7	Medical Center Court	50 feet from centerline	60.7
18	1/9/2003	30	59.6	Wueste Road	57 feet from centerline	60.2
19	1/9/2003	20	56.0	Santa Paula Drive	50 feet from centerline	56.0
20	1/9/2003	20	72.5	Otay Valley Road*	48.5 feet from centerline	72.4
				I-805	450 feet from centerline	
21	1/9/2003	20	48.9	N/A – landfill		
22	1/16/2003	30	73.3	I-905	64 feet from centerline	74.4
23	1/16/2003	20	68.4	Olympic Parkway	116.5 feet from centerline	72.7
				Heritage Road	68 feet from centerline	

*Indicates a dominant noise source.
N/A: Adjacent road is not dominant noise source.

TABLE 5.12-3
SUMMARY OF 24-HOUR NOISE MEASUREMENT RESULTS
(dB[A] L_{eq} for the stated period)

Location	January 15, 2003 2:00 P.M. to 7:00 P.M.	January 15, 2003 7:00 P.M. to 10:00 P.M.	January 15-16, 2003 10:00 P.M. to 7:00 A.M.	January 16, 2003 7:00 A.M. to 2:00 P.M.	CNEL
A	62	66	65	64	72
B	74	70	73	72	79

The analysis of the noise environment considered that the topography was flat with no intervening terrain or buildings between sensitive land uses and roadways. Because there are no obstructions assumed, in most cases predicted noise levels are higher than would actually be expected to occur. In actuality, buildings and other obstructions along roadways shield distant receivers from traffic noise to some degree.

Existing traffic noise levels were estimated for adopted General Plan Circulation Element roadways indicated by the City (Francis, pers. com. 2002). Figure 5.12-2 shows the Circulation Element roadways. Existing traffic volumes were obtained from a variety of sources. These include the Traffic Volume book maintained by the City of Chula Vista (Hellman, pers. com. 2002), traffic counts compiled by SANDAG (2003b), and traffic counts compiled by Caltrans (2003). Traffic speeds used in the analysis were those specified for the roads in the SANDAG traffic forecast model (SANDAG 2003c).

Traffic mix data chosen for this analysis were based on typical mix data for area roadways. Auto, medium truck, and heavy truck percentages were based on current area roadway performance. For Interstate 5, Interstate 805, and State Route 54, the average percentages of cars, medium trucks, and heavy trucks were 95.3 percent, 3.2 percent, and 1.5 percent, respectively. For this EIR, 95 percent, 3 percent, and 2 percent were used for all freeways. The traffic mix used for city streets was 97 percent cars, 2 percent medium trucks, and 1 percent heavy trucks. This mix was determined in consultation with the traffic engineer at the City of Chula Vista.

As part of this analysis prepared for the EIR, the City provided 15-minute interval traffic count data for a 24-hour period for seven roadway segments within the plan area. These data were used to estimate the traffic distribution on plan area roadways. The data summarized in Table 5.12-4 show an average of 77.7 percent daytime, 12.7 percent evening, and 9.6 percent nighttime traffic for these seven roadway segments. With this distribution, CNEL is approximately 1.4 decibels greater than the noise level for an average daytime hour.

TABLE 5.12-4
TRAFFIC DISTIBUTION DATA

Roadway	Percent Daytime	Percent Evening	Percent Nighttime
Main Street			
Between I-5 and Industrial Blvd.	80.7	8.8	10.5
Broadway			
Between G and H Streets	77.7	13.7	8.6
Between H and I Streets	78.3	14.0	7.7
East H Street			
Between Southwest College Entrance and Otay Lakes Road	77.2	13.3	9.5
Between Del Rey Blvd. and Paseo del Rey	75.8	13.7	10.5
Otay Lakes Road			
Between East H St. and Gotham St.	77.8	14.0	8.2
Between East H St. and Gotham St. (different day)	76.6	11.3	12.1
Average	77.7	12.7	9.6

However, as can be seen from Table 5.12-4, some roadways had more than 10 percent nighttime traffic with one segment showing over 12 percent nighttime traffic. The greater the amount of nighttime traffic, the greater the resulting CNEL generally will be. Since the traffic distribution data were collected for an extremely small sample of roadways within the plan area, a typical, conservative distribution of 77 percent daytime, 10 percent evening, and 13 percent nighttime traffic was assumed for projecting existing noise contours.

With this distribution, CNEL is approximately two decibels greater than the noise level for an average daytime hour.

Figure 5.12-3 presents existing noise contours relative to the Circulation Element roadways throughout the plan area, which are based upon the conservative assumption of hard, flat site conditions.

It should be noted that at any specific location the actual existing noise level will depend upon not only the source noise, but the nature of the path from the source to the receiver. Buildings, walls, and other barriers will reduce direct line of sight noise levels. For existing noise contours, the first row of buildings (where they exist) will effectively reduce road noise to receivers situated behind those structures.

Railway and Trolley Operations

The primary railway operations in the plan area consist of trolley traffic. The current trolley schedule for the Blue Line indicates that there are 138 trolleys during the daytime hours, 20 trolleys during the evening hours, and 44 trolleys during the nighttime hours. For estimating

the noise due to trolley operations, the following formula provides the equivalent number of trolley operations for a 24-hour period (Swing and Pies 1973):

$$N_{total} = N_{day} + 3*N_{evening} + 10*N_{night}$$

This results in a total of 630 equivalent trolley operations. The CNEL due to trolley operations may be estimated from the SEL for a single trolley passby using the following formula (Swing and Pies 1973):

$$CNEL = SEL + 10*Log10(N_{total}) – 49.4$$

Using an SEL of approximately 94 dB(A) that was calculated from the 24-hour measurement data at Location B discussed above, the CNEL due to trolley operations is estimated to be approximately 72.5 CNEL at 45 feet from the centerline between the trolley tracks, or approximately 72 CNEL at a distance of 50 feet. Again, the maximum observed noise levels during the trolley passbys ranged from 86 to 101 dB(A). These maximum noise levels generally last for a few seconds during each passby. Table 5.12-5 provides the unobstructed distance from the centerline between the trolley tracks to noise contours resulting from trolley operations.

TABLE 5.12-5
DISTANCE FROM CENTERLINE BETWEEN TROLLEY TRACKS TO UNOBSTRUCTED NOISE CONTOURS

	CNEL			
	75	70	65	60
Distance	25 feet	80 feet	260 feet	810 feet

Maximum noise levels of up to 112 dB(A) were observed for the assumed freight operations. This is substantial given that these freight operations generally occur during the early morning hours (between 2:00 A.M. and 4:30 A.M.). As with the trolley passbys, maximum noise levels due to the freight operations are of relatively short duration (typically less than 30 seconds).

Aircraft Operations

There are several airfields in the immediate vicinity of the plan area as shown in Figure 5.12-4. The primary source of aircraft noise in the vicinity of the plan area is due to aircraft operations associated with Brown Field located within the city of San Diego immediately to the south. Noise levels due to operations at the other airfields generally do not impact the plan area. Figure 5.12-5 shows the existing noise contours associated with operations at Brown Field. As seen from this figure, a small portion of the plan area is

within the Airport Influence Area, an even smaller portion is within the 60 CNEL contour, and a very small portion of the plan area is within the 65 CNEL contour.

Coors Amphitheater

The greatest noise impacts associated with Coors Amphitheater occur during concerts that use amplified music. A comprehensive evaluation of the potential impacts due to events at the amphitheater is contained in the environmental impact report that was prepared for the amphitheater in 1995 (Tetra Tech, Inc. 1995).

Figure 5.12-6 shows the projected noise contours resulting from the amphitheater during concert events. As seen in Figure 5.12-6, the contours are directional, with the greatest potential impacts occurring to the northeast of the facility.

These contours represent the average A-weighted sound level resulting from the facility. They do not provide an indication of the noise content (frequency spectrum) of the resulting noise. Low frequency (bass) sounds tend to travel farther than high frequency sounds. As a result, receivers at a distance from the facility will primarily hear the low bass content of the music (typically perceived as a thump, thump, thump) while those closest to the facility will tend to hear the entire noise range. Additionally, at times crowd noise will be more apparent than the music.

Consequently, although noise levels at a distance from the facility will be relatively low, they may be perceived as annoying to certain individuals. Given that the concert events occur as late as approximately 11:00 P.M., careful consideration must be given to placing sensitive receivers in the vicinity of the amphitheater.

Otay Landfill

Noise levels associated with operation of a landfill generally are very low except in the immediate vicinity of the working face. Equipment operating at the working face of a landfill includes refuse hauling trucks, compactors, graders, water trucks, as well as private vehicles. As the refuse loads are dumped, the heavy equipment consolidates and compacts the refuse to appropriate standards.

As such, the noise generated near the Otay Landfill face is similar to that which occurs during construction grading operations. Average noise levels at a working landfill face have been measured to be approximately 80 dB(A) at 50 feet from the working equipment (RECON 1996). Noise levels from this type of operation will drop off at the rate of 6 to 7.5 decibels per doubling of distance. Assuming a drop-off rate of 6 decibels per doubling of distance the average noise levels from the working face operations would drop to 65 dB(A) in approximately 300 feet.

South Bay Power Plant

The South Bay Power Plant is located adjacent to San Diego Bay in a relatively undeveloped portion of the city. Field observations indicate that noise from the plant is generally not noticeable in the currently developed areas in the vicinity as traffic noise, particularly associated with I-5, dominates.

Chula Vista Generating Station (Chula Vista I)

The Chula Vista Generating Station (Chula Vista I) consists of one 44 megawatt (MW) natural gas-fired combustion turbine located at 3497 Main Street. Chula Vista I has been operational since May 2001. The noise study prepared for the Chula Vista I facility indicates that "unobstructed noise would dissipate to below 40 dB(A) L_{eq} at the nearest residence" with the noise control measures that were implemented for the facility (California Energy Commission [CEC] 2001). Furthermore, the facility is subject to a noise monitoring program to ensure that noise levels at the facility boundaries are maintained at acceptable levels (CEC 2001). Measurements at this facility conducted on December 13, 2001 in accordance with this requirement indicated that the facility operated at a range of between 53 and 59 decibels at the property line (Austin 2001).

Other Sources of Noise

Other sources of noise within the study area are due to the normal activities associated with a given land use. For example, within residential areas noise sources may include dogs, landscaping activities, parties, etc. Sources of noise in commercial areas may include car washes, drive-through fast food restaurants, auto repair facilities, etc. Sources of noise in industrial and manufacturing areas may include heavy machinery, truck loading/unloading, quarry operations, etc. Noises from these types of activities are considered normal environmental noises that are expected to be generated by these types of land uses. The noise control ordinance of the Chula Vista Municipal Code generally regulates excessive noises resulting from such activities.

5.12.2 Thresholds of Significance

The proposed General Plan Update would result in significant noise impacts if it would:

- Threshold 1: Result in exposure of people to excessive noise.
- Threshold 2: Result in the generation of excessive noise.
- Threshold 3: Expose people residing or working within an established Airport Influence Area to excessive noise levels.

5.12.3 Impacts

Noise impacts resulting from future development in accordance with the proposed General Plan Update can result from two conditions: (1) development of a sensitive use in a noisy condition, or (2) placement of a noise generator near a sensitive receiver. The most prevalent noise source that typically and widely occurs adjacent to sensitive receivers is traffic on area roadways, but other transportation noise sources can also result in adverse acoustical conditions.

5.12.3.1 Threshold 1: Result in Exposure of People to Excessive Noise

Threshold 1 indicates that a significant noise impact will occur if project approval will result in people being exposed to excessive noise. Excessive noise can be evaluated in two ways: (1) total noise and (2) increase in noise, and there are two categories of noise that could affect people in Chula Vista: (1) fixed sources such as the amphitheater, and (2) mobile sources, such traffic on area roads. Noise levels that may result in excessive noise include traffic, aircraft, the Coors Amphitheater, activities at the Otay Landfill, and rail traffic. The focus on the evaluation of this threshold addresses the potential for proposed sensitive land uses, such as residential use, in locations where excessive noise exists or is anticipated.

Figure 5.12-7 provides the traffic noise contours for the Preferred Plan. Roads included in the General Plan Update traffic analysis with a Class I Collector roadway designation or higher are included in Figure 5.12-7. The assumptions used in modeling these noise levels are listed in Appendix G. Figure 5.12-3 and Figure 5.12-7 illustrate the change in traffic noise levels between existing conditions and the proposed General Plan Update. The proposed plan would permit development that could expose residents to excessive noise. Table 5.12-6 compares traffic volumes of road segments where there is a three decibel or greater increase between existing conditions and either the Preferred Plan or Scenarios 1, 2, or 3. A three-decibel increase in noise is considered a perceptible change by the average observer and would be considered a significant impact. The impacted roadway segments listed in Table 5.12-6 make up approximately 16 percent of the existing road segments analyzed, and shows that, for every segment analyzed, there will be at least a three-decibel increase (ranging up to at least one 10-decibel increase).

In addition, there are existing roadways where the anticipated noise levels would experience traffic level changes that would result in a noise increase of three decibels or greater. This condition exists for roadways where traffic volumes are projected to at least double. Table 5.12-6 provides a list of the roadways that meet these criteria.

Based on noise measurements described above, trolley/train activity produces 65 decibel CNEL at about 260 feet from the centerline of the tracks. Noise from the amphitheater is not expected to change with time. Additional rail traffic could result in a change in the distance to the 65 decibels. Currently, there is no plan to expand freight service along the rail line

TABLE 5.12-6
CHANGE IN TRAFFIC NOISE LEVELS
(FOR ROADWAYS WITH 3 dB[A] INCREASE OR GREATER)

Road	Segment	Existing ADT	Compared Scenario	Scenario ADT	Change in Noise Level
E Street	Bay Blvd to I-5	14,520	Preferred	37,500	4
E Street	Bay Blvd to I-5	14,520	Scenario 1	38400	4
E Street	Bay Blvd to I-5	14,520	Scenario 2	38,400	4
E Street	Bay Blvd to I-5	14,520	Scenario 3	37,900	4
F Street	Bay Blvd to Broadway	3,255	Preferred	19,400	8
F Street	Bay Blvd to Broadway	3,255	Scenario 1	23,000	9
F Street	Bay Blvd to Broadway	3,255	Scenario 2	20,300	8
F Street	Bay Blvd to Broadway	3,255	Scenario 3	19,900	8
H Street	Otay Lakes Rd to SR-125	4,080	Preferred	10,120	5
H Street	Otay Lakes Rd to SR-125	4,080	Scenario 1	16,100	6
H Street	Otay Lakes Rd to SR-125	4,080	Scenario 2	15,800	6
H Street	Otay Lakes Rd to SR-125	4,080	Scenario 3	16,000	6
J Street	Marina Pkwy to Bay Blvd	5,347	Preferred	40,400	9
J Street	Marina Pkwy to Bay Blvd	5,347	Scenario 1	44,000	9
J Street	Marina Pkwy to Bay Blvd	5,347	Scenario 2	42,500	9
J Street	Marina Pkwy to Bay Blvd	5,347	Scenario 3	42,500	9
Main Street	I-805 to Heritage Road	14,846	Preferred	52,600	6
Main Street	I-805 to Heritage Road	14,846	Scenario 1	47,700	5
Main Street	I-805 to Heritage Road	14,846	Scenario 2	50,400	5
Main Street	I-805 to Heritage Road	14,846	Scenario 3	50,500	5
Proctor Valley Rd	Mount Miguel Rd to Hunte Pkwy	6,968	Preferred	28,600	6
Proctor Valley Rd	Mount Miguel Rd to Hunte Pkwy	6,968	Scenario 1	30,600	6
Proctor Valley Rd	Mount Miguel Rd to Hunte Pkwy	6,968	Scenario 2	30,900	7
Proctor Valley Rd	Mount Miguel Rd to Hunte Pkwy	6,968	Scenario 3	30,300	6
Otay Lakes Road	Eastlake Pkwy to Lane Ave	19,400	Preferred	50,700	4
Otay Lakes Road	Eastlake Pkwy to Lane Ave	19,400	Scenario 1	52,500	4
Otay Lakes Road	Eastlake Pkwy to Lane Ave	19,400	Scenario 2	52,100	4
Otay Lakes Road	Eastlake Pkwy to Lane Ave	19,400	Scenario 3	52,300	4
Otay Lakes Road	Lane Ave to Hunte Pkwy	12,800	Preferred	28,100	3
Otay Lakes Road	Lane Ave to Hunte Pkwy	12,800	Scenario 1	35,500	4
Otay Lakes Road	Lane Ave to Hunte Pkwy	12,800	Scenario 2	35,500	4
Otay Lakes Road	Lane Ave to Hunte Pkwy	12,800	Scenario 3	35,100	4
Olympic Pkwy	Heritage Rd to La Media Rd	16,000	Preferred	49,400	5
Olympic Pkwy	Heritage Rd to La Media Rd	16,000	Scenario 1	49,700	5
Olympic Pkwy	Heritage Rd to La Media Rd	16,000	Scenario 2	49,900	5

TABLE 5.12-6
CHANGE IN TRAFFIC NOISE LEVELS
(FOR ROADWAYS WITH 3 dB[A] INCREASE OR GREATER)
(continued)

Road	Segment	Existing ADT	Compared Scenario	Scenario ADT	Change in Noise Level
Olympic Pkwy	Heritage Rd to La Media Rd	16,000	Scenario 3	49,800	5
Fourth Avenue	Main Street to Southern City Limits	4,620	Preferred	11,100	4
Fourth Avenue	Main Street to Southern City Limits	4,620	Scenario 1	10,300	4
Fourth Avenue	Main Street to Southern City Limits	4,620	Scenario 2	9,700	3
Fourth Avenue	Main Street to Southern City Limits	4,620	Scenario 3	9,600	3
Heritage Road	Telegraph Canyon Rd to Olympic Pkwy	16,505	Preferred	42,300	4
Heritage Road	Telegraph Canyon Rd to Olympic Pkwy	16,505	Scenario 1	39,500	4
Heritage Road	Telegraph Canyon Rd to Olympic Pkwy	16,505	Scenario 2	39,300	4
Heritage Road	Telegraph Canyon Rd to Olympic Pkwy	16,505	Scenario 3	40,600	4
Heritage Road	Olympic Pkwy to Main Street	15,400	Preferred	70,700	4
Heritage Road	Olympic Pkwy to Main Street	15,400	Scenario 1	33,500	3
Heritage Road	Olympic Pkwy to Main Street	15,400	Scenario 2	35,100	4
Heritage Road	Olympic Pkwy to Main Street	15,400	Scenario 3	37,700	4
La Media Road	Telegraph Canyon Rd to Olympic Pkwy	13,419	Preferred	27,200	3
Eastlake Pkwy	Otay Lakes Rd to Olympic Pkwy	9,474	Preferred	34,000	6
Eastlake Pkwy	Otay Lakes Rd to Olympic Pkwy	9,474	Scenario 1	29,600	5
Eastlake Pkwy	Otay Lakes Rd to Olympic Pkwy	9,474	Scenario 2	29,300	5
Eastlake Pkwy	Otay Lakes Rd to Olympic Pkwy	9,474	Scenario 3	29,400	5
Eastlake Pkwy	Hunte Pkwy to Alta Road	16,754	Preferred	38,800	4
Lane Avenue	Proctor Valley Road to Otay Lakes Road	4,268	Preferred	27,800	8
Lane Avenue	Proctor Valley Road to Otay Lakes Road	4,268	Scenario 1	23,900	8
Lane Avenue	Proctor Valley Road to Otay Lakes Road	4,268	Scenario 2	23,900	8
Lane Avenue	Proctor Valley Road to Otay Lakes Road	4,268	Scenario 3	24,200	8
Hunte Parkway	Proctor Valley Road to Otay Lakes Road	1,400	Preferred	14,700	10

TABLE 5.12-6
CHANGE IN TRAFFIC NOISE LEVELS
(FOR ROADWAYS WITH 3 dB[A] INCREASE OR GREATER)
(continued)

Road	Segment	Existing ADT	Compared Scenario	Scenario ADT	Change in Noise Level
Hunte Parkway	Proctor Valley Road to Otay Lakes Road	1,400	Scenario 1	11,000	9
Hunte Parkway	Proctor Valley Road to Otay Lakes Road	1,400	Scenario 2	11,000	9
Hunte Parkway	Proctor Valley Road to Otay Lakes Road	1,400	Scenario 3	11,000	9
Hunte Parkway	Otay Lakes Rd to Olympic Pkwy	5,905	Preferred	20,500	5
Hunte Parkway	Otay Lakes Rd to Olympic Pkwy	5,905	Scenario 1	15,900	4
Hunte Parkway	Otay Lakes Rd to Olympic Pkwy	5,905	Scenario 2	15,700	4
Hunte Parkway	Otay Lakes Rd to Olympic Pkwy	5,905	Scenario 3	16,200	4
Hunte Parkway	Olympic Pkwy to Eastlake Pkwy	4,216	Preferred	35,800	9
Hunte Parkway	Olympic Pkwy to Eastlake Pkwy	4,216	Scenario 1	25,000	8
Hunte Parkway	Olympic Pkwy to Eastlake Pkwy	4,216	Scenario 2	25,500	8
Hunte Parkway	Olympic Pkwy to Eastlake Pkwy	4,216	Scenario 3	21,600	7

through Chula Vista, but trolley service could increase. Specific forecasts for the plan year 2030 are not available; however, a doubling of the number of daily trolley trips would result in an increase in CNEL by three decibels. This would place the 65 dB(A) CNEL contour at a distance about 500 feet from the tracks.

The Coors Amphitheater is also noise sources potentially effecting receivers in the City. Figure 5.12-6 shows the noise contours for the amphitheater. The noise levels illustrated for Coors Amphitheater occur only when there are noise-producing events at the facility and do not represent continuous noise levels.

A portion of the General Plan area is located within the Airport Influence Area for Brown Field. Figure 5.12-4 provides the noise contours for Brown Field. Although the airport itself is not within the boundaries of the plan area, the 60-decibel CNEL noise contour extends into the East Planning Area. The contour crosses the Otay River valley just east of the amphitheater and extends north to just above Rock Mountain. It extends eastward until just east of future State Route 125 (see Figure 5.12-5). There are no proposed uses within the 65 decibel contour of the airport.

Average noise levels at a working landfill face have been measured to be approximately 80 dB(A) at 50 feet from the working equipment (RECON 1996) and are expected to be similar to activities at the Otay Landfill. Assuming a drop-off rate of 6 decibels per doubling of distance, the average noise levels from the working face operations would drop to 65 dB(A) in approximately 300 feet. The CNEL associated with this average noise level would depend upon the hours of operation and numbers of simultaneous pieces of equipment operating.

Section 3.5 of the proposed Environmental Element addresses noise. That section recognizes that land uses that generate significant noise should be separated from land uses that are particularly sensitive to noise. To establish the compatibility of various land uses with exterior noise levels, the element specifies the use of CNEL to address potential adverse noise effects.

As detailed below, the Preferred Plan and each of the Scenarios place residential uses adjacent to Circulation Plan roadways that have the potential to expose receivers to noise levels in excess of 65 dB(A) CNEL. In addition, there are existing roadways where the anticipated noise levels would experience traffic volume changes that would result in a noise increase of three decibels or greater. As illustrated in Table 5.12-6, traffic increases on area roads would result in noise increases of between 3 and 9 decibels for receivers adjacent to these roadways. This increase is a significant adverse impact.

Preferred Plan

The potential for future sensitive receivers within the update areas to be exposed to adverse noise levels depends upon the number of people potentially placed in vicinity of a noise source. Primarily this equates to the proposed increase in allowable density along highways and major arterials, adjacent to rail, and within the airport influence area of Brown Field. In addition, traffic increases on area roadways shown in Table 5.12-6 resulting from the adoption of the Preferred Plan would cause the existing receivers to be exposed to increased noise levels. This increased exposure is a significant impact.

The Preferred Plan would increase population density in the Northwest and Southwest Planning Areas along Interstate 5. The potential for future uses to result in the generation of excess noise is primarily associated with industrial and commercial uses. The possibility that these uses would result in a significant adverse impact to sensitive receivers depends upon the placement of the noise generator relative to the receiver. The extent to which this threshold represents a significant impact, therefore, relates to the possible placement of noise generating industrial/commercial land uses near residential and other sensitive land uses. Since the Preferred Plan establishes land uses in areas near residential uses, this is a significant noise impact.

URBAN CORE SUBAREA

In the Interstate 5 Corridor District of the Urban Core Subarea, the Preferred Plan places multi-family residential at the west end of D Street, the current location of a mobile home park. The Preferred Plan also proposes residential uses between E and F Streets in the Interstate 5 Corridor District adjacent to the freeway. South of F Street, the Preferred Plan places Urban Core Residential uses next to the freeway with the potential for a neighborhood park. Residential uses in these locations have the potential to expose additional residents to noise levels in excess of 65 dB(A) CNEL resulting from freeway and rail traffic.

No industrial uses are proposed within the Urban Core Subarea under the Preferred Plan. There are a variety of commercial areas designated near residences and part of residential mixed uses. Depending upon the ultimate nature of the commercial uses, associated activities could have an adverse noise impact, if they were to cause noise levels at the property line in excess of the standard in the City's noise control ordinance, or to exceed the standard set by the proposed General Plan Update.

MONTGOMERY SUBAREA

The Preferred Plan places high residential and mixed use transit focus area in the area between Interstate 5 and the trolley and rail tracks within the Palomar Gateway District of the Montgomery Subarea. These land uses, in this area, have the potential to result in adverse noise impacts because noise levels adjacent to the freeway and the trolley/rail line are in

excess of 65 dB(A) CNEL. The Main Street District calls for industrial uses along Zenith Street, across the street from residential uses. These industrial uses have the potential to result in adverse noise effects on neighboring residential uses if they were to cause noise levels at the property line in excess of the standard in the City's noise control ordinance, or to exceed the standard set by the proposed General Plan Update.

OTAY RANCH SUBAREA

The Preferred Plan places low-medium residential adjacent to a future transit route in the Western District. Low residential is proposed adjacent to a future transit route in the Central District. The Eastern University District places low-medium residential, medium residential, and mixed use residential adjacent to SR-125 and a future transit route. Projected noise levels for these transportation facilities are in excess of the proposed 65 dB(A) CNEL standards, and, as such, residential uses in these locations have the potential to expose future residents to significant noise levels.

In the Western District of the Otay Ranch Subarea, the Preferred Plan places light industrial uses adjacent to residential low medium. As with industrial uses in other areas of the City, these industrial uses have the potential to result in adverse noise effects on neighboring residential uses. The Eastern University District proposes mixed use residential adjacent to retail commercial. Depending upon the ultimate nature of the commercial uses, associated activities could have an adverse noise impact on adjacent residential receivers.

EAST MAIN STREET SUBAREA

The Preferred Plan proposes a future transit route adjacent to an existing residential area. Residential uses in this area have the potential to be exposed to future high noise levels resulting from transit traffic.

In the East Main Street Subarea, retail commercial uses are proposed adjacent to existing residential. Depending upon the ultimate nature of the commercial uses, associated activities could have an adverse noise impact. These industrial uses have the potential to result in adverse noise effects on neighboring residential uses if they were to cause noise levels at the property line in excess of the standard in the City's noise control ordinance, or to exceed the standard set by the proposed General Plan Update

Scenario 1

As with the Preferred Plan, adoption of Scenario 1 would result in a significant noise impact. Traffic increases on area roadways shown in Table 5.12-6 resulting from the adoption of the Scenario 1 will cause the existing receivers to be exposed to increased noise levels. This increased exposure is a significant impact. Also, since Scenario 1 establishes commercial

and industrial land uses in areas near residential uses, there would be a significant noise impact from the adoption of the scenario.

URBAN CORE SUBAREA

In the Interstate 5 Corridor District of the Urban Core Subarea, Scenario 1 leaves a portion of this area with its current designation and places a transit focus area on the portion below D Street. As with the Preferred Scenario, Scenario 1 has the potential to expose additional residents to noise levels resulting from freeway and rail traffic in excess of the proposed 65 dB(A) CNEL standard.

Scenario 1 proposes residential uses between E and F Streets in the Interstate 5 Corridor District adjacent to the freeway. South of F Street, this scenario places Urban Core residential uses next to the freeway with the potential for a neighborhood park.

No industrial uses are proposed within the Urban Core Subarea under this scenario. There are a variety of commercial areas designated near residences and part of residential mixed uses. Depending upon the ultimate nature of the commercial uses, associated activities could have an adverse noise impact, if they were to cause noise levels at the property line in excess of the standard in the City's noise control ordinance, or to exceed the standard set by the proposed General Plan Update.

MONTGOMERY SUBAREA

Scenario 1 places a mixed use transit focus area in the Palomar Gateway District between the freeway and the rail line. As with the Preferred Plan, this increase in density has the potential to result in adverse noise impacts. This scenario leaves the existing planned condition along Zenith Street unchanged.

In the Main Street District of the Montgomery Subarea, Scenario 1 leaves the existing residential designation along Zenith Street. This area is currently adjacent to industrial uses. Depending upon the ultimate nature of the commercial uses, associated activities could create excessive noise resulting in an adverse noise impact, if they were to cause noise levels at the property line in excess of the standard in the City's noise control ordinance, or to exceed the standard set by the proposed General Plan Update.

OTAY RANCH SUBAREA

Scenario 1 places medium-high residential adjacent to a future transit route in the Western District. In the Central District, low-medium residential is proposed adjacent to SR-125; and low residential, medium-high residential, and mixed use residential are proposed adjacent to a future transit route. The Eastern University District places mixed use residential and medium-high residential adjacent to SR-125 and a future transit route. Projected noise levels

for these transportation facilities are in excess of the proposed 65 dB(A) CNEL standards, and, as such, residential uses in these locations have the potential to expose future residents to high noise levels resulting from freeway and rail traffic.

In the Western District of the Otay Ranch Subarea, Scenario 1 places light industrial uses adjacent to low-medium residential. These industrial uses have the potential to result in adverse noise effects on neighboring residential uses.

EAST MAIN STREET SUBAREA

Scenario 1 proposes a future transit route adjacent to an existing residential area. Residential uses in this area have the potential to be exposed to future high noise levels resulting from transit traffic.

In the East Main Street Subarea, retail commercial uses are proposed adjacent to existing residential. Depending upon the ultimate nature of the commercial uses, associated activities could have an adverse noise impact, if they were to cause noise levels at the property line in excess of the standard in the City's noise control ordinance, or to exceed the standard set by the proposed General Plan Update.

Scenario 2

As with the adoption of the Preferred Plan and Scenario 1, the adoption of Scenario 2 would result in a significant noise impact. Traffic increases on area roadways shown in Table 5.12-6 resulting from the adoption of the Preferred Plan will cause the existing receivers to be exposed to increased noise levels. This increased exposure is a significant impact. Also, since Scenario 2 establishes commercial and industrial land uses in areas near residential uses, there would be a significant noise impact from the adoption of the scenario.

URBAN CORE SUBAREA

In the Interstate 5 Corridor District of the Urban Core Subarea, Scenario 2 designates the area at the west end of D Street as high residential, which has the potential to expose future residents to noise levels resulting from freeway and rail traffic in excess of the City's proposed 65 dB(A) CNEL standard.

Scenario 2 proposes transit focus area between E and F Streets in the Interstate 5 Corridor District adjacent to the freeway. South of F Street, this scenario places visitor commercial uses next to the freeway.

No industrial uses are proposed within the Urban Core Subarea under this scenario. There are a variety of commercial areas designated near residences and part of residential mixed uses. Depending upon the ultimate nature of the commercial uses, associated activities could

have an adverse noise impact, if they were to cause noise levels at the property line in excess of the standard in the City's noise control ordinance, or to exceed the standard set by the proposed General Plan Update.

MONTGOMERY SUBAREA

As with the Preferred Plan, Scenario 2 places high residential and mixed use with residential in the area between Interstate 5 and the trolley and rail tracks within the Palomar Gateway District of the Montgomery Subarea. These land uses, in this area, have the potential to result in adverse noise impacts.

The Main Street District calls for retail uses along Zenith Street, across the street from residential uses, and, depending upon the ultimate retail use, may reduce the potential for noise impacts at this location.

The Main Street District calls for retail uses along Zenith Street, across the street from residential uses, and, depending upon the ultimate retail use, may reduce the potential for noise impacts at this location. However, the potential would exist for development that creates excessive noise to be developed in this area, which could result in an adverse noise impact if it were to cause noise levels at the property line in excess of the standard in the City's noise control ordinance, or to exceed the standard set by the proposed General Plan Update.

OTAY RANCH SUBAREA

Scenario 2 places medium-high residential adjacent to a future transit route in the Western District. In the Central District, low-medium residential is proposed adjacent to SR-125; and low, low-medium, medium-high, and mixed use residential are proposed adjacent to a future transit route. The Eastern University District places low, medium, medium-high, and mixed use residential adjacent to SR-125 and a future transit route. Residential uses in these locations have the potential to expose future residents to high noise levels resulting from freeway and rail traffic.

In the Otay Ranch Subarea, the Western District places medium-high residential adjacent to the Otay Landfill. Depending on the location of the working face of the landfill, there is the potential for adverse noise effects on neighboring residential uses. The Eastern University District proposes mixed use residential adjacent to retail commercial. The Otay Valley District proposes high residential adjacent to open space-active recreation. Depending upon the ultimate nature of the commercial and active recreation uses, associated activities could have an adverse noise impact on adjacent residential receivers, if they were to cause noise levels at the property line in excess of the standard in the City's noise control ordinance, or to exceed the standard set by the proposed General Plan Update.

EAST MAIN STREET SUBAREA

Scenario 2 proposes a future transit route adjacent to an existing residential area. Residential uses in this area have the potential to be exposed to future high noise levels resulting from transit traffic.

In the East Main Street Subarea, retail commercial uses are proposed adjacent to existing residential. Depending upon the ultimate nature of the commercial uses, associated activities could have an adverse noise impact, if they were to cause noise levels at the property line in excess of the standard in the City's noise control ordinance, or to exceed the standard set by the proposed General Plan Update.

Scenario 3

As with the adoption of the other scenarios, the adoption of Scenario 3 would result in a significant noise impact. Traffic increases on area roadways shown in Table 5.12-6 resulting from the adoption of the Preferred Plan will cause the existing receivers to be exposed to increased noise levels. This increased exposure is a significant impact. Also, since Scenario 3 establishes commercial and industrial land uses in areas near residential uses, there would be a significant noise impact from the adoption of the scenario.

URBAN CORE SUBAREA

Scenario 3 specifies the area at the end of D Street for visitor-serving uses. Visitor-serving uses in this location have less of a potential to result in adverse noise impacts, although, depending upon the ultimate use, an adverse noise impact could result.

Between E and F Streets in the Interstate 5 Corridor District adjacent to the freeway, Scenario 3 considers a mixed use residential designation. This scenario also places this designation for the area south of F Street and north of G Street. It does not place a potential neighborhood park in the area immediately adjacent to the freeway.

No industrial uses are proposed within the Urban Core Subarea under this scenario. There are a variety of commercial areas designated near residences and part of residential mixed uses. Depending upon the ultimate nature of the commercial uses, associated activities could have an adverse noise impact.

MONTGOMERY SUBAREA

Scenario 3 places high residential and mixed use residential in the area between I-5 and the trolley and rail tracks within the Palomar Gateway District of the Montgomery Subarea. It also designates the West Fairfield District for mixed use residential. These land uses, in these areas, have the potential to result in adverse noise impacts.

The Main Street District calls for retail uses for the area along Zenith Street, between Zenith and Main Street.

The Main Street District calls for retail uses for the area along Zenith Street, between Zenith and Main Street. Depending upon the ultimate nature of the commercial uses, associated activities could create excessive noise resulting in an adverse noise impact to the residents north of Zenith, if they were to cause noise levels at the property line in excess of the standard in the City's noise control ordinance, or to exceed the standard set by the proposed General Plan Update.

OTAY RANCH SUBAREA

Scenario 3 places medium-high residential and mixed use residential adjacent to a future transit route in the Western District. In the Central District, Low Residential and Low-Medium Residential are proposed adjacent to a future transit route. The Eastern University District places medium-high residential and mixed use residential adjacent to SR-125 and a future transit route. Residential uses in these locations have the potential to expose future residents to high noise levels resulting from freeway and rail traffic.

In the Otay Ranch Subarea, the Western District places light industrial uses adjacent to residential low-medium. These industrial uses have the potential to result in adverse noise effects on neighboring residential uses.

EAST MAIN STREET SUBAREA

Scenario 3 proposes a future transit route adjacent to an existing residential area. Residential uses in this area have the potential to be exposed to future high noise levels resulting from transit traffic.

In the East Main Street Subarea, retail commercial uses are proposed adjacent to existing residential. Depending upon the ultimate nature of the commercial uses, associated activities could have an adverse noise impact, if they were to cause noise levels at the property line in excess of the standard in the City's noise control ordinance, or to exceed the standard set by the proposed General Plan Update.

GENERAL PLAN POLICIES

Threshold 1 indicates that a significant noise impact will occur if project approval will result in people being exposed to excessive noise Table 5.12-7 contains the proposed exterior land use-noise compatibility guidelines contained in Section 3.5 of the Environmental Element. These guidelines reflect the levels of noise exposure that are generally considered to be compatible with various types of land use. The element notes that these guidelines are to be

TABLE 5.12-7
EXTERIOR LAND USE-NOISE COMPATIBILITY GUIDELINES

	Acceptable CNEL in Decibels					
Land Use	50	55	60	65	70	75
Residential						
Schools, Libraries, Daycare Facilities, Convalescent Homes, Outdoor Use Areas, and Other Similar Uses Considered Noise Sensitive						
Neighborhood Parks, Playgrounds						
Community Parks, Athletic Fields						
Office and Professional						
Places of Worship (excluding outdoor use areas)						
Retail and Wholesale Commercial, Restaurants, Movie Theaters						
Industrial, Manufacturing						

used at the land use planning stage, for noise impact assessments, and to determine mitigation requirements for development proposals.

There are two objectives in the proposed Environmental Element that address noise. Both objectives contain specific policies to avoid adverse noise impacts. The policies that have the most important application to avoiding potential noise impacts include those that establish and enforce a noise threshold for future development.

Objective EE 21

Protect people from excessive noise through careful land use planning and the incorporation of appropriate mitigation techniques.

Policies

EE 21.1: Apply the exterior land use-noise compatibility guidelines contained in Table 9-1 (see Table 5.12-7 of this EIR) of the Environmental Element to new development where applicable and in light of project-specific considerations.

EE 21.2: Where applicable, the assessment and mitigation of interior noise levels shall adhere to the applicable California Building Code with local amendments and other applicable established City standards.

EE 21.3: Promote the use of available technologies in building construction to improve noise attenuation capacities.

EE 21.4: Continue to implement and enforce the City's noise control ordinance.

Objective EE 22

Protect the community from the effects of transportation noise.

Policies

EE 22.1: Work to stabilize traffic volumes in residential neighborhoods by limiting throughways and by facilitating the use of alternative routes around, rather than through, neighborhoods.

EE 22.2: Explore the feasibility of using new technologies to minimize traffic noise, such as use of rubberized asphalt in road surface materials.

EE 22.3: Employ traffic calming measures where appropriate, such as narrow roadways and on-street parking, in commercial and mixed use districts.

EE 22.4: Encourage walking, biking, carpooling, use of public transit, and other alternative modes of transportation to minimize vehicular use and associated traffic noise.

EE 22.5: Require projects to construct appropriate mitigation measures in order to attenuate existing and projected traffic noise levels in accordance with applicable standards, including the exterior land use-noise compatibility guidelines contained in Table 9-1 of this Environmental Element (see Table 5.12-7 of this EIR).

Both of the proposed objectives and associated policies identified above address the potential generation of excessive noise. For future development that occurs in conformance to the General Plan Update, the adoption of the Preferred Plan or any of the Scenarios will not expose people to excessive noise because the policies require future projects to comply with the exterior land use-noise compatibility guidelines contained in Table 5.12-7 of this EIR (EE 21.1), promote the use of available technologies in building construction to improve noise attenuation (EE 21.4), and assure the continued implementation the City's noise control ordinance (EE 21.5). They also work to stabilize traffic volumes (EE 22.1), provide for consideration of feasibility of using new technologies to minimize traffic noise (EE 22.2), employ traffic calming measures (EE 22.3), and encourage alternative modes of transportation to minimize traffic noise (EE 22.4). The Update also requires project developers to implement appropriate measures in order to attenuate existing and projected traffic noise levels in accordance with applicable standards (EE 22.5) and specifies those standards.

Traffic increases on area roads will result in noise increases of between 3 and 9 decibels for existing receivers adjacent to roadways listed in Table 5.12-6. This increase is a significant adverse impact resulting from the adoption of the Preferred Plan or any of the Scenarios.

5.12.3.2 Threshold 2: Result in the Generation of Excessive Noise

Threshold 2 states that there would be a significant noise impact if the adoption of the plan amendment were to result in the generation of excessive noise. Potential noise generators in the city are controlled under Section 19.689 of the Chula Vista Municipal Code (Noise Control Ordinance). This ordinance contains noise performance standards for allowable noise generation from stationary sources of noise (i.e., noise sources other than transportation related) and are stated as the maximum permissible sound level that can be produced by a noise generator at a receiving property boundary (see Table 5.12-1)

The Preferred Plan and the Scenarios do not propose any development that will violate these standards. In general, increased commercial and industrial land increases the potential that noise producing uses will be developed. Application of the policies proposed in the General Plan Update will avoid the potential for the establishment of uses that result in the generation

of excessive noise because Policy EE 21.1 requires future projects to comply with the exterior land use-noise compatibility guidelines contained in Table 9-1 of the General Plan and Table 5.12-7 of this EIR, Policy EE 21.3 promotes the use of available technologies in building construction to improve noise attenuation capacities, and Policy 21.4 assures the continued implementation of the City's noise control ordinance.

5.12.3.3 Threshold 3: Aircraft Noise

Threshold 3 indicates that a significant impact would occur if the project would expose people residing or working within an established Airport Influence Area to excessive noise levels. The adopted Brown Field Airport Land Use Compatibility Plan (ALUCP) established the Airport Influence Area for this airport, which encompasses a limited area of the East Planning Area.

As seen from Figure 5.12-5, a small portion of the plan area is within the Brown Field Airport Influence Area, an even smaller portion is within the 60 CNEL contour, and a very small portion of the plan area is within the 65 CNEL contour. The 65-decibel contour parallels the southern boundary of the planning area and is confined primarily to Otay Mesa. The 60-decibel contour for the airport crosses the Otay River valley just east of the amphitheater and extends north to just above Rock Mountain. It extends to the eastward until just east of future State Route 125 (see Figure 5.12-5).

Preferred Plan

The Preferred Plan designates a portion of the Otay Valley District area within the Airport Influence Area as Active Recreation and a limited portion for Light Industrial and Open Space. These uses are consistent with the land uses indicated in the Airport Land Use Compatibility Plan.

Scenario 1

Scenario 1 designates the same uses in the Airport Influence Area as does the Preferred Plan: active recreation and light industrial and open space. These uses are consistent with the land uses indicated in the Airport Land Use Compatibility Plan. Because these uses are outside of the 65-decibel CNEL contour, they will not expose people residing or working in the project area to excessive noise.

Scenario 2

Scenario 2 designates mixed use commercial, residential medium, residential high, light industrial, open space and active recreation uses in the Airport Influence Area. Because these uses are outside of the 65-decibel CNEL contour, they will not expose people residing or working in the project area to excessive noise.

Scenario 3

Scenario 3 designates mixed use commercial, light industrial, open space and active recreation uses in the Airport Influence Area. Because these uses are outside of the 65-decibel CNEL contour, they will not expose people residing or working in the project area to excessive noise.

5.12.4 Level of Significance Prior to Mitigation

5.12.4.1 Threshold 1: Result in Exposure of People to Excessive Noise

Compliance with the proposed General Plan Update objectives and policies would not expose people to excessive noise because the policies require future projects to comply with the exterior land use-noise compatibility guidelines contained in Table 5.12-7 of this EIR (EE 21.1), promote the use of available technologies in building construction to improve noise attenuation (EE 21.4), and assure the continued implementation the City's noise control ordinance (EE 21.5). They also work to stabilize traffic volumes (EE 22.1), provide for consideration of feasibility of using new technologies to minimize traffic noise (EE 22.2), employ traffic calming measures (EE 22.3), and encourage alternative modes of transportation to minimize traffic noise (EE 22.4). The Update also requires project developers to implement appropriate measures in order to attenuate existing and projected traffic noise levels in accordance with applicable standards (EE 22.5) and specifies those standards. Therefore, excessive noise impacts from the implementation of the Preferred Plan or any of the Scenarios would not be significant for new developments.

As illustrated in Table 5.12-6, traffic increases on area roads will result in noise increases of between 3 and 9 decibels for receivers adjacent to these roadways. This increase is a significant adverse impact.

5.12.4.2 Threshold 2: Result in the Generation of Excessive Noise

The Preferred Plan and the Scenarios do not propose any development that will violate the standards established by Policy EE 21.1 or noise levels set by the Noise Control Ordinance. In general, increased commercial and industrial land increases the potential that noise producing uses will be generated. Application of the policies proposed in the General Plan Update would avoid the potential for the establishment of uses that result in the generation of excessive noise because Policy EE 21.1 requires future projects to comply with the exterior land use-noise compatibility guidelines contained in Table 9-1 of the General Plan and Table 5.12-7 of this EIR, Policy EE 21.3 promotes the use of available technologies in building construction to improve noise attenuation capacities, and Policy 21.4 assures the continued implementation of the City's noise control ordinance

Threshold 3: Expose people residing or working within an established Airport Influence Area to excessive noise levels.

The Preferred Plan or any of the Scenarios will not expose people residing or working in the project area to excessive noise levels within the area that is designated as part of the Brown Field Airport Influence Area and Airport Land Use Compatibility Plan because the 65 dB(A) contour does impact the planning area.

5.12.5 Mitigation Measures

No significant noise impacts would result from new development completed in accordance with the proposed General Plan Update and no mitigation is necessary. A significant impact will occur to existing receivers adjacent to circulation element roadways where traffic volumes are projected to result in noise level increases of more than 3 decibels. Lessening the noise levels in these areas would require a lot-by-lot review of potential exterior use areas and an evaluation of the acoustical performance of each building exposed to the increase. The exterior analysis would assess the feasibility of reducing noise levels to outdoor use areas through the construction of barriers or other measures, and the interior review would require consideration of the effectiveness of existing windows and doors, the adequacy of existing construction, and the need for retrofit. Since this level of analysis is infeasible at the General Plan stage impacts remain significant and not mitigated.

5.12.6 Level of Significance After Mitigation

Significant and not mitigable.

5.13 Public Services

Public services consist of fire protection, law enforcement, parks and recreation, schools, and libraries. The following discussion deals with the potential impacts that the proposed General Plan Update would have upon existing and planned public services.

The City Council adopted the Threshold Standards Policy for Chula Vista in November 1987, which established "quality of life" indicators for the five public service topics addressed in this section. Each topic was addressed in the Policy in terms of a goal, objective(s), a threshold, and implementation measures. These standards are intended to preserve and enhance the environment and city residents' quality of life as growth occurs.

5.13.1 Fire Protection

5.13.1.1 Existing Conditions

Regulatory Plans and Policies

Fire protection services are addressed in the City's Threshold Standards Policy, the Otay Ranch General Development Plan (GDP), and the adopted Fire Station Master Plan.

The Threshold Standard requires that 80 percent of emergency calls throughout the City shall be responded to within seven minutes.

Section E, Part 4 of the Otay Ranch GDP addresses fire protection and emergency services facilities. As part of the GDP, four additional fire stations were identified, two of which have subsequently been built, to serve the Otay Ranch project area at buildout. An objective in the GDP states "Provide sufficient fire and emergency medical service facilities to respond to call within the Otay Ranch urban communities with 7 minute response time in 85 percent of the cases."

The adopted Fire Station Master Plan contains six guidelines to assess alternative fire station needs and networks. These guidelines address travel time, response time, cost, and relative workloads among stations. The Fire Station Master Plan recommends 1.5-acre sites for all fire stations and calls for a total of nine fire stations in the city.

Existing Citywide Conditions

Fire protection for the City of Chula Vista is provided by the Chula Vista Fire Department. There are currently eight fire stations located throughout the City, one of which is a temporary facility. Two additional permanent stations are planned for future development, one of which would replace the existing temporary facility. The current Fire Station Master Plan, which calls for nine fire stations, is being updated to reflect changes to proposed

General Plan land uses and to respond to a revised set of performance criteria as proposed in the Fire Department Strategic Plan. Therefore, the number and locations of future fire stations along with how they are equipped may change. Table 5.13-1 and Figure 5.13-1 summarize existing and future fire station locations and facilities; the number and location of future fire stations may change pending adoption of an updated Fire Station Master Plan, which is currently being prepared.

The Chula Vista Fire Department maintains approximately 126.75 permanent full-time employees. The department currently serves a population of approximately 209,200 people within an area of over 50 square miles and responds to more than 12,000 calls annually. Approximately 85 percent of the Department's priority calls for service are in the emergency medical services area. As indicated on Table 5.13-2 below, 72.9 percent of emergency calls were responded to within seven minutes during the 2004 reporting period, compared with the 80 percent requirement in the threshold standard.

The Northwest Update Area contains one fire station located at 447 F Street. The Southwest Update Area contains one fire station located at 391 Oxford Street. There is one existing fire station in the East Update Area located at 1640 Santa Venetia and one planned in the Eastern Urban Center.

5.13.1.2 Thresholds of Significance

The proposed project would result in a significant impact to public services if it would:

Threshold 1: Result in the inability of the City to provide an adequate level of service in accordance with the adopted standards and thresholds.

5.13.1.3 Impacts

Threshold 1 states that adoption of the General Plan Update would result in significant impacts to fire protection services if the plan would result in the City's inability to provide an adequate level of service in accordance with adopted standards and thresholds.

Impacts to fire protection services resulting from development completed under the Preferred Plan or Scenarios 1, 2, or 3 would be similar. The Chula Vista Fire Department does not currently meet the threshold standards established for response time. Increased response time is attributable, in part, to increased travel time, which results from responding to freeway incidents; the lower density, hilly terrain; and the circuitous non-grid nature of many streets in new residential developments in eastern Chula Vista, and will only worsen as traffic density increases. In response to this condition, the City Council has taken recent steps in order to improve response times, including accelerating planned staffing increases and new fire station construction.

TABLE 5.13-1
EXISTING AND FUTURE FIRE STATIONS AND FACILITIES

Location	Service Area	Apparatus
Fire Station 1 447 F Street Chula Vista, CA 91910	Downtown, Bay Front, Northwest City, Interstates 5 & 805/North	Ladder Truck Fire Engine Command Vehicle
Fire Station 2 and Warehouse 80 East J Street Chula Vista, CA 91910	Central City, Interstate 805/Central, Hilltop, Terra Nova, Country Club	Fire Engine Rescue Vehicle
Fire Station 3 1410 Brandywine Ave. Chula Vista, CA 91911	Sunbow, Interstate 805 South, Otay Valley, Woodlawn Park, East/Main Street	Fire Engine Fire Engine (Reserve 1)
Fire Station 4 and Training Facility 850 Paseo Ranchero Chula Vista, CA 91910	Rancho Del Rey, Otay Ranch, Bonita Long Canyon	Fire Engine Brush Engine Reserve
Fire Station 5 391 Oxford Street Chula Vista, CA 91911	Montgomery, Harborside, Otay, Interstate 5/South Southwest City, West/Main Street	Fire Engine (Reserve 3)
Fire Station 6 605 Mt. Miguel Chula Vista, 91913	EastLake, Rolling Hills Estates, San Miguel Ranch, Bella Lago	Fire Engine
Fire Station 7 1640 Santa Venetia Chula Vista, 91913	Otay Ranch, Village of Heritage, Heritage Hills, Village of Countryside	Fire Engine Ladder Truck Reserve Engine
Fire Station 8 (temporary) 975 Lane Avenue Planned for Construction Chula Vista, CA	EastLake Woods, Vistas, Trails	TBD; minimum 1 Engine
Fire Station 8 (future) Planned for Construction	EastLake Woods, Vistas, Trails	TBD; minimum 1 Engine
Fire Station 9 (future) Planned for Construction	Eastern Urban Center	TBD; minimum 1 Engine

TABLE 5.13-2
FIRE/EMS EMERGENCY RESPONSE TIMES

Year	Call Volume	Percent of Calls Responded to within Seven minutes
Emergency Response Threshold		80.0
FY 2004	8,420	72.9
FY 2002-03	8,088	75.5
FY 2001-02	7,626	69.7
FY 2000-01	7128	80.8
FY 1999-00	6654	79.7
CY 1999	6344	77.2
CY 1998	4119	81.9
CY 1997	6275	82.4
CY 1996	6103	79.4
CY 1995	5885	80.0
CY 1994	5701	81.7

The land uses proposed for the four scenarios would increase the demand for fire protection services by increasing development densities in the west and by converting vacant land in the east to urban uses. Because of the need to respond to these areas within the current seven-minute response threshold time, or other applicable threshold standard(s) which may be established in the future, regardless of land use, it is anticipated that additional fire stations beyond those which presently exist would be needed to maintain compliance with the applicable threshold standard(s). The actual extent of the need for future fire stations would be evaluated in accordance with Policies PFS 5.1 and PFS 5.7, which calls for this determination to be made based upon the existing or updated Fire Station Master Plan.

The adoption of the General Plan Update would not impact the City's ability to provide an adequate level of fire protection services in accordance with adopted standards and thresholds because the plan includes policies which ensure that fire protection facilities and services would be provided concurrent with need as additional development and population growth occurs.

The proposed Public Facilities and Services Element contains the following two objectives and associated policies that address fire protection:

Objective PFS 5

Sufficient levels of fire protection, emergency medical service and law enforcement service to protect public safety and property.

Policies

PFS 5.1: Continue to adequately equip and staff the Fire Department to ensure that established service standards for emergency calls are met.

PFS 5.2: Upgrade fire and emergency medical equipment as required to protect the public from hazards and to ensure the safety of fire fighters.

PFS 5.3: Support the provision of new fire stations as deemed necessary through the existing or updated Fire Station Master Plan.

PFS 5.4: Provide adequate law enforcement staff and equipment pursuant to Police Department strategic plans to meet established service standards.

PFS 5.7: Prior to approval of any discretionary projects, ensure that construction is phased with provision of police and fire protection services such that services are provided prior to or concurrent with need.

PFS 5.8: Require that the Police and Fire Departments maintain active participatory roles in the community.

Objective PFS 6

Provide adequate fire and police protection services to newly developing and redeveloping areas of the City.

Policies

PFS 6.1: Continue to require new development and redevelopment projects to demonstrate adequate access for fire and police vehicles.

PFS 6.2: Require new development and redevelopment projects to demonstrate adequate water pressure to new buildings.

The proposed Growth Management Element contains the following objective and associated policies to assure public facilities and services are available to residents and visitors of Chula Vista in a timely manner as development occurs:

Objective GM 1

Concurrent public facilities and services.

Policies:

GM 1.1: Maintain a set of quantitative level-of-service measures (growth management "threshold standards"), as a tool to assess the relative impact of new facility and service demands created by growth, and apply those standards, as appropriate, to approval of discretionary projects.

GM 1.3: Prepare development forecasts and monitor development activity as it occurs in support of growth management program activities.

GM 1.4: Provide growth forecasts and related information to City departments and other local government entities and request annual responses regarding their ability to provide services and facilities consistent with the Threshold Standards.

GM 1.5: As part of the Growth Management Program, conduct an ongoing Development Monitoring Program focused on new development activity and related infrastructure and public facility construction to

determine compliance with Threshold Standards and other City policies and programs.

GM 1.6: Periodically review and revise the Threshold Standards to assure that they reflect current service delivery and measurement techniques and to assure their effectiveness at achieving quality of life goals.

GM 1.7: Create and periodically update a set of Facility Master Plans for major municipal infrastructure and public facilities.

GM 1.8: Adopt and periodically update Development Impact Fees that assures that new development contributes a proportional share of funding for necessary municipal infrastructure and public facilities.

GM 1.9: Require that all Major Development projects prepare a Public Facilities Financing Plan (PFFP) that articulates infrastructure and public facilities requirements and costs and funding mechanisms.

GM 1.11: Establish the authority to withhold discretionary approvals and subsequent building permits from projects demonstrated to be out of compliance with the applicable Threshold Standards.

GM 1.12: Establish the authority for the City Council to impose limits on the total amount of development when such development, in aggregate, has or is forecasted to exceed Threshold Standards or otherwise negatively affect quality of life and public health, safety, or welfare of the City.

GM 1.13: Establish the authority for the City Council to impose limits upon the rate of development as needed to assure that development occurs at an optimal rate that does not negatively affect quality of life and public health, safety or welfare of the City.

Impacts to the provision of fire protection services are avoided because the policies in the proposed General Plan Update ensure that the Fire Department is adequately equipped and staffed in order to meet established service standards for emergency services (PFS 5.1), requires that construction of large-scale development be phased with provision of fire protection services prior to or concurrent with need (PFS 5.7). The update also calls for the city to maintain a set of quantitative level of service measures (growth management threshold standards) as a tool to assess the relative impact of new facility and service demands created by growth (GM 1.1), and apply those standards, as appropriate, to approval of discretionary projects (GM 1.1), and establishes the authority of the City Council to withhold discretionary approval and subsequent building permits for projects out of

compliance with those standards (GM 1.11). Therefore, impacts to the provision of fire protection services are avoided by implementation of self-mitigating Policies PFS 5.1, PFS 5.7, GM 1.1, and GM 1.11.

5.13.1.4 Level of Significance Prior to Mitigation

The policies in the proposed General Plan Update ensure that the Fire Department is adequately equipped and staffed in order to meet established service standards for emergency services. The need for future fire stations would be evaluated in accordance with proposed Policies PFS 5.1 and 5.7, which call for this determination to be made based upon the existing or updated Fire Station Master Plan. The plan also includes Policy GM 1.1 which calls for the city to maintain a set of threshold standards which are policy based quantitative level of service measures as a tool to assess the relative impact of new service demands expected or created by growth, and Policy GM 1.11 prohibits discretionary approval for projects out of compliance with those standards. Therefore, potential impacts to the provision of fire services are self-mitigating.

5.13.1.5 Mitigation Measures

Since no significant impacts to fire protection services would result based upon conformance to the applicable General Plan Update objectives and policies, no mitigation is required.

5.13.1.6 Level of Significance After Mitigation

No significant impacts to fire protection services have been identified as part of this EIR.

5.13.2 Law Enforcement

5.13.2.1 Existing Conditions

Regulatory Plans and Policies

Police response times are addressed in the City's Threshold Standards Policy and in the Otay Ranch GDP. With regards to police response times, the Threshold Standard requires that, among other considerations, 81 percent of Priority I emergency calls (i.e., life threatening) and 57 percent of Priority II urgent calls (i.e., misdemeanor in progress) throughout the city shall be responded to within seven minutes and shall maintain an average response time of 5.5 and 7.5 minutes, respectively.

The objective under Section E, Part 6, Law Enforcement Facilities, of the Otay Ranch GDP is to make provisions for criminal justice facilities, including jails, courts, and police facilities adequate to serve the Otay Ranch area.

Existing Citywide Conditions

Police protection for the City of Chula Vista is provided by the Chula Vista Police Department. There is one central police station within the city located at 315 Fourth Avenue, within the Northwest Update Area. All police operations are based out of this one central facility. The department currently maintains 1.17 sworn employees per 1,000 residents. Currently, the Chula Vista Police Department has 228 sworn officers and 112 civilian staff. The Department is recruiting new officers and has approximately 15 officers in training.

For the purposes of providing police services, the city is subdivided into three geographic sectors which correspond to the Northwest, Southwest, and East Planning areas. Each sector is further broken down into a beat configuration, as shown on Figure 5.13-2. Officers respond to calls citywide. The beat strength does not include traffic units, school resource officers, roving patrol officers, patrol sergeants, and investigative division units that service the city as needed. Beats within sectors take into account call volumes and natural geographic or manmade boundaries. As the city continues to grow, additional beats would be added to the eastern portion of Chula Vista.

Despite increasing population and traffic volumes, emergency response in the city has improved over the last year. During the most recent reporting period, 82.1 percent of emergency calls (Table 5.13-3) and 48.4 percent of urgent calls were responded to within seven minutes. Additionally, the city has experienced an 8 percent decline in crime rates over the last five years.

TABLE 5.13-3
RESPONSE TIMES EMERGENCY CALLS FOR SERVICE

Fiscal year	Call Volume	Percent of Call Response within 7 Minutes (percent)	Average Response Time
Emergency Response Threshold		81.0	5:30
2004	1,322 of 71,000	82.1	4:52
2002–3	1,424 of 71,268	80.8	4:55
2001–02	1,539 of 71,859	80.0	5:07
2000–01	1,734 of 73,977	79.7	5:13
1999–00	1,750 of 76,738	75.9	5:21
CY 1999*	1,890 of 74,405	70.9	5:50

*The 1998-99 Fiscal Year report used calendar year (CY) 1999 data due to implementation of new CAD system mid-1998.

Response time is just one measure of how police services are keeping pace with growth. The City has implemented measures to improve police response time. These measures range from maintaining full staffing to technological improvements.

5.13.2.2 Thresholds of Significance

The proposed General Plan Update would result in a significant impact to public services if it would:

Threshold 1: Result in the inability of the City to provide an adequate level of service in accordance with the adopted standards and thresholds.

5.13.2.3 Impacts

Threshold 1 states that adoption of the General Plan Update would result in significant impacts to law enforcement services if the plan would result in the City's inability to provide an adequate level of service in accordance with the adopted standards and thresholds.

Impacts to police protection services resulting from implementation of the Preferred Plan or Scenarios 1, 2, or 3 would be similar. The land uses proposed for the four scenarios would increase the demand for police protection services by increasing development densities in the west and by converting vacant land in the east to urban uses.

The Police Department currently responds to 82.1 percent of Priority I calls and 48.4 percent of Priority II calls within the seven-minute response threshold. The land uses proposed for any of the scenarios (Preferred Plan and Scenario 1, 2, or 3) would result in an increase in calls for service regardless of which is ultimately selected. Estimated increase for calls for police services beyond the anticipated 16,766 additional calls at buildout of the adopted General Plan for each of the scenarios is presented in Table 5.13-4.

TABLE 5.13-4
PROJECTED POLICE CALLS FOR SERVICE AT BUILDOUT ABOVE EXISTING CONDITIONS

Condition	Northwest Planning Area	Southwest Planning Area	East Planning Area	Total
Scenario 1	4,541	2,381	13,268	20,190
Scenario 2	7,078	2,644	13,343	23,065
Scenario 3	3,616	2,657	14,845	21,119
Preferred Plan	5,487	2,213	13,776	21,476

SOURCE: City of Chula Vista Police Department.

In the East Planning Area, design of newer subdivisions, including new streets, secured entries, and the overall number of new units, as well as the rapid pace of construction, would impact Police Department services. The design of new home construction may also be an issue due to the common feature of an alarm system on new homes that tends to increase false alarm calls and further consume Police Department resources. Additionally,

development in the East Planning Area would require officers to travel additional distances to respond to calls for service, increasing response time.

The central police station at Fourth Avenue and F Street is sufficient to meet the law enforcement needs created by the increased demand associated with the Preferred Plan, Scenario 1, Scenario 2, or Scenario 3. However, in order to maintain response times, more police officers would be needed. Additionally, adherence to police protection standards would be necessary to ensure that adequate levels of service are maintained.

The Police Department is anticipating meeting the challenges of overall growth in the city with technological upgrades to equipment. These upgrades could include a computer-aided dispatch system integrated with in-car global positioning system (GPS) systems, MDC mapping capabilities in every car, and the ongoing efforts to reduce false alarms. The department is also seeking support for research into alternative call management options to correctly prioritize calls and improve deployment tactics including revised beat configurations, bike patrol units, and a possible aerial component. Implementation of the objectives and policies contained in the proposed General Plan Update would avoid potential impacts to law enforcement services.

The proposed General Plan Update includes proposed Objectives PFS 5, PFS 6, and GM-1, which contain policies that address police protection. These policies are presented in the preceding section that addresses fire protection. In addition to those policies listed in the discussion of fire services, the following policies addressing police services are also included in Objective PFS 5:

PFS 5.4 Provide adequate law enforcement staff and equipment pursuant to Police Department strategic plans to meet established service standards.

PFS 5.5 Explore the need to establish local, community-based satellite or storefront police offices to enhance community wellbeing.

Impacts to police protection services would be avoided because the policies contained in the proposed General Plan require that the City provide adequate law enforcement staff and equipment equivalent to the existing ratio of police officers to population to meet established service standards (PFS 5.4) and calls for the City to maintain a set quantitative level of service measures (growth management threshold standards) as a tool to assess the relative impact of new facility and service demands created by growth (GM 1.1), and apply those standards, as appropriate, to approval of discretionary projects (GM 1.1), and establishes the authority of the City Council to withhold discretionary approval and subsequent building permits for projects out of compliance with those standards (GM 1.11). Therefore, impacts to law enforcement services are avoided because the plan includes self-mitigating Objectives PFS 5, 6, and GM 1 and associated policies.

Update Areas

Because Policy PFS 5.4 requires that the City provide adequate law enforcement staff and equipment equivalent to the existing ratio of police officers to population to meet established service standards and Policy GM 1.1 calls for the city to maintain a set of threshold standards which are policy based quantitative level of service measures as a tool to assess the impact of new service demands.

5.13.2.4 Level of Significance Prior to Mitigation

The proposed GPU would not result in a significant impact resulting from the provision of new or expanded police facilities. It is not anticipated that future proposed growth would necessitate the construction of new or expanded police facilities. Existing physical facilities are adequate to handle police protection for the projected proposed General Plan buildout. Potential impacts to the provision of law enforcement services would be avoided by implementation of the proposed Policy PFS 5.4 which requires that the City provide adequate law enforcement staff and equipment equivalent to the existing ratio of police officers to population to meet established service standards, Policy GM 1.1 which calls for the city to maintain a set of quantitative level of service measures (growth management threshold standards) as a tool to assess the relative impact of new facility and service demands created by growth (GM 1.1), and apply those standards, as appropriate, to approval of discretionary projects (GM 1.1), and establishes the authority of the City Council to withhold discretionary approval and subsequent building permits for projects out of compliance with those standards (GM 1.11). As such, there would not be a significant impact resulting from the provision of law enforcement services.

As described above, impacts to the level of service for police are considered self-mitigating because of the requirements of the City to withhold discretionary approval for projects that do not comply with threshold standards.

5.13.2.5 Mitigation Measures

Since no adverse impacts to law enforcement services would result, no mitigation is necessary.

5.13.2.6 Level of Significance After Mitigation

No impacts to the provision of law enforcement services have been identified as part of this EIR.

5.13.3 Schools

5.13.3.1 Existing Conditions

Regulatory Plans and Policies

School services are addressed in the City's Threshold Standard and in the Otay Ranch GDP. The Threshold Standard states that the City shall provide the two local public school districts with an annual report which includes a 12- to 18-month growth forecast; and the District shall provide the City's Growth Management Oversight Commission with an evaluation of their ability to accommodate that growth.

The goal of Section E, Chapter 8, School Facilities, of the Otay Ranch GDP is to provide educational facilities for Otay Ranch residents by coordinated planning of school facilities with the appropriate districts. The GDP identifies seven elementary schools planned for future construction, two of which are currently under construction. Additionally, the GDP contains guidelines for the siting and acreage of school facilities.

Existing Citywide Conditions

There are two public school districts that provide all public primary and secondary school facilities and services in the city of Chula Vista: Chula Vista Elementary School District (CVESD) and Sweetwater Union High School District (SUHSD).

CVESD

CVESD operates kindergarten through sixth grade. There are 34 CVESD-operated schools in the city (Table 5.13-5). Established in 1892, CVESD is the largest kindergarten through sixth grade school district in California. CVESD serves approximately 25,600 students and employs approximately 2,600 people districtwide.

In addition to traditional instruction, Family Resource Centers are located on the sites of four schools. These centers offer services which include case management, counseling, emergency food, assistance with health insurance and other applications and forms, job search help, and employment internships. The District also has a Professional Development School, Model Technology Schools, Pre-service Bilingual Teacher Training Center, Dual Language Acquisition Program, State-funded Preschool Programs, and Extended Day Child Care.

SUHSD

SUHSD operates junior and senior high schools and ancillary programs. There are 18 SUHSD-operated schools in the city (Table 5.13-6). SUHSD, the largest secondary school system in California, serves approximately 36,000 students in junior and senior high schools

TABLE 5.13-5
CHULA VISTA ELEMENTARY SCHOOL DISTRICT SCHOOLS

School	Planning Area
Cook	Northwest
CV/LCC	Northwest
Feaster-Edison	Northwest
Hilltop	Northwest
Kellogg	Northwest
Mueller	Northwest
Vista Square	Northwest
Harborside	Southwest
Castle Park	Southwest
Lauderbach	Southwest
Loma Verde	Southwest
Montgomery	Southwest
Otay	Southwest
Palomar	Southwest
Rice	Southwest
Rohr	Southwest
Rosebank	Southwest
Allen	East
Arroyo Vista	East
Casillas	East
Chula Vista Hills	East
Clear View	East
Discovery	East
EastLake	East
Halecrest	East
Hedenkamp	East
Heritage	East
Marshall	East
McMillin	East
Olympic View	East
Parkview	East
Rogers	East
Tiffany	East
Valle Lindo	East

TABLE 5.13-6
SWEETWATER UNION HIGH SCHOOL DISTRICT SCHOOLS
WITHIN THE CITY OF CHULA VISTA

School	Planning Area
Chula Vista HS	Northwest
Chula Vista MS	Northwest
Hilltop HS	Northwest
Hilltop MS	Northwest
Castle Park HS	Southwest
Castle Park MS	Southwest
Chula Vista AS	Southwest
Fifth Avenue Academy	Southwest
MAAC Community Charter	Southwest
Options Secondary	Southwest
Palomar HS	Southwest
Alta Vista Academy	East
Bonita Vista HS	East
Bonita Vista MS	East
EastLake HS	East
EastLake MS	East
Otay Ranch HS	East
Ranch Del Rey MS	East

AS = Adult School
HS = High School
MS = Middle School

combined and approximately 40,441 adult learners in south San Diego County, including Chula Vista.

In addition to traditional middle school and high school curriculum, adult education classes are available at over 70 locations throughout South County. These classes include U.S. citizenship and English as a Second Language (ESL) programs, vocational- and professional-skills development, as well as literacy and other general education courses that help students prepare for a high school diploma or General Education Development (GED) equivalency certificate. The District also provides parent education and personal development courses.

Update Areas

CVESD

Of the 17 CVESD operated schools located west of I-805, four are located within the Northwest Update Area and four within the Southwest Update Area. CV/LCC, Feaster-Edison, Mueller, and Vista Square are located in the Northwest Update Area and Harborside, Lauderbach, Montgomery, and Rice are located in the Southwest Update Area. Valle Lindo, a CVESD-operated school, is located just north of the portion of the Southwest Update Area north of Main Street and just east of I-805.

There are currently no CVESD operated schools in the East Update Area. CVESD currently operates 17 schools east of I-805. There are two CVESD operated schools located just outside the northeast portion of the East Update Area: Heritage and McMillin.

SUHSD

SUHSD operates two schools within the Northwest Update Area and four within the Southwest Update Area (see Table 5.13-6). Chula Vista High School and Chula Vista Middle School serve the junior and senior high school student population of the Northwest Update Area. The student population in the Southwest Update Area is served by Castle Park Middle School, Chula Vista Adult School, Palomar High School, and Fifth Avenue Academy.

Of the seven SUHSD operated schools east of I-805, the recently constructed Otay Ranch High School is located in the East Update Area. The current capacity of Otay Ranch High School is 2,400 students, with a current enrollment of 2,234 students.

5.13.3.2 Thresholds of Significance

Development in accordance with the proposed General Plan Update would result in a significant impact to public services if it would:

Threshold 1: Result in the inability for the public school system to provide adequate schools.

5.13.3.3 Impacts

Threshold 1 states that adoption of the General Plan Update would result in significant impacts to the provision of school services if the plan would result in the City's inability to provide adequate schools.

The proposed General Plan Update would result in increased population in each area of the city. Demand for schools would continue to increase as the population of the city increases. Increasing the number of elementary, middle school, and high school students would have a significant impact on existing schools since they are already at or near capacity.

Proposed development and the projected increase in the number of elementary, middle school, and high school students under any of the scenarios (Preferred Plan and Scenarios 1, 2, or 3) would have a substantial impact on the existing schools since they are already at or near capacity regardless of which is ultimately selected. Demand for schools would continue to increase as the population of the city increases.

The estimated number of students to be generated by any of the scenarios upon buildout was based on the current student generation factors used by each of the school districts. Additional student generation and school needs at buildout are presented in Tables 5.13-7 through 5.13-10.

TABLE 5.13-7
STUDENT GENERATION FOR K-6

Update Area	Existing Conditions	Adopted General Plan	Preferred Plan	Scenario 1	Scenario 2	Scenario 3
Northwest	6,030	6,021	7,409	7,265	6,973	7,053
Southwest	5,730	5,533	6,258	6,118	6,260	6,343
East	12,660	18463	20,087	19,609	20,549	18,806
Bayfront	–	2,255	2,255	2,255	2,255	2,255
TOTAL	24,420	32,272	36,009	35,247	36,037	34,457

SOURCE: Chula Vista Elementary School District SNFA Report, February 2003
Generation Rate per unit: Single-family = 0.385
Multi-family = 0.2255

TABLE 5.13-8
STUDENT GENERATION FOR MIDDLE SCHOOL

Update Area	Existing Conditions	Adopted General Plan	Preferred Plan	Scenario 1	Scenario 2	Scenario 3
Northwest	2,051	2,166	2,788	2,753	2,625	2,661
Southwest	1,920	1,944	2,276	2,232	2,294	2,332
East	3,882	6,012	6,723	6,443	6,810	6,160
Bayfront	–	98	98	98	98	98
TOTAL	7,845	10,220	11,885	11,526	11,827	11,153

SOURCE: Sweetwater Union High School District, 2003
Generation Rate per unit: Single-family = 0.11
Multi-family = 0.098

TABLE 5.13-9
STUDENT GENERATION FOR HIGH SCHOOL

Update Area	Existing Conditions	Adopted General Plan	Preferred Plan	Scenario 1	Scenario 2	Scenario 3
Northwest	4,002	4254	5501	5435	5178	5251
Southwest	7,481	11672	13096	12,525	13251	11969
East	7,481	11672	13096	12,525	13,251	11969
Bayfront	–	196	196	196	196	196
TOTAL	18964	27,794	31889	30,681	31876	29385

SOURCE: Sweetwater Union High School District, 2003
Generation Rate per unit: Single-family = 0.221
Multi-family = 0.196

TABLE 5.13-10
ADDITIONAL SCHOOLS PER SCENARIO
CHULA VISTA ELEMENTARY SCHOOL DISTRICT

Planning Area	Existing	Preferred Plan	Scenario 1	Scenario 2	Scenario 3
Northwest	0.72	3.87	3.65	3.02	3.20
Southwest	–0.03	1.75	1.42	1.73	1.92
East*	0	2	1	3	0

*This total represents additional facilities needed in the East, beyond the seven elementary schools identified in the GDP.

Including current enrollment, the Preferred Plan is expected to generate approximately 79,783 elementary, middle, and high school students (see Tables 5.13-7 through 5.13-9

respectively). As seen in Table 5.13-10, ~~no additional~~ 5.6 elementary schools would be required in the west upon buildout of the Preferred Plan; two would be required in the east.

Estimated student generation for elementary, middle school, and high school students is shown on Tables 5.13-7 through 5.13-9, respectively. Implementation of Scenario 1 is expected to generate approximately 77,454 elementary, middle school, and high school students and Scenario 2 is expected to generate 79,740 students. Compared to the other scenarios, Scenario 3 would place the least demand on school services. Including the current student enrollment, Scenario 3 is expected to generate approximately 74,995 elementary, middle school, and high school students. Additional CVESD schools estimated upon buildout of each of the scenarios is presented in Table 5.13-10.

SUHSD has identified the need for one additional high school site in the west and expanded facilities of existing high schools and middle schools regardless of which scenario is ultimately selected. In the east, SUHSD has identified that the planned middle school and high school would be sufficient to accommodate additional student enrollment resulting from the Preferred Plan and any of the scenarios.

Specific sites for the CVESD and SUHSD schools have not yet been determined. Siting and construction of the facilities could have a potential environmental impact.

School sites in western Chula Vista have little capacity for facility expansion. The infill and redevelopment of western Chula Vista with a substantial amount of residential development would increase enrollments at these schools. A significant level of funding, which is not currently available, would be required to add the needed capacity and upgrade outdated classrooms. However, the demographics of households moving into downtown redevelopment areas may have a significantly lower student generation rate than the current household composition. In addition, changes in demographics throughout the city would also impact school facilities and educational program needs.

The proposed Public Facilities and Services Element contains the following two objectives and associated policies that address school services and facilities:

Objective PFS 9

Develop schools that cultivate and educate people of all ages, that meet the needs of the work force, and that serve as community centers.

Policies:

PFS 9.1: Coordinate with local school districts during review of applicable discretionary approvals to provide adequate school facilities, to meet needs generated by development and to avoid overcrowding in accordance with the guidelines and limitations of Government Code 65996(b).

PFS 9.2 Encourage the consideration of new approaches to accommodate student enrollments, including alternative campus locations and education programs.

PFS 9.3: Assist school districts in identifying and acquiring school sites for new construction in needed time frames.

PFS 9.4: Assist school districts in identifying sources of funding for the expansion of facilities in western Chula Vista as needed based on growth.

PFS 9.5: Work closely with the school districts to identify needs for public education facilities and programs, including developing and expanding extra-curricular recreation and educational programs, for primary, secondary and adult education, and providing state-of-the-art information services.

Objective PFS 10

Efficiently locate and design school facilities.

Policies:

PFS 10.1: Coordinate and make recommendations to the school districts, property owners and developers on the location, size and design of school facilities relative to their location in the community. Suggest to the school districts that they consider joint use and alternative structural design such as multi-story buildings where appropriate

PFS 10.2: Coordinate with the school districts to maximize student safety at school campuses and public library facilities.

PFS 10.3: Require that proposed land uses adjacent to a school site be planned in such a manner as to minimize noise impacts and maximize compatibility between the uses.

PFS 10.4: Encourage the central location of new schools within the neighborhoods or areas they serve so as to further community development and enhance the quality of life.

As discussed in the Fire Protection and Law Enforcement sections above, the proposed Growth Management Element contains Objective GM 1 and associated policies to assure public facilities and services are available to residents and visitors of Chula Vista in a timely manner as development occurs. These policies pertain to schools as well as fire protection and law enforcement services. Unlike police and fire services, however, the City of Chula Vista is not responsible for the actual provision of schools. This responsibility falls to the CVESD and the SUHSD.

Impacts to the provision of school services would be avoided because policies in the General Plan Update require that school facilities are sufficient to accommodate projected student population generated by the proposed General Plan Update (PFS 10.1) in accordance with the guidelines and limitations of Government Code 65995(b) (Policy PFS 9.1) and calls for the City to maintain a set of set of quantitative level of service measures (growth management threshold standards) as a tool to assess the relative impact of new facility and service demands created by growth (GM 1.1), and apply those standards, as appropriate, to approval of discretionary projects (GM 1.1), and establishes the authority of the City Council to withhold discretionary approval and subsequent building permits for projects out of compliance with those standards (GM 1.11). Therefore, impacts to the provision of school services are avoided by the implementation of self-mitigating Policies PFS 9.1, PFS 10.1, GM 1.1, and GM 1.11.

5.13.3.4 Level of Significance Prior to Mitigation

The proposed General Plan Update would result in increased population in each of the Update areas of the city. Demand for schools will continue to increase as the population of the city increases. Increasing the number of elementary, middle school, and high school students will result in the need for additional schools.

As discussed above, school sites in western Chula Vista have little capacity for facility expansion. The infill and redevelopment of western Chula Vista with residential development would increase enrollments at these schools. A level of funding, which is not currently available, would be required to add the needed capacity and upgrade outdated classrooms. Changes in demographics throughout the city would also impact school facilities and educational program needs.

Provision of school facilities is the responsibility of the school district when additional demand warrants. The legislation provides that the statutory fees are the exclusive means of considering as well as mitigating for school impacts. It does not just limit the mitigation that may be required, but also limits the scope of review and the findings to be adopted for school

impacts. Once the statutory fee is imposed, the impact would be mitigated because of the provision that statutory fees constitute full and complete mitigation [Government Code 65995(b)].

When proposed as part of a development project, the environmental effects can be reviewed and controlled by the City of Chula Vista. When school construction or modification is completed by the school district it is outside of the authority of the City.

The proposed General Plan Update does not result in the inability of the public school system to provide adequate schools because Policies PFS 9.1, 10.1, and Objective GM 1 require the provision of adequate schools. Impacts resulting from development completed in conformance with the proposed General Plan are considered to be self-mitigating because policies in the General Plan Update require that school facilities are sufficient to accommodate projected student population generated by the proposed General Plan Update (PFS 10.1) in accordance with the guidelines and limitations of Government Code 65995(b) (Policy PFS 9.1). In addition, complying with Objective GM 1 would ensure that school services and facilities are concurrent with need. Policy GM 1.1 calls for the city to maintain a set of threshold standards which are policy based quantitative level of service measures as a tool to assess the relative impact of new service demands expected or created by growth.

5.13.3.5 Mitigation Measures

Since no significant impacts to the provision of schools services would result, no mitigation is required.

5.13.3.6 Level of Significance After Mitigation

No significant impacts to the provision of school services were identified as part of this EIR.

5.13.4 Library Service

5.13.4.1 Existing Conditions

Regulatory Plans and Policies

Policies and guidelines regarding library services in the city of Chula Vista are contained within the Library Facilities Master Plan, the Library Strategic Plan, the Otay Ranch GDP, and the City's Threshold Standard.

The Chula Vista Library Strategic Plan provides a blueprint for library service over a five-year period. The Library Strategic Plan is designed to focus priorities and resources in order to ensure residents of Chula Vista receive the highest quality library services possible.

The Library Facilities Master Plan addresses the increasing demand for library services in response to the city's continuing growth.

Section E, Part 7, Library Facilities, of the Otay Ranch GDP requires that 500 gross square feet (GSF) per 1,000 residents of library facilities and services be provided to meet the information and education needs of Otay Ranch residents.

The Threshold Standard states that the City shall construct 60,000 GSF of library space, beyond the citywide June 30, 2000 GSF, in the area east of I-805 by buildout. Additionally, construction of these facilities shall occur in phases such that the City will not fall below the citywide ratio of 500 GSF per 1,000 residents.

Existing Citywide Conditions

There are currently three full-service libraries in the city of Chula Vista (Figure 5.13-3): the Civic Center Branch, the South Chula Vista Branch, and the EastLake Branch. The three facilities comprise a total of 102,000 square feet of library space, including 14,000 square feet of administrative facility space. In addition to the three full service libraries, the Chula Vista Heritage Museum is part of the Chula Vista Public Library System and a Chapter of the Friends of the Library. The Library Facilities Master Plan calls for the construction of a 30,000-square-foot full-service library in Rancho del Rey by summer 2007.

Update Areas

The Civic Center Branch Library, located in the Northwest Update Area, is 27 years old and considered the city's main library. The 41,000 square feet of library space is 54 percent of the existing library space. The library is crowded and frequently public passageways are congested. It should be noted that approximately 14,000 square feet at the Civic Center Library is used to house non-public service, system-wide administrative and support functions. The library has reached its capacity with regard to materials.

The Chula Vista Heritage Museum, located at 360 Third Avenue, is also in the Northwest Update Area. Although not formally counted as part of the library system, the Civic Center Branch oversees the operation of this approximately 500-square-foot museum. The mission of the museum is to locate, collect, display, preserve, and record materials of local historic interest to the South San Diego Bay communities. The museum collection has expanded beyond the current available square footage and uses the Civic Center Branch basement to store and process photos and memorabilia.

The South Chula Vista Branch Library is located in the Southwest Update Area. This 37,000-square-foot library opened in 1995 and comprises 36 percent of the current library space in the city. The branch has reached collection capacity as well as space and storage capacity.

Due to the number of children served, this division has a large storage and assembling need and currently occupies space not originally planned for these activities.

The EastLake Branch Library, located in the East Update Area, is a joint-use facility between the Chula Vista Public Library and the Sweetwater Union High School District. This facility is located in a building in the rear area of the EastLake High School campus. The facility serves as the High School Library during the school day and as a public library during non-school hours. This 10,000-square-foot branch opened in 1993, and represents 10 percent of the existing library space in the city.

5.13.4.2 Thresholds of Significance

The proposed General Plan Update would result in a significant impact to public services if it would:

Threshold 1: Result in the inability for the city to provide an adequate level of service in accordance with the adopted standards and thresholds, which currently requires the provision of 500 square feet of library facilities per 1,000 population for new development.

5.13.4.3 Impacts

Threshold 1 states that adoption of the General Plan Update would result in significant impacts to the provision of library services if the plan would result in the City's inability to provide an adequate level of service in accordance with the adopted standards and thresholds, which currently requires the provision of 500 square feet of library facilities per 1,000 population for new development.

Buildout of the Preferred Plan or Scenarios 1, 2, or 3 would increase the demand for library services throughout the city. Table 5.13-11 provides the calculation for library facilities demand under each Scenario. For the Preferred Plan, 44,500 square feet of additional library space would be required to meet the forecasted population growth. It should be noted that the library requirement is citywide and can be met anywhere in the city. While the change in population resulting from the proposed General Plan Update stems from land use changes in the Update Areas, the library need can be met in other areas of the city. Scenario 1 would require an additional 41,000 square feet of library space in order to meet newly created demand. Scenario 2 would require 45,500 square feet and Scenario 3 would require 38,000 square feet of library space.

TABLE 5.13-11
LIBRARY REQUIREMENT[1]

	Population	Existing Population	Change	1,000 Population	Library Requirement (square feet)
Preferred Plan	298,529	209,200	89,329	89	44,500
Scenario 1	291,546	209,200	82,346	82	41,000
Scenario 2	299,837	209,200	90,637	91	45,500
Scenario 3	285,656	209,200	76,456	76	38,000

[1]Population figures are for the incorporated area of the city.

The proposed Public Facilities and Services Element contains the following three objectives and associated policies that address library services:

Objective PFS 11

Provide a library system of facilities and programs that meets the needs of Chula Vista residents of all ages.

Policies

PFS 11.1: Coordinate with the Chula Vista Public Library during review of land use issues requiring discretionary approval to provide adequate library facilities that meet the needs generated by development.

PFS 11.2: Encourage an update to the Chula Vista Public Library Facilities Master Plan within five to eight years.

PFS 11.3: Assist the Chula Vista Public Library in identifying and acquiring library sites for new construction in needed time frames.

PFS 11.4: Assist the Chula Vista Public Library in identifying sources of funding for the expansion of facilities in western Chula Vista as needed based on growth.

PFS 11.5: Work closely with the Chula Vista Public Library to identify needs for public outreach programs, including developing and expanding extra-curricular recreation and educational programs and providing state-of-the-art information services.

Objective PFS 12

Efficiently locate and design of library facilities.

Policies

PFS 12.1: Coordinate and make recommendations to the Chula Vista Public Library and property owners/developers on the location, size and design of library facilities relative to their location in the community.

PFS 12.2: Maximize customer safety at public library facilities.

PFS 12.3: Require that proposed land uses adjacent to a library site be planned in such a manner as to minimize noise impacts and maximize compatibility between the uses.

Objective PFS 13

Use alternative site location and design methods, including joint use of facilities, to meet the school and public library needs of the City.

PFS 13.1: Consider and suggest joint use of school and public library facilities where feasible, especially at high schools and institutions of higher learning.

PFS 13.2: Ensure that operation of joint use facilities provides adequate and safe child supervision consistent with school district policies.

PFS 13.3: Encourage the maintenance of safe access, clear signage and sufficient parking for joint use school and public library facilities.

Policies contained in Objectives PFS 11, 12, and 13 demonstrate Chula Vista's commitment to ensuring adequate library facilities and services. Objective PFS 11 focuses on providing a library system that meets the needs of the City. It sets five policies that require the City to work with the Chula Vista Public Library to acquire sites, identify sources of funding for expansion of facilities, and ensuring the provision of libraries required as the result of new development are addressed through the discretionary approval process.

In addition, the strategic plan for the library sets a series of goals to help meet the demand for libraries and library services within the City. Goal 26 of the strategic plan addresses the Facilities Master Plan and the provision of additional libraries.

> Goal 26: Maintain consistent level of service to the community through the implementation of the CVPL "Facilities Master Plan".
>
> - Prepare a Library Bond Act application for construction of the Rancho del Rey Branch Library by June 14, 2002
> - Build an approximately 30,000 square foot branch library at Rancho del Rey by 2005/06
> - Revise the CVPL "Facilities Master Plan" (Year 5)

The construction of the 30,000-square-foot full-service library in Rancho del Rey is currently in the design build process and is slated for completion by summer 2007.

Potential impacts to the provision of library services would be avoided because, as discussed in the Fire Protection, Law Enforcement, and Schools sections above, the proposed plan contains policies associated with Objectives PFS 11, 12, and 13 and Objective GM 1 to assure public facilities and services are available to residents and visitors of Chula Vista in a timely manner as development occurs. Complying with Objective GM 1 would ensure that the provision of library services and facilities are provided concurrent with need. Policy GM 1.1 calls for the city to maintain a set of threshold standards which are policy based quantitative level of service measures as a tool to assess the relative impact of new service demands expected or created by growth. The application of Policies GM 1.9 and GM 1.11 would ensure that major development projects are not approved if these facilities are inadequate. The application of Policies GM 1.9 and GM 1.11 would ensure that major development projects are not approved if these facilities are inadequate. GM 1.11 states that the General Plan:

> Establish the authority to withhold discretionary approvals and subsequent building permits from projects demonstrated to be out of compliance with applicable Threshold Standards.

The requirement for provision of 500 square feet of library space per 1,000 people for new development would be ensured through the application of this policy. As such, there is no significant impact to libraries from the adoption of the Preferred Plan or any of the Scenarios; in essence, it is self-mitigating.

In addition, facilities are funded through development impact fees collected as part of the City's Public Facilities Development Impact Fee (PFDIF). Implementation of the Preferred Plan or Scenarios 1, 2, or 3 would require an amendment to the PFDIF recreation facilities component in order to expand the total number of facilities needed to meet new growth.

5.13.4.4 Level of Significance Prior to Mitigation

Impacts resulting from implementation of any of the scenarios would be the same regardless of which is ultimately selected. Currently, there are insufficient existing libraries in the city to meet the 500 square feet per 1,000 population standard. Adoption of the General Plan would generate increased demand for library facilities.

The proposed General Plan would not result in significant impacts to the provision of library services and facilities because the policies contained in the proposed General Plan require that library facilities are sufficient to accommodate increased demand generated by the proposed Preferred Plan or Scenarios 1, 2, or 3. The plan contains Objectives PFS 11, 12, and 13, which demonstrate Chula Vista's commitment to ensuring adequate library facilities and services. Implementation of these policies would reduce potential impacts but not to below a level of significance.

Complying with Objective GM 1 would ensure that the provision of library services and facilities are provided concurrent with need. Policy GM 1.1 calls for the city to maintain a set of threshold standards which are policy based quantitative level of service measures as a tool to assess the relative impact of new service demands expected or created by growth. The application of Policies GM 1.9 and GM 1.11 would ensure that major development projects are not approved if these facilities are inadequate. The threshold standard requiring the provision of 500 square feet per 1,000 people for new development would be ensured through the application of this policy. As such, there is no significant impact to libraries from the adoption of the Preferred Plan or any of the Scenarios; in essence, it is self-mitigating.

5.13.4.5 Mitigation Measures

Since there are no significant impacts for the provision of library facilities and no impacts would result from adoption of the proposed General Plan Update, no mitigation is necessary.

5.13.4.6 Level of Significance After Mitigation

No significant impacts to library services have been identified as part of this EIR.

5.13.5 Parks and Recreation

5.13.5.1 Existing Conditions

Regulatory Plans and Policies

Parks and recreation are addressed in the Parks and Recreation Master Plan, Otay Ranch GDP, Otay Valley Regional Park Concept Plan, Greenbelt Master Plan, and the City's Threshold Standard Policy.

The Parks and Recreation Master Plan is oriented to create a comprehensive parks and recreation system that uses public and quasi-public resources which strives to meet the needs of the city by effectively distributing park types and their associated recreation facilities and programs. In addition, the Plan contains several policies which address the siting and acreage of community and neighborhood parks.

Chapter 4 of the Otay Ranch GDP addresses parks and recreation. The intent of the GDP is to provide diverse park and recreational opportunities within Otay Ranch which meet the recreational, conservation, preservation, cultural, and aesthetic needs of the community.

The intent of the Otay Valley Regional Park Concept Plan is to provide recreation facilities, protect resources, and coordinate the park's development with adjacent land uses to ensure compatible development, buffering, and linkages with other regional resources. In addition, the Plan requires that a comprehensive management plan be implemented to address long-term management of the park, provide protection for park visitors and neighbors, develop recreational programs, and enhance park/open space activities and resources.

The Greenbelt Master Plan as it relates to parks and recreation ensures public access within the Greenbelt through an active and passive recreation park system with trails connecting each segment.

The Growth Management Threshold Standard requires that three acres of neighborhood and community parkland with appropriate facilities shall be provided per 1,000 residents in the area east of I-805. The three acres per 1,000 residents population threshold standard does not apply to portions of the city west of I-805. However, per the Park Development Ordinance, the three acres per 1,000 population standard does apply to the entire city, including western Chula Vista.

Existing Citywide Conditions

Under the adopted General Plan, the city is divided into five planning areas: Bayfront, Central, Montgomery, Sweetwater, and Eastern Territories. Existing and future parks and recreation facilities within the city are identified in Figure 5.13-4; the corresponding

numbered locations are summarized in Table 5.13-12. Table 5.13-12 summarizes the location, acreage, and amenities of the existing and future park recreation facilities in each planning area and includes additional park and/or recreation areas not identified in the adopted Parks and Recreation Master Plan. In eastern Chula Vista, the 3 acres per 1,000 population threshold standard is currently being met.

As seen in Table 5.13-12, the Montgomery area lacks an existing community park and the one that is planned for the area is not yet fully planned and approved. Additionally, the Bayfront lacks existing or planned neighborhood parks (see Table 5.13-12).

Chula Vista currently has 42 community parks, neighborhood parks, and mini-parks. Using the year 2000 census data, Chula Vista provided 2.19 acres of parkland per 1,000 residents. Table 5.13-13 below summarizes park acreage per population in each of the five community planning areas.

In addition to the park acreage shown in Table 5.13-13, Chula Vista contains over 9,433 acres of regional parks within its planning area. These incorporate substantial portions of the Sweetwater and Otay River valleys, as well as the Upper and Lower Otay Reservoirs, and make up a significant portion of the Chula Vista Greenbelt.

In addition to the above parks, Chula Vista also has golf courses. The City currently owns one golf course in the city of Chula Vista, leased to and managed by American Golf Corporation. The city also contains four other privately owned courses within the General Plan area: San Diego Country Club, Bonita Golf Course, EastLake Country Club, and The Auld Course.

Update Areas

The Northwest Update Area contains parks and recreational facilities (see Figure 5.13-4). There are three neighborhood parks in the Northwest Update Area: Chula Vista Memorial Park, Friendship Park, and Norman Park. Together these parks total approximately 13.32 acres and have a variety of amenities including open green space, play equipment, and picnic areas. This area also has the recreation complex, Parkway Gymnasium, Parkway Center, and Parkway Pool, and Norman Park Senior Center.

The Southwest Update Area contains one neighborhood park, Lauderbach Park, and no community park. Lauderbach Park is approximately four acres and includes ball fields, play equipment, open green space, picnic areas, and a Boys and Girls Club of Chula Vista facility. The Otay Valley Regional Park borders this update area to the south. No park and recreation facilities currently exist within this segment of the OVRP; however, several facilities are planned for the future.

TABLE 5.13-12
SUMMARY OF EXISTING AND FUTURE PARK AND RECREATION FACILITIES

	Community Parks		Neighborhood Parks		Mini Parks		Totals		
Community/ Planning Area	Existing # Acres	Planned # Acres	Existing # Acres	Planned # Acres	Existing # Acres	Planned # Acres	Existing # Acres	Planned # Acres	Total # Acres
Bayfront	2	1	–	–	1	–	3	1	4
	25.42	20[1]			1.35		26.77	20[1]	46.77[1]
Central	1	–	3	2	3	–	7	2	9
	19.8		15.77	28[2]	1.87		37.44	28[2]	65.44[2]
Montgomery	–	1	7	4	5	–	12	5	17
		20[3]	55.12	60[3]	2.8		57.92	80[3]	137.92[3]
Sweetwater	2	–	9	–	2	–	13	–	13
	79.83		83.61		12.11		175.55		175.55
Eastern Territories	2	8	8	15	1	1	11	24	35
	56.99	364.75[4]	45.72	116.88[5]	0.9	1.0	103.61	482.63[4]	586.24[4]
TOTAL	7	10	27	21	11	1	46	32	78
	182.04	404.75	200.22	204.88	19.03	1.0	401.29	610.63	1,011.92

NOTE: Future parks and recreation facilities include proposed parks that are not yet planned or programmed.

[1]Estimated future Bayfront Park acreage identified in the adopted Park & Recreation Master Plan. This acreage is subject to change based on the results of the joint City/Port District Bayfront Master Plan.

[2]Acreage includes two parks that are proposed but not yet planned or programmed – Woodlawn Avenue/F Street at 5 to 8 acres and Lower Sweetwater at 20 acres.

[3]Acreage includes five parks that are proposed but not yet fully planned and approved – an unnamed community park in the OVRP Recreation Area 4 at 10 to20 acres; two unnamed neighborhood parks, one at Oxford Street at 5 acres and one in the OVRP Recreation Area 6 at 10 to 20 acres; and two more "Potential Recreation Areas" in the OVRP, Area 5 at 10 acres and Area 7 at 25 acres (for a total of 80 potential future park Acres in the Montgomery area that are not yet fully planned and approved).

[4]Acreage includes four parks that are proposed but not yet fully planned and approved – two unnamed community parks, the Landfill park site at 35 acres and the OVRP Area 11 West site at 10 to 20 acres; and two more "Potential Recreation Areas" in the OVRP, Area 10 at 125 acres and Area 11 East at 45 acres.

[5]Acreage includes two future 9-acre neighborhood parks in Otay Ranch Village 13 which is outside of the City of Chula Vista municipal boundaries and current Sphere of Influence.

TABLE 5.13-13
PUBLIC PARK ACREAGE PER POPULATION (YEAR 2004)

Planning Area	Park Acres	Population	Park Acres/1,000 Population
Bayfront	26.77	0	-
Northwest	42.72	56,931	0.75
Southwest	57.92	53,562	1.08
East	279.95	98,707	2.84
TOTAL	407.36	209,200	1.95

There are currently no neighborhood or community parks or community centers within the East Update Area. The Park and Recreation Master Plan identifies several community and neighborhood parks planned for construction in the future within this update area. The OVRP, part of the Greenbelt system, runs along the southern boundary of this update area. This segment of the OVRP currently contains no recreation facilities; however, several are planned for future construction.

5.13.5.2 Thresholds of Significance

The proposed General Plan Update would result in a significant impact to public services if it would:

Threshold 1: Result in the inability for the City to provide an adequate level of service in accordance with the adopted standards and thresholds, which currently requires the provision of 3 acres of dedicated parkland per 1,000 population for new development.

5.13.5.3 Impacts

Threshold 1 states that adoption of the General Plan Update would result in significant impacts to park and recreation services if the plan would result in the City's inability to provide an adequate level of service in accordance with the adopted standards and thresholds, which currently requires the provision of three acres of dedicated parkland per 1,000 population for new development.

Adoption of the Preferred Plan or Scenarios 1, 2, or 3 would result in an increase in the need for park and recreation facility improvements (i.e., sport fields and courts, picnic facilities, playground equipment, and all related support facilities including parking lots and walkways) by increasing residential density in the west and converting vacant land in the east to residential uses. Table 5.13-14 provides the calculation for park demand under each Scenario. For the Preferred Plan, 267 acres of additional parks would be required to meet the forecasted population growth resulting form new development. It should be noted that the park requirement is citywide and can be met anywhere in the city. While the change in population resulting from the proposed General Plan Update stems from land use changes in the Update Areas, the park need can be met in other areas of the city. Scenario 1 would require an additional 246 acres of developed parkland in order to meet newly created demand. Scenario 2 would require 273 acres of newly developed parkland and Scenario 3 would require 231 acres.

TABLE 5.13-14
PUBLIC PARK ACREAGE REQUIREMENT

	Population	Existing Population	Change	1,000 Population	Park Need (acres)
Preferred Plan	298,529	209,200	89,329	89	267
Scenario 1	291,546	209,200	82,346	82	246
Scenario 2	299,837	209,200	90,637	91	273
Scenario 3	285,656	209,200	76,456	76	228

NOTE: Population figures are for the incorporated area of the city.

Recreation facilities are funded through development impact fees collected as part of the City's PFDIF. Implementation of Preferred Plan would require an amendment to the PFDIF recreation facilities component in order to expand the total number of facilities needed to meet new growth.

Siting and construction of the facilities could result in potential environmental impacts. Sites have not been determined and are not part of the proposed General Plan Update. Siting of parks would take into account the minimization of environmental impacts at the time specific locations are determined.

Within eastern Chula Vista, the current three acres per 1,000 resident population threshold standard is being met.

The Parks and Recreation Master Plan states that at buildout of the adopted General Plan, with implementation of existing goals and policies, the city would have over 700 acres of parkland available for recreational use to meet the expressed needs of the community. The system is planned to be comprised of a minimum of nine community parks, 46 neighborhood parks, and several regional parks.

The Parks and Recreation Master Plan includes a demand analysis for parks and recreation facilities, which concludes that existing facilities fall short of current demand and that while future growth would result in additional parklands, there would continue to be a deficit in western Chula Vista due to the amount of parkland that can be required of new development.

The land uses identified in the Preferred Plan and Scenarios 1, 2, and 3 would increase demand for park and recreational services and facilities throughout the city. Potential impacts to the provision of park and recreational services are avoided because the plan contains policies which ensure adequate services are provided concurrent with need.

The proposed Public Facilities and Services Element contains the following objectives and associated policies that address park and recreation services and facilities:

Objective PFS 14

Provide parks and recreation facilities and programs citywide that are well maintained, safe, accessible to all residents and that offer opportunities for personal development and fitness in addition to recreation.

Policy

PFS 14.5: Work with proponents of new development projects and redevelopment projects at the earliest stages to ensure that parks, recreation, trails, and open space facilities are designed to meet City standards and are built in a timely manner to meet the needs of residents they will serve.

Objective PFS 15

Provide new park and recreation facilities for residents of new development citywide.

Policy

PFS 15.7: Work with proponents of new development projects and redevelopment projects at the earliest stages to ensure that parks, recreation, trails and open space facilities are designed to meet city standards and are built in a timely manner to meet the needs of residents they will serve.

As discussed in the Fire Protection, Law Enforcement, Schools, and the Library Service sections above, the proposed Growth Management Element contains Objective GM 1 and associated policies to assure public facilities and services are available to residents and visitors of Chula Vista in a timely manner as development occurs.

Impacts to the provision of park and recreation services and facilities would be avoided because the policies contained in the proposed General Plan ensure that park and recreation facilities are designed to meet City standards and are sufficient to accommodate increased demand generated by the proposed General Plan Update (PFS 14.5 and PFS 15.7). In addition, complying with Objective GM 1 would ensure that park and recreation services and facilities are concurrent with need. The proposed General Plan Policy GM 1.1 calls for the City to maintain a set of threshold standards which are policy based quantitative level of service measures as a tool to assess the relative impact of new service demands expected or created by growth. The application of Policies GM 1.9 and GM 1.11 would ensure that major development projects are not approved if these facilities are inadequate. Therefore, impacts

to the provision of park and recreation services and facilities are avoided by the implementation of self-mitigating Policies PFS 14.5, 15.7, GM 1.9 and GM 1.11.

5.13.5.4 Level of Significance Prior to Mitigation

The Chula Vista Municipal Code, Section 17.10 (the Park Development Ordinance – PDO) applies a standard of 3 acres of park land for every 1,000 people to all new development. Since the park demand forecast as resulting from the adoption of the Plan or any of the Scenarios results from population associated with new development, compliance with the PDO assures provision of 3 acres of dedicated park land for every 1,000 people for all new development. As a result, there is no significant impact to parks as a result of the adoption of the proposed General Plan Update.

Impacts to the provision of park and recreation services and facilities are considered to be self-mitigating because the policies contained in the proposed General Plan ensure that park and recreation facilities are designed to meet City standards and are sufficient to accommodate increased demand generated by the proposed General Plan Update (PFS 14.5 and PFS 15.7), and calls for the City to maintain a set of threshold standards which are policy based quantitative level of service measures as a tool to assess the relative impact of new service demands expected or created by growth (GM 1.1). In addition, the application of Policies GM 1.9 and GM 1.11 would ensure that major development projects are not approved if park and recreation facilities and services are inadequate by prohibiting discretionary approval for projects out of compliance with those standards (GM 1.11).

5.13.5.5 Mitigation Measures

Since there are no significant impacts for the provision of park and recreation services and facilities would result from adoption of the proposed General Plan Update, no mitigation is necessary.

5.13.5.6 Level of Significance After Mitigation

No significant impacts to parks and recreation services have been identified as part of this EIR.

5.14 Public Utilities

Public utilities consist of the provision of water, sewer, and integrated waste management services and facilities. The following discussion deals with the potential impacts that adoption of the General Plan Update would have upon existing and planned public utilities.

The City Council adopted the Threshold Standards Policy for Chula Vista in November 1987, which established "quality of life" indicators for water and sewer services and facilities. These topics were addressed in the policy in terms of a goal, objective(s), threshold, and implementation measures. These standards are intended to preserve and enhance the environment and city residents' quality of life as growth occurs.

5.14.1 Water

The City of Chula Vista prepared a water technical report to describe the various components of the existing water supply and distribution system serving the city, the current condition of those components, and the standards used to maintain the quality of water service. This report was prepared in December 2004 and is included in this EIR as Appendix H.

5.14.1.1 Existing Citywide Conditions

Water imported to the San Diego region comes from two primary sources, the Colorado River through the 240-mile Colorado River Aqueduct, and the State Water Project from Northern California through the Sacramento-San Joaquin River Delta and the 444-mile-long California Aqueduct. These sources deliver water to The Metropolitan Water District of Southern California (MWD), which then distributes water supplies to water agencies throughout the Southern California region including the San Diego County Water Authority (SDCWA). The SDCWA is comprised of 23 member agencies and receives purchased water by gravity through two aqueducts containing five large-diameter pipelines. These pipelines then supply the member water agencies that serve Chula Vista.

The California Legislature created the SDCWA through special act legislation in 1944 to administer the region's Colorado River water rights, import water and take over the operation of the aqueduct from the Navy. The first imported water arrived in the county in November 1947. Providing a safe and reliable water supply to the people who live and work in the San Diego region is the mission of the SDCWA. Today, up to 90 percent of the region's water is imported from a single supplier. Over the past several years, the SDCWA has been actively pursuing programs and projects to enhance water reliability by diversifying its water supply portfolio. All imported water is currently obtained from MWD. The SDCWA is MWD's largest member agency, purchasing up to 30 percent of MWD's supplies annually.

On October 10, 2003, representatives from the SDCWA and three water agencies signed documents required to implement the Quantification Settlement Agreement (QSA), a landmark accord that fundamentally changed the way Colorado River water is distributed and used in California. The QSA provides California a transition period to implement water transfers and supply programs that will reduce California's over-dependence upon the Colorado River and reduce the state's draw to its 4.4 million acre-foot annual apportionment. Importantly for San Diego County, the QSA cleared the way for an agreement to transfer of up to 200,000 acre-feet of water annually from the Imperial Irrigation District to the SDCWA; the initial term of this agreement is 45 years, which can be renewed for an additional 30 years if both parties agree. Also included in the QSA is a project to conserve water through the concrete lining of the All-American and Coachella Canals to prevent seepage losses, which will yield 77,000 acre-feet of water annually to the SDCWA for 110 years. When deliveries of the water are fully ramped up, San Diego County will receive nearly 280,000 acre-feet of new, highly reliable water supplies.

The development of local water resources is a focus of the SDCWA. These include efforts to make the most of local resources include recycled water programs, use modern reverse osmosis technology for the desalination of brackish (salty) groundwater in several different part of the county, groundwater storage projects, and ongoing water conservation efforts that have saved more than 345,000 acre-feet of water since 1990. The SDCWA is exploring the development of the region's first large-scale seawater desalination project adjacent to the Encina Power Station in Carlsbad. If approved, it would be the largest seawater desalination project in the Western Hemisphere, producing 56,000 acre-feet per year.

San Diego County Water Authority 2000 Urban Water Management Plan

On November 16, 2000, the SDCWA Board of Directors approved its 2000 Urban Water Management Plan (2000 UWMP). The plan outlines how the SDCWA will meet future water demands. The 2000 UWMP looks at historic and current water demands for the San Diego region, compares water supplies with demands through 2020 and identifies potential new supplies to meet those demands. Currently, SDCWA's UWMP is undergoing its five-year update and is scheduled to be finished by December 31, 2005.

Water demand within the SDCWA's service area is expected to grow from about 695,000 acre-feet currently to 813,000 acre-feet by 2020. Since the current General Plan Update uses a 2030 buildout horizon year, until the Urban Water Management Plan is updated with any adopted changes to the General Plan and projects demand until 2030, the forecast will be out of conformance with the water plan. The Urban Water Management Plan identifies the imported and local water supplies expected to meet these future water demands and diversify the county's sources of water. Local water supplies discussed in the plan include future groundwater recovery and water recycling projects, a potential seawater desalination project by 2020, as well as water conservation measures being implemented by the water agencies within the SDCWA's service area. The plan also identifies increases expected in the

SDCWA's imported water supply. Water transfer agreements, such as the one the SDCWA has with the Imperial Irrigation District (IID), will add to the region's traditional source of imported water from the MWD.

San Diego County Water Authority 2004 Annual Water Supply Report

The SDCWA Administrative Code (Section 8.00.050) requires the SDCWA to provide its member agencies, the County of San Diego, and each city in the County of San Diego an annual statement regarding the Water Authority's water supplies, implementation of SDCWA plans, and programs to meet the future water supply requirements of its member agencies. The SDCWA 2004 Annual Water Supply Report (Report) satisfies the Administrative Code requirements.

The Report provides documentation on the existing and planned water supplies being developed by the Water Authority, including the Water Authority-Imperial Irrigation District water transfer, All American and Coachella Canal lining projects, and seawater desalination. This documentation may be used by the SDCWA's member agencies in preparation of the water supply assessments and written verifications required under state law [Reference Water Code Sections 10910 through 10914 and Government Code Sections 65867.5, 66455.3, and 66473.7 and (commonly referred to as SB 610 and SB 221)].

The Report contains information regarding imported water supplies from MWD's 2003 Water Supply Report. When preparing the assessments and verifications for projects within its respective service areas, the SDCWA member agencies should use the Report, MWD's March 2003 Report, and additional information developed by the individual member agencies, such as the Sweetwater Authority and the Otay Water District, on local demands and supplies.

The SDCWA's 2000 UWMP and Regional Water Facilities Master Plan (Master Plan) identify development of a diverse mix of resources to meet water supply reliability needs within the San Diego region. Development of a diverse supply provides for flexibility and adaptability in the resource mix to handle potential risks associated with managing and developing supplies. These risks could include environmental constraints, lack of political will, water supply contamination, and/or lack of funding.

Development of local supplies by the SDCWA's member agencies is a critical element to securing reliability. Therefore, the Report provides a brief discussion on the management and development of local supplies within the San Diego region compared with the supply targets included in the 2000 UWMP.

AVAILABILITY OF SUFFICIENT SUPPLIES AND PLANS FOR ACQUIRING ADDITIONAL SUPPLIES

The SDCWA currently obtains imported supplies from MWD and an increasing amount of conserved agricultural water from IID. Section 135 of MWD's Act defines the preferential right to water for each of its member agencies. As calculated by MWD, the SDCWA currently has a preferential right to about 15.54 percent of MWD's supply, but accounts for approximately 28 percent of MWD's water sales. Under preferential rights, MWD could allocate water without regard to historic water purchases or dependence on MWD. The SDCWA and its member agencies are taking measures to reduce its dependence upon MWD through development of additional supplies and a water supply portfolio that would not be jeopardized by a preferential rights allocation. MWD has stated, consistent with Section 4202 of its Administrative Code, that it is prepared to provide the SDCWA's service area with adequate supplies of water to meet expanding and increasing needs. When and as additional water resources are required to meet increasing needs, MWD says it will be prepared to deliver such supplies. The SDCWA has made large investments in MWD's facilities and will continue to include imported supplies from MWD in the future resource mix. As discussed in the SDCWA's 2000 UWMP, the SDCWA is planning to diversify its supply portfolio and reduce purchases from MWD. It should be noted that SDCWA does not provide water to Chula Vista directly, but sells water to the Otay Water District and to the Sweetwater Water District, which in turn provides water to consumers in the City.

Section 6 of the SDCWA's 2000 UWMP contains a detailed shortage contingency analysis, which addresses a regional catastrophic shortage situation and drought management. The analysis demonstrates that the SDCWA and its member agencies, through the Emergency Response Plan and Emergency Storage Project, are taking actions to prepare for and appropriately handle an interruption of water supplies. The analysis also describes actions being taken by the SDCWA to provide increased reliability in a drought to minimize shortages. Included in these measures is a plan to diversify supply and drought management including such items as furthering the acquisition of water from IID, expansion of recycling projects, and potential seawater desalinization. The SDCWA, in conjunction with its member agencies, plans to develop a new drought allocation methodology in connection with the SDCWA's next UWMP update, which will be completed in 2005.

Metropolitan Water District of Southern California 2003 Water Supply Report

In March 2003, MWD produced a document entitled, *Report on Metropolitan's Water Supplies, A Blueprint for Water Reliability* (March 2003 Report). The objective of the March 2003 Report is to provide the member agencies, retail water utilities, cities, and counties within its service area with water supply information for purposes of developing water supply assessments and written verifications. The March 2003 Report states the approach to evaluating water supplies and demands is consistent with MWD's 2000 Regional UWMP. As part of this process, MWD utilizes SANDAG's regional growth forecast in calculating

regional water demands for the SDCWA's service area. As noted above, since the current General Plan Update uses a 2030 buildout horizon year, until the Urban Water Management Plan is updated with any adopted changes to the General Plan and projects demand until 2030, the forecast will be out of conformance with the water plan.

MWD is a wholesale supplier of water to its member public agencies and obtains its supplies from two primary sources: the Colorado River, via the Colorado River Aqueduct (CRA), which it owns and operates, and Northern California, via the State Water Project (SWP). The purpose of the March 2003 Report is to document the availability of these existing supplies and additional supplies necessary to meet future demands. MWD has not yet updated the March 2003 Report.

Colorado River Aqueduct Deliveries

The March 2003 Report includes a description of MWD's 550,000 acre feet per year basic annual apportionment water (Priority 4) along with the Colorado River supply projects that are necessary to maintain a full CRA. One of the actions that were finalized following distribution of the March 2003 Report is approval of the QSA and other related agreements. Signing of the QSA and related agreements will now allow implementation of Colorado River supply projects identified in MWD's March 2003 Report. Information on these activities is discussed below.

MWD INTEGRATED WATER RESOURCES PLAN 2003 UPDATE

In July 2004, an updated water resource plan, the "Integrated Water Resources Plan, 2003 Update" (IRP) that provides the roadmap for maintaining Southern California's reliable supply future was adopted by MWD's Board of Directors. The 1996 IRP determined, through a comprehensive stakeholder process, what the guiding principles should be for building a long-term water resource plan, and the development targets under that plan. The 2003 IRP Update Report contains refinements to the development targets, and establishes two schedules for regular reporting and updating the IRP in the future. The first is an annual IRP Implementation Report that will provide regular reporting to the Board on the status and progress of resource implementation. The second is a regular five-year schedule for the future IRP Updates, coincident with MWD's filing of the Regional Urban Water Management Plan, as prescribed by the California Water Code. MWD's other planning processes build upon the resource development targets.

The IRP Update published by the Metropolitan Water District of Southern California stated that:

> The bottom line conclusion from the IRP Update is that the resource targets from the 1996 IRP, factored in with changed conditions, will continue to provide for 100 percent reliability through 2025. However, the region's

> reliability can be reinforced through continually maintaining contingency plans. (MWD 2004:7)

MWD indicates that this is possible because of the changed targets and conditions, including lower demands. As a result, the current resource goals were determined sufficient to extend the IRP through 2025. The IRP indicates that the most significant changed conditions are higher conservation savings and Member Agencies plans to increase local supply development. Together these changes cause projected Metropolitan demands to drop as much as 500,000 acre-feet in a dry year. Other major changed conditions include:

- Board-revised goals for the State Water Project
- Board-revised goals for the Colorado River Aqueduct
- More stringent water quality regulations
- Evolving resource implementation risk

Recently, two pieces of legislation were passed that address the supply of water, SB 610 and SB 221. Both of these bills place water supply requirements on individual projects, and require consideration whether there is an adequate supply of water to support the project. For the adoption of a General Plan, neither of these bills applies directly. Both apply, in certain situations, to subsequent projects developed in conformance with a General Plan.

SB 610 requires that a water supply assessment be included in the environmental review for projects specified in Water Code section 10912. These include, among others, residential projects of more than 500 units, shopping centers of more than 500,000 square feet, and industrial facilities of more than 650,000 square feet.

SB 221 requires the City to verify that there is a sufficient water supply as a condition of approval of projects specified in Water Code Section 10912. Proof of a sufficient supply is based on a written verification from the Otay Water District or the Sweetwater Authority, depending upon the location of the proposed project.

The projects that are covered by SB 610 and SB 221 could be developed in conformance to the land uses identified in the proposed General Plan Update. Conformance to these acts will be required as part of the CEQA review requirements for future proposed development projects.

In order to project and plan for future water needs, the SDCWA has entered into a Memorandum of Agreement with SANDAG to use the most recent regional growth forecast for planning purposes. The SDCWA uses the growth forecasts to develop demand projections that are used in supply and facility planning. Using the growth forecasts, the

SDCWA has developed the UWMP and updates it every five years. This plan describes and evaluates sources of supply, reasonable and practical efficient uses of water, reclamation and demand management. It considers the demands for population and water use through the next 20 years.

Because the UWMP is closely integrated with SANDAG's regional growth forecasts, the basis of those forecasts is critical to the supply and demand projections. SANDAG projects growth based in part on adopted general plans. The projections involve development of an estimate of regional population growth and the distribution of population within the region. Regional growth is, to a large extent, based on economic factors. Distribution of that population within the region is largely based on the land use decisions made by local agencies, specifically general plans and takes into consideration such aspects and housing capacity and density, employment capacity, and available land for development.

To the extent that development occurs in accordance with the adopted general plans used to prepare growth forecasts, their long-term impact on water supply and demand were included in the Authorities plans. To the extent that a project differs from the General Plan assumptions used in preparing the growth forecasts, it could vary from the SDCWA projection.

Update Areas

Water consumers within the City of Chula Vista are served by three water suppliers or districts (Otay Water District, Sweetwater Authority, and Cal-American) as described below. The service areas of these suppliers and districts are shown on Figure 5.14-1.

Otay Water District

Water service is provided to the majority of the area east of Interstate 805, including the newly developing areas of eastern Chula Vista, by the Otay Water District (OWD). OWD has developed an aggressive Capital Improvement Program (CIP) so that facilities and supplies remain in step with increasing demand. OWD receives the majority of its treated supply from SDCWA's Pipeline Number 4 of the Second San Diego Aqueduct treated by the Metropolitan Water District of Southern California. The remainder of their potable water comes from the First San Diego County Aqueduct treated by the Helix Water District.

OWD is actively pursuing development of the local water supply through the sharing of treatment plant capacity with agencies such as Helix Water District and the City of San Diego. An agreement with the City of San Diego for 10 million gallons per day (MGD) from their Otay Water Treatment Plant (WTP) has been executed and 8 MGD from the Helix Water District's Levy WTP is currently available to OWD; OWD is in the 90 percent design phase of the Lower Otay Pump Station to supply this 10 MGD from the Otay WTP and the recent construction of Flow Control Facility No. 14 has allowed for the use of the 8 MGD

from the Helix Water District. The Ralph W. Chapman Water Recycling Facility can now produce about 1.1 MGD or 1,232 acre-feet per year of recycled water and that the City of San Diego formally approved an agreement with OWD on October 20, 2003 to provide 6 MGD of recycled water from their South Bay Water Reclamation Plant (SBWRP) to OWD. Recycled water from the SBWRP is expected to be delivered to OWD in the Fall of 2006. Construction and completion of the transmission, storage, and pump station systems necessary to import and distribute this additional supply of recycled water is expected to be completed in the fall of 2006.

Otay Water District 2000 Urban Water Management Plan

The *Otay Water District 2000 Urban Water Management Plan* (Plan) assesses the OWD's water supply sources, water demands, water supply reliability, supply and demand comparison provisions, demand management, water shortage contingency plan, and water recycling through 2020. The Plan projects that the total number of connections and total demand within OWD's service area will increase from 35,870 connections and a demand for 27,145 acre-feet of water per year in 2000 to 64,782 connections and a demand for 49,022 acre-feet of water per year in 2020.

The Plan states that because OWD is completely dependent on imported water provided by the SDCWA, water supply reliability depends on the reliability of water supplied to SDCWA by MWD. The Plan describes measures to ensure a reliable water supply. These measures include water conservation measures, emergency and operational storage, and interagency agreements with neighboring water agencies. The Plan concludes that in average precipitation years, OWD has sufficient water to meet its customers' needs in the city of Chula Vista through 2020, based on continued commitment to conservation programs, which is frequently the lowest cost resource available to OWD. Water conservation is a critical part of the Plan and the long-term strategy for meeting the water needs of the district; the Plan outlines 14 best management practices for urban water conservation which OWD implements. The Plan indicates that OWD not only encourages the use of recycled water, but also requires its use for any and all appropriate and approved uses in areas where recycled water is allowed by the regulatory agencies.

Otay Water District Water Resources Master Plan – August 2002

The *Otay Water District Water Resources Master Plan* (Master Plan) identifies the capital facilities needed to provide an adequate, reliable, flexible, and cost effective potable and recycled water system for the delivery of OWD, City of San Diego, SDCWA, and/or MWD water supply to meet approved land use development plans and growth projections within the planning area consistent with SANDAG's forecasts. Proposed potable and recycled facilities, and expansions to existing facilities, are identified in the Master Plan with required capacity, phasing, and estimated probably capital costs. The Master Plan projects that the systemwide annual average day demand for potable water of approximately 22.44 MGD in

2002 will increase to 28.66 MGD by 2006, 40.31 MGD by 2016, and 56.29 MGD at buildout.

Sweetwater Authority

The majority of the established western portion of the City is supplied by the Sweetwater Authority. The Sweetwater Authority receives their water as a part of the Joint Powers Agency with the City of National City and the South Bay Irrigation District. They receive treated water from the SDCWA through Pipeline Number 4, and raw water from the SDCWA Pipeline Number 3, which is then treated at their own Perdue Water Treatment Plant. Additional sources of water are Sweetwater and Loveland Reservoirs, the Reynolds Desalination Facility and the National City Wells. These "local" sources can at times of wet weather provide up to 100 percent of the needed annual demand.

Sweetwater Authority Urban Water Management Plan 2000

The *Sweetwater Authority Urban Water Management Plan 2000* (Plan) assesses the Authority's water demands, conservation and public affairs program, water supply and management, water pricing and rate structures, and drought and emergency management through 2020. The Plan projects that the total number of connections and total demand within the Authority's service area will increase from 33,641 connections and a demand for 7,631 million gallons of water per year in 2000 to 34,462 connections and a demand for 7,840 million gallons of water per year in 2020.

The Plan identifies the following existing sources of water for the Authority: National City Wells #2 and #3 which draw from the San Diego Formation aquifer; Richard A. Reynolds Desalination Facility; Sweetwater and Loveland Reservoirs, which capture runoff during periods of wet weather with Sweetwater Reservoir also utilized to store water imported from the SDCWA. The Plan states that because there are no recycled water transmission mains in the Authority's service area, the capital costs provide recycled water is prohibitively high; however, the Plan states that the Authority will continue to work with the local agencies to review potential recycled water projects within their service area. Recently, due to an increase of projected recycled water requirements in the Authority's service area, the Authority has initiated a recycled water master plan. Because the timetable for implementation of recycled water is not yet determined, it is not considered in the current projections for Sweetwater Authority water supplies. This plan is intended to determine whether it is feasible to deliver recycled water to this area based on future needs. The Plan concludes that if projected imported and local supplies are available as indicated in the Plan, no shortages are anticipated within the Authority's service area in an average/normal year through 2020 and in the dry year scenarios analyzed in the Plan. The Plan acknowledges that during drought conditions, even with the Authority's reliance on imported water being reduced and the ability to store water in times of drought, there is always a vulnerability when you must rely on an external source to provide water supply. The Plan states that the

Authority plans to continue the implementation of conservation measures as referenced in the Authority's 2000 urban water conservation best management practices report, which is contained in the Plan.

Sweetwater Authority Water Distribution System Master Plan 2002

The *Sweetwater Authority Water Distribution System Master Plan 2002* (Master Plan) updated the 1979 and 1989 Water System Master Plans and the 1993 Water System Master Plan Update and addresses a comprehensive evaluation of the transmission, distribution, storage, pumping system, and water main life expectancy. The Master Plan identifies $23 million of remaining improvements to meet current standards and $30.6 million for continued effort to remove the older metallic pipelines within the Authority's system. In addition, the Master Plan identifies other essential improvements that were not identified in the previous master plans, estimated to cost $4 million. The Master Plan also addresses the replacement of the system's newer pipelines due to life expectancy. Based upon a life expectancy of 100 years for new pipelines (previous material life was 50-60 years), it was concluded that the Authority needs to escalate the replacement program to four miles per year from the then current two miles per year at a cost of almost $4 million per year compared to the then current cost of $1.8 million. The Master Plan also acknowledges that the Authority is also faced with the ever-changing requirements and escalating costs to treat water at its three sources of supply.

The conclusions and recommendations of the Master Plan include the following: 1) Based upon the projected maximum day demand of 35.4 MGD in 2020, no expansion of the Perdue Plant is recommended, unless arrangements with neighboring water agencies requesting alternative sources of supply are executed; 2) Construct remaining water storage tanks to comply with storage requirements based on maximum day plus fire flow demand for each individual system without added system redundancy; 3) The Authority should continue to prepare a new Water Distribution System Master Plan every 10 years, and an interim Master Plan Update every five years; 4) The Authority's comprehensive pipeline replacement and rehabilitation program should be continued until all aging and leaking water mains are replaced; 5) Eliminate nitrification and low disinfectant levels by strategically placing chemical injection points at selected water storage tanks; 6) Further economic analysis on pipeline replacement due to life expectancy is needed in order to plan for future budgets; 7) Continue with a minimum of $3.5 million annually (escalated for inflation) for Master Plan and metallic pipeline replacement projects.

Cal-American Water District

Small sections of the southern end of the city are provided water by Cal-American. Cal-American covers a limited area of the city under it's Coronado Division which contains a total of only 178 miles of water mains and receives their water supply from the City of San Diego through a 24-inch trans-bay pipeline.

Cal-American plays the smallest role in the Chula Vista water supply covering only small portions of the City's southern boundary. Cal-American does not disaggregate their system by political jurisdiction, so the exact amount of water distributed within Chula Vista is not estimated. The total size of the Coronado Division of Cal-American serves only 20,479 metered customers or roughly 80,000 people. However, only a small portion of this population is within Chula Vista.

The Cal-American Water District receives treated water via the City of San Diego.

City of Chula Vista

GROWTH MANAGEMENT PROGRAM/ORDINANCE

The goal of the City of Chula Vista's Growth Management Program is to ensure that the supply of water required by existing and future residents is available from suppliers and is at a level of quality necessary for its intended use. The Growth Management Program has two objectives regarding water supply and distribution: (1) Ensure that adequate storage, treatment, and transmission facilities are constructed concurrently with planned growth; and (2) Ensure that water quality standards are not jeopardized during growth and construction.

The Growth Management Ordinance threshold for water supply and distribution states:

The City shall annually provide the San Diego County Water Authority, the Sweetwater Authority and the Otay Municipal Water District with a 12- to 18-month development forecast and request and evaluation of their ability to accommodate the forecast and continuing growth. Districts' replies should address the following:

1. Water availability to the City and Planning Area, considering both short and long term perspectives;

2. Amount of current capacity, including storage capacity, now used or committed;

3. Ability of affected facilities to absorb forecast growth;

4. Evaluation of funding and site availability for projected new facilities; and

5. Other relevant information the District(s) desire(s) to communicate to the City and the Growth Management Oversight Commission.

The Chula Vista Growth Management Ordinance, Municipal Code Section 19.09.050C, requires a Water Conservation Plan (WCP) to be submitted with all Sectional Planning Area (SPA) Plans. If a SPA Plan is not required, a WCP is required to be submitted with

Tentative Subdivision Maps. The Growth Management Program further requires that a Water Conservation Plan be submitted for all major development projects, defined as residential projects consisting of 50 dwelling units or greater, or commercial and industrial projects with 50 Equivalent Dwelling Units (EDU's) of water demand or greater.

All residential units subject to the WCP requirements shall contain at least one outdoor water conservation measure and at least one additional conservation measure from either the indoor or outdoor categories. In addition, all residential units subject to the WCP requirements shall contain the following three indoor water measures:

- Hot Water Pipe Insulation: insulation of hot-water pipes, and separation of hot and cold water piping to avoid heat exchange.

- Pressure Reducing Valves: pressure reducing valves maintain the pressure below 60 psi reducing the volume of any leakage present and preventing excessive flow of water from all appliances and fixtures.

- Water-efficient Dishwashers: dishwashers with water saving features such as water level sensors instead of timed fillers.

All non-residential uses subject to the WCP requirements shall contain the following two indoor water conservation measures:

- Hot Water Pipe Insulation: install insulation on all hot water pipes in all common areas and all tenant-developed areas.

- Pressure Reducing Valves: provide pressure reducing valves at all meters, set to deliver water at no higher than 60 psi.

In accordance with the Growth Management Program, WCPs must provide an analysis of water usage requirements of the proposed project. This includes a detailed plan of proposed measures for water conservation, use of reclaimed water, and other means of reducing per capita water consumption from the proposed project, as well as defining a program to monitor compliance. WCPs have been adopted for the following developments:

- Otay Ranch SPA 1, Villages 1 and 5
- San Miguel Ranch
- EastLake Trails
- EastLake Business Center II
- EastLake Greens
- EastLake I
- Rolling Hills Ranch
- EastLake III

- Otay Ranch Village 6
- Otay Ranch Village 11
- Bella Lago
- Otay Ranch Village 7

The City of Chula Vista also ensures that an adequate supply and quality of water is provided to accommodate new master planned developments, prior to project approval, by implementing a set of project processing requirements for applicants to follow through each stage of development. Processing requirements for General Development Plans, Sectional Planning Area Plans/Public Facilities Finance Plans and Tentative Maps are described below:

A General Development Plan for an area shall identify:

- total water demands,
- storage requirements, and
- needed facilities to service all new projects.

A Sectional Planning Area Plan/Public Facilities Finance Plan shall identify:

- demands for street and sewer improvements,
- location of improvements in conformance with the concerned water districts master plan,
- cost estimates and financing responsibilities,
- financing methods, and
- Water Conservation Plan for all developments with 50 dwelling units/equivalent of water demand or greater.

At the Tentative Map stage, identification of the following improvements is required:

- distribution and storage facilities by phase of development,
- dedication of required easements,
- identification of financing for each development,

- letter from the concerned water district verifying their ability to serve the phased development, and

- if needed, conditions to comply with Metro II Program concepts.

At the Final Map stage, conditions are implemented and there is a confirmation of the water district's ability to service project demands prior to the issuance of building permits. Ultimately, with the issuance of Building Permits all water connection fees are to be paid. Water connections fees go to capital facilities for water service and new regional infrastructure.

CHULA VISTA LANDSCAPE MANUAL

The City of Chula Vista Landscape Manual includes requirements and standards for landscape areas throughout the City and identifies the need for water conservation practices to be implemented in the form of xeriscape landscaping and drought tolerant plant materials. The Landscape Manual states that water conserving methods of landscaping are a legal requirement of the State of California, as set forth in Government Code Section 65591 et seq. (AB325 1990) and the State Department of Water Resources Water Efficient Landscape Ordinance.

OTAY RANCH GENERAL DEVELOPMENT PLAN

The Otay Ranch General Development Plan (GDP) governs development of the 23,000-acre Otay Ranch. The demand for public services including police protection is discussed as part of the GDP.

5.14.1.2 Thresholds of Significance

The proposed General Plan Update would result in a significant impact to water supply and distribution if it would:

- Threshold 1: Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

- Threshold 2: Require new or expanded supplies or facilities to meet projected needs.

- Threshold 3: Result in the proposed General Plan Update being inconsistent with the UWMP prepared by the San Diego County Water Authority.

5.14.1.3 Impacts

The proposed Public Facilities and Services Element contains three objectives and associated policies that pertain to the water supply and distribution, as well as wastewater: Objective PFS 1 relates to water, sewer, and drainage facilities, Objective PFS 2 addresses efficiency in water use, and Objective PFS 3 deals with long term water supply.

Objective PFS 1

Ensure adequate and reliable water, sewer and drainage service and facilities. For water, this objective is met through compliance with the following policies.

Policies

PFS 1.1: Coordinate with water districts by providing growth forecast information to allow the districts to plan and design water facilities and ensure adequate supply needed to accommodate anticipated growth.

PFS 1.5: Accelerate infrastructure upgrades throughout the city, especially in older portions of western Chula Vista as growth places additional demands on existing, sometimes sub-standard facilities.

PFS 1.6: To avoid recently improved streets from being torn up repeatedly, maintain a comprehensive facility phasing and capital improvement program. The program should be based on anticipated land development and be conducted in coordination with all utilities.

PFS 1.7: Identify ways to obtain timely funding for public facility and service needs. Upon request by community representatives, facilitate the possible formation of assessment districts to finance public infrastructure, upgrades and maintenance.

Objective PFS 2

Increase efficiencies in water use, wastewater generation and its re-use, and handling of stormwater runoff throughout the city through use of alternative technologies. Policies supporting this objective as they pertain to water include:

Policies

PFS 2.1: Promote and encourage local water resource development and explore all opportunities for viable water supplies, including

desalination. If appropriate, reserve land areas suitable to accommodate such potentially viable facilities and to protect groundwater sources and water-storage aquifers.

PFS 2.4: In designing water, wastewater and drainage facilities, limit the disruption of natural landforms and water bodies. Encourage the use of natural channels that simulate natural drainage ways while protecting property.

Objective PFS 3

Ensure a long-term water supply to meet the needs of existing and future uses in Chula Vista. Policies that are intended to achieve this objective include:

Policies

PFS 3.1: Assist the water agencies in preparing and maintaining Urban Water Management Plans that identify water demand anticipated by existing and new development.

PFS 3.2: Coordinate with water providers on long-range planning programs.

PFS 3.3: Participate in existing and future regional planning programs for water treatment, reclamation and distribution.

PFS 3.4: Encourage the development of new technologies and the use of new sources to meet the long-term water demands in Chula Vista.

As discussed in the Public Services section of this EIR, the proposed Growth Management Element contains Objective GM 1 and associated policies to assure public facilities and services are available to residents and visitors of Chula Vista in a timely manner as development occurs.

Threshold 1 states that a significant impact would occur if the General Plan Update would require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

Buildout of the General Plan under the Preferred Plan or any of the Scenarios would place demands on the water supply system, both in the need to improve and develop infrastructure and in the provision of an adequate supply. All four scenarios propose to increase development potential in each update area of the city. This increased demand for water would require corresponding improvements to treatment and distribution facilities. Both the Sweetwater Authority and OWD have capital improvement programs for completion of

required infrastructure. Since these capital improvement programs are based on the current Master Plans, which are based on the adopted General Plan, the adoption of any of the four scenarios proposed would require the capital improvement programs to be reevaluated. They would serve as the lead CEQA agency for their respective infrastructure improvements, and are responsible for assessing specific potential environmental impacts. Significant impacts could occur as a result of the completion of these projects. At this level of planning, the extent of those effects is speculative because the nature and location of those improvements has not been determined.

Threshold 2 indicates that a significant impact would occur if the proposed plan would require new or expanded supplies or facilities to meet projected needs.

Buildout of the General Plan area would place demands on the water supply, both in terms of the need to improve and develop infrastructure and in terms of the provision of an adequate supply. Currently the forecast requirements for the supply of water to member agencies of the SDCWA are presented in SDCWA's UWMP (2000). Based upon the SANDAG growth projections, which used adopted General Plans, the SDCWA projects that the agencies serving Chula Vista will require 102,200 acre-feet of water per year by 2030. Table 5.14-1 provides a breakdown of the forecast water demand at the 95 percent confidence level as presented in the Regional Water Facilities Master Plan prepared by the SDCWA.

TABLE 5.14-1
ANNUAL WATER DEMAND
(acre-feet)

	Year					
Agency	2005	2010	2015	2020	2025	2030
Sweetwater	24,600	25,600	27,100	29,100	32,200	34,200
OWD	36,400	41,500	48,700	56,400	63,300	68,000

NOTE: This table represents the total water demand of each agency which includes areas outside of city boundaries. The numbers are based on the adopted General Plan.

Because the above water supply forecasts are based on the regional growth forecasts conducted by SANDAG in accordance with adopted general plans, amending the general plan to increase development potential would, necessarily, result in an inconsistency between the water supply forecast and the newly adopted General Plan. This is considered a significant water supply impact.

Long-term water supply is not assured and contracts do not currently exist to serve Chula Vista through buildout of the proposed General Plan Update. As previously discussed, the SDCWA has developed the UWMP and updates it every five years using SANDAG's regional growth forecasts. The UWMP does not guarantee an adequate water supply.

In general, the net result of the land use revisions create the need for additional water supply caused by the increase in projected water demand resulting in direct impacts to the previously planned water system infrastructure. The Authority's ~~T~~transmission system pipelines in various locations will need to be increased in size to provide an adequate level of service. Also, the water storage reservoir volume needs and alternative water supply requirements must be increased.

Regional improvements anticipated to be needed as a result of the land use changes amount to a total of $5 million, comprised of $3 million for pipelines and $2 million for improvements to the Perdue Treatment Plant. This is above and beyond what the Authority has previously planned for systemwide improvements. Conditions to these estimated improvements are as follows:

1. The analysis was based on modeling only. No detailed analysis was performed.

2. The city of National City "densification" was not included. This does not have a direct impact to Chula Vista's General Plan Update, but may affect the Authority's overall regional infrastructure planning.

3. Site specific impacts to existing pipelines were not performed.

Project by project analysis needs to be performed that may require pipeline replacements due to fire and domestic flows, similar to what the Authority currently does through their review of proposed development projects within Chula Vista.

The small areas at the southern end of the city that are currently served by Cal-American are presently built-out and the company does not predict any significant growth. The water company is therefore upgrading their system incrementally as the need requires.

Table 5.14-2 contains projected water demand for the Update areas, for the Preferred Plan and Scenarios 1, 2, and 3 compared to existing conditions.

TABLE 5.14-2
PROJECTED WATER DEMAND – UPDATE AREAS ONLY

	Sweetwater Authority Service Area		Otay Water District Service Area		Combined Service Area	
Condition	Demand (MGD)	Demand Increase Above Existing (MGD)	Demand (MGD)	Demand Increase Above Existing (MGD)	Demand (MGD)	Demand Increase Above Existing (MGD)
Existing	3.22	NA	0.09	NA	3.31	NA
Scenario 1	7.87	4.65	7.51	7.42	22.55	19.24
Scenario 2	7.62	4.40	8.62	8.53	23.38	20.07
Scenario 3	7.91	4.69	6.81	6.72	23.57	20.26
Preferred Plan	7.83	4.61	8.01	7.92	23.92	20.61

SOURCE: Chula Vista General Plan Update Water Technical Report, December 2004.

MGD = million gallons per day

Because a long-term water supply is not assured, the increases in water demand shown in Table 5.14-2 are significant.

As noted above, large projects proposed in conformance with the Preferred Plan, Scenario 1, Scenario 2, or Scenario 3 would have to conform to the requirements of SB 610 and SB 221, requiring those projects to demonstrate adequate water availability.

Threshold 3 states that a significant impact would occur if the proposed GPU would result in the City of Chula Vista's General Plan being out of conformance with the UWMP prepared by the San Diego County Water Authority.

The UWMP is based on SANDAG's regional growth forecasts, which are in large part based on adopted General Plans. As discussed below, the proposed General Plan Update would increase development potential within the update areas of the city of Chula Vista. Since SANDAG's present 2030 Regional Growth Forecast is based on currently adopted General Plans within the region, Chula Vista's proposed General Plan capacities are not included in the current UWMP. These plan modifications would result in an inconsistency between UWMP forecasts and Chula Vista's General Plan. Because there will be an inconsistency, this is a significant short-term impact to the provision of water in the city until the SDCWA is able to amend its UWMP based upon the updated General Plan.

5.14.1.4 Level of Significance Prior to Mitigation

Threshold 1: Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

> All four scenarios propose to increase development potential in each update area of the city. This increased demand for water would require corresponding improvements to treatment and distribution facilities. Significant impacts could occur as a result of the construction of these projects. At this level of planning, the extent of those effects is speculative because the nature and location of those improvements have not been determined. This is a significant adverse impact.

Threshold 2: Require new or expanded supplies or facilities to meet projected needs.

> Impacts resulting from implementation of any of the scenarios (Preferred Plan and Scenarios 1, 2, or 3) would be similar. Table 5.14-2 provides a comparison of the increase in demands for water relative to the adopted General Plan in the year 2030 for each of the scenarios.

Although, for larger projects, future review would require conformance to SB 610 and SB 221, at this time it is not possible to state conclusively that sufficient water supplies would be available for individual projects facilitated by adoption of the Preferred Plan. Because contracts for water do not currently exist for the buildout condition of the City, the potential lack of an adequate water supply is a significant adverse impact.

Threshold 3: Result in the proposed General Plan Update being inconsistent with the UWMP prepared by the San Diego County Water Authority.

As previously discussed, the SDCWA has developed the UWMP and updates it every five years using SANDAG's regional growth forecasts. The UWMP does not ensure adequate supply.

Amending the general plan to increase population densities will, necessarily, result in the water supply forecast to be inconsistent with the adopted plan. Because the water supply forecasts are based on the regional growth forecasts conducted by SANDAG, and because the regional growth forecasts rely on the adopted general plans, this is a significant water supply impact.

5.14.1.5 Mitigation Measures

5.14-1 For any residential subdivision with 500 or more units or any commercial project of over 500,000 square feet, any CEQA compliance review shall include demonstration of compliance with the requirements of SB 610.

5.14-2 For any residential subdivision with 500 or more units, any CEQA compliance review shall include demonstration of compliance with the requirements of SB 221.

5.14.1.6 Level of Significance After Mitigation

Compliance with the policies associated with Objectives PFS 2 and 3 and implementation of the mitigation measures identified above would reduce the impact to water supply; however, because there is no assurance that water supply will be available to adequately serve the projected increase in population resulting from the proposed General Plan Update, the impact remains significant and unmitigated.

5.14.2 Wastewater

5.14.2.1 Existing Citywide Conditions

Sewer facilities are addressed in the City's Growth Management Threshold Standard Policy and in the Otay Ranch GDP. The Threshold Standard for wastewater facilities states:

a. Sewage flows and volumes shall not exceed City Engineering Standards.

b. The City shall annually provide the San Diego Metro with a 12-to 18-month development forecast and request confirmation that the projection is within the City's purchased capacity rights and an evaluation of their ability to accommodate the forecast and continuing growth, or the City Engineering Department staff shall gather the necessary data. The information provided to the GMOC shall include the following:

1. Amount of current capacity now used or committed

2. Ability of affected facilities to absorb forecast growth

3. Evaluation of funding and site availability for projected new facilities.

4. Other relevant information

The City's current Wastewater Master Plan was adopted in May 2005. The recently updated master plan addressed issues relating to the City's long-range land use plan as determined through the GPU process. This updated Master Plan also identified facility improvements needed to sustain development through buildout of the city.

Chula Vista relies on the City of San Diego Metro Sewage System for treating and disposing of the wastewater generated within the city. The Metropolitan Wastewater Department (Metro) adopted the Metropolitan Wastewater Plan in November 2003, which identifies future treatment facilities needed to meet anticipated demands within the Metro service area.

The City of Chula Vista currently operates and maintains a sanitary sewer collection system consisting of approximately 400 miles of sewer pipelines ranging in size from 6 inches to 48 inches in diameter. It also includes an extensive network of manholes, metering stations, and pump stations. In addition to maintaining the existing systems and replacing outdated or damaged components the City must also address upgrading and expanding the current

systems to accommodate new sewer connections, especially in the eastern portion of the city. Exiting facility data is summarized in Table 5.14-3.

Sewer Basins

The City of Chula Vista's wastewater collection system consists of eight major sewer basins: Sweetwater, G Street, Telegraph Canyon, Main Street and Date/Faivre, Bay Front, Salt Creek, Wolf Canyon Basin, and Poggi Canyon.

System Capacity

The City has completed the construction of the major facilities that will serve the Eastern portion of the city with the exception of the Wolf Canyon Trunk Sewers (Rock Mountain Road Trunk sewer and the Heritage Road Trunk Sewer). These Trunk lines are currently scheduled to be in place by 2008.

The major trunk lines in the collection system on the western portion of the city are adequate. The City has budgeted four Capital Improvement projects to address existing constraints in that portion of the collection system. These projects are currently in the design phase and should be completed within the next two years. With the completion of these improvements, no other major improvements will be required other than the annual maintenance projects.

At the regional level, the City of Chula Vista is part of the Metropolitan Wastewater District. The City entered into an agreement with the City of San Diego, and currently has purchased 19.843 MGD of capacity rights in the Metro Collection System. The city currently discharges approximately 16.6 MGD into the Metro Interceptor.

5.14.2.2 Update Areas

As mentioned above, there are eight major sewer basins in the city of Chula Vista. Six of the seven major sewer basins are located within the three update areas and are described below:

Northwest Planning Area

SWEETWATER SEWER BASIN

Wastewater from the Sweetwater Sewer Basin, located in the northern portion of the city, gravity flows via pipelines into the Spring Valley Sewer Interceptor. This pipeline is owned and operated by the Spring Valley Sanitation District. The city of Chula Vista currently has capacity rights within this line. This pipeline terminates at a connection to the City of San Diego Metro Interceptor near Sea Vale Street. Based on recent flow metering data, Chula

TABLE 5.14-3
WASTEWATER FACILITY DATA

Type of Facility	Quantity
6-inch Pipe	8.56 miles
8-inch pipe	286.54 miles
10-inch pipe	13.22 miles
12-inch pipe	17.77 miles
14-inch pipe	0.62 miles
15-inch pipe	13.64 miles
18-inch pipe	6.30 miles
20-inch pipe	0.12 miles
21-inch pipe	1.46 miles
24-inch pipe	0.20 miles
30-inch pipe	0.13 miles
36-inch pipe	1.6 miles
42-inch pipe	4.4 miles
48-inch pipe	1.78 miles
Other pipe	16.70 miles
Manholes	7,635
Drop Manholes	4
Manhole Dead-end/Cap-ends	552
Manhole Clean-outs	138
Force Main Clean-outs	54
Other Manhole facilities (miscellaneous)	162
Metering Stations	12
Pump Lifts and Lift Stations	12
Commercial/Industrial Sewer Laterals	2,300
Residential (SF, MF, and Mobile Home) Sewer Laterals	53,700

Vista discharges approximately 3.042 mgd of sewage into the Spring Valley Sewer Interceptor.

G STREET SEWER BASIN

Wastewater generated in the G Street Sewer Basin, located in the upper portion of central Chula Vista, is transported to the Metro Interceptor via the G Street Trunk Sewer. The G Street Trunk Sewer receives tributary sewage flows from the area bounded by D Street south to H Street. This trunk sewer terminates at a metered connection to the Metro Interceptor located on G Street just west of Bay Boulevard. Recent meter data indicate that approximately 2.2 mgd is being generated in this Basin.

Northwest Planning Area and Southwest Planning Area

TELEGRAPH CANYON SEWER BASIN

The Telegraph Canyon Sewer Basin serves lower central and eastern Chula Vista from H Street south to Naples Street. The Telegraph Canyon Trunk Sewer is located in J Street and Telegraph Canyon Road. The Telegraph Canyon Sewer Interceptor begins at the easterly end on Otay Lakes Road near Eastlake Drive and ends at a metered connection to the Metro Interceptor. Recent meter data indicate that approximately 5.3 mgd is being generated in this Basin.

Southwest Planning Area

MAIN STREET AND DATE/FAIVRE SEWER BASIN

The Main Street and Date/Faivre Sewer Basin is located in the southern portion of Chula Vista. Pipelines in this Basin (Main Street Trunk Sewer and Date/Faivre Trunk Sewer) generally parallel each other beginning on the easterly side of I-805 to where they connect in Hollister Street prior to the metering station. From the metering station, the trunk sewer connects to the Metro Interceptor at the end of Marian Avenue. Recent meter data indicate that approximately 2.0 mgd is being generated in this Basin.

In addition to the two trunk lines mentioned above, the City of Chula Vista signed an agreement with the City of San Diego to provide for the conveyance of flows from a small portion of the city along the southerly boundary, within this Basin, where the City of San Diego's Otay Valley Trunk Sewer Line (OVT) is in close proximity. This trunk line conveys the flows from these properties westerly to the Metro Interceptor. The OVT Line primary conveys flows from the Coors Amphitheater and Soak City USA Water Park. Current meter data indicate that these Chula Vista properties generate approximately 0.011 mgd.

East Planning Area

SALT CREEK SEWER BASIN

Major sewer improvements in this basin include the Salt Creek Gravity Sewer Interceptor and the Wolf Canyon Trunk Sewer, described below:

Salt Creek Gravity Sewer Interceptor: The City of Chula Vista has completed construction of the Salt Creek Gravity Sewer Interceptor. The Salt Creek Gravity Sewer Interceptor consists of more than 13.5 miles of sewer line ranging from 15 to 48 inches in diameter. It is divided into nine "reaches," or points of major slope changes and points where significant amounts of sewage flow would be contributed. This facility conveys wastewater flows from new developments in the Salt Creek, Poggi Canyon, and Wolf Canyon Basins and provides additional sewer capacity for existing wastewater collection systems in the southern side of the city. The interceptor will generally parallel Salt Creek, Otay Valley Road and Main Street. Based on current projections of development within the basin, the average daily flow generation of wastewater at build-out is estimated at 5.88 mgd.

WOLF CANYON BASIN

Wolf Canyon Trunk Sewers: Currently, the City of Chula Vista is in the process of preparing a preliminary design report for the Wolf Canyon Trunk Sewer project. The City of Chula Vista proposes to serve the properties within the Wolf Canyon Basin using two trunk sewer lines: one located along Heritage Road and the other located within the future Rock Mountain Road. It is anticipated that these trunk sewer lines will be operational by 2008.

POGGI CANYON SEWER BASIN

The Poggi Canyon Basin Sewer Interceptor is currently connected to the Salt Creek Trunk Sewer. The Poggi Canyon Interceptor varies in diameter size from 15 inches to 21 inches and is located mostly in Olympic Parkway and along the downstream portion of Poggi Canyon Drainage Basin. Based on current projections of development within the Basin, the average daily flow of wastewater at buildout from the Poggi Canyon Sewer Basin is estimated at 3.76 mgd. To increase capacity and to accommodate buildout of the basin (per the adopted General Plan), the City has started the planning and design required improvements to Reach 205 of the Poggi Canyon Sewer, which is located under I-805. The improvements are currently scheduled for completion by December 2005.

5.14.2.3 Thresholds of Significance

Threshold 1: The proposed General Plan Update would result in a significant wastewater impact if it would:

- Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate planned capacity to serve projected demand in addition to the provider's existing commitments.

5.14.2.4 Impacts

The City retained PBS&J to update the City's Wastewater Master Plan. PBS&J prepared a Wastewater Master Plan, contained as Appendix I of this EIR for the General Plan Update. Chapter 5 of this report provides the capacity evaluation for the General Plan Update. The details of this assessment are provided below in the discussion of trunk sewer improvements.

The City of Chula Vista continually monitors and reviews both existing facilities and proposed projects to consistently meet current and anticipated demand. Current improvements to the wastewater collection system include:

- Colorado Street Improvements between J & K - Currently under design, construction scheduled to be completed by the end of 2006

- Moss Street Improvements between Broadway and Woodlawn - Design Complete, construction scheduled to be completed by Dec. 2005

- "G" Street Pump Station Improvements - Project is currently in the Pre-Design Phase, construction is scheduled to begin in mid 2006, and completed by the end of 2007.

- Sewer Rehabilitation - On-going annual project to line existing pipes and replace portions of cracked lines.

- Upgrade of Reach 205 of the Poggi Canyon Trunk Sewer – Project is currently under construction and is scheduled to be completed by December 2005.

- Wolf Canyon Trunk Sewer – Scheduled for 2008

- Main Street at Fresno Street – Currently under design, construction to be completed by the end of 2006

These projects were identified through the analysis performed as part of the Wastewater Master Plan Update. The completion of these required improvements will facilitate the development of the City to buildout. City staff through the infrastructure flow monitoring and video monitoring programs will continue to monitor, maintain and operate the system, and initiate future improvements if needed.

At the time the agreement with Metro was signed, the 19.843 MGD capacity allocation seemed adequate to meet the city's needs for several years. Based on the recent flow analysis performed as part of the Wastewater Master Plan, the City will be generating approximately 23 MGD of sewage based on the findings of the Wastewater master Plan (PBS&J 2005) at buildout under the adopted plan. This information has been conveyed to Metro in order to initiate the process of acquiring additional capacity and to assist Metro in the planning process.

Metro is in the process of completing the system capacity re-rating process to distribute additional capacity rights to participating agencies. The additional capacity was created with the recent completion of the 15 MGD Southbay Treatment Plant. Through this process, the City is set to be allocated additional treatment capacity rights currently estimated to be 1.027 MGD, which would bring the City's total capacity rights to 20.870 MGD.

Additional capacity rights are allocated to each participating agency in proportion to their total Metro expenditure over a 5-year period (1996 through 2001). The exact amount would be determined upon completion of the audit process by City of San Diego staff. Furthermore, based on the technical analysis performed as part of the Wastewater Master Plan Update, there is sufficient capacity to serve the City until 2010. The City has already begun discussions with City of San Diego to identify a mechanism for the provision of additional capacity to the City of Chula Vista in accordance with the terms of the agreement between the City of San Diego, the City of Chula Vista and the other participating agencies. The primary focus at this time is the purchase or lease of additional capacity. Concurrent with that effort, staff is also exploring other options including the construction of a wastewater reclamation facility as an independently owned or joint facility (i.e., with a water agency) which will negate the need for the purchase of additional capacity rights.

The Wastewater Master Plan Update analyzed the impacts resulting from the four land use alternatives considered for the General Plan Update and the resulting capacity impacts are outlined in Table 5.14-4 below.

TABLE 5.14-4
ESTIMATED WASTEWATER GENERATION IMPACTS FROM GENERAL PLAN SCENARIOS

Condition	Average Daily Flow (MGD)	Increase Above Existing Flow (MGD)	Additional Capacity Needed (Above Existing Metro Capacity Rights) (MGD)
Existing Flow	16.3	NA	NA
Existing Metro Capacity Rights	19.9	NA	NA
Scenario 1	25.2	8.9	5.3
Scenario 2	25.5	9.2	5.6
Scenario 3	25.3	9.0	5.4
Preferred Plan	26.2	9.9	6.3

SOURCE: Wastewater Master Plan Technical Memorandum, General Plan Update Sewer Capacity Evaluation for the City of Chula Vista (PBS&J 2004).
MGD = million gallons per day.

As discussed above, Chula Vista owns capacity in the Metro System, which provides conveyance of City wastewater flows to the Point Loma Treatment Facility and the treatment and disposal of the wastewater at Metro facilities. The following discussion of impacts to the city's wastewater collection system is based on the Wastewater Master Plan Technical Memorandum completed by PBS&J.

To evaluate the proposed General Plan scenarios, the incremental additional wastewater generated in the update areas due to implementation of each alternative was determined by subtracting the projected buildout flows for each scenario from the projected flow based on buildout of the adopted General Plan. These flows were determined by applying the calibrated unit generation rates to projected residential unit counts and non-residential areas given in current TAZ data provided by the city. The incremental flow increase was then assigned to the corresponding tributary manholes in the Master Plan hydraulic model and simulated downstream flow depths were evaluated based on a maximum flow depth to pipe diameter ration (d/D) criteria of 0.85.

Simulated peak wet weather flows were simulated in existing mains generally 12-inch diameter or larger. The following reach locations can be found in Figures 1 through 3 of the attached technical report, which is included as Appendix I of this EIR.

MAIN STREET TRUNK SEWER SYSTEM

The City has a budgeted project that is currently included in the City's CIP Program for the construction of a diversion structure to facilitate the diversion of flows from the Main Street Trunk Sewer to the Salt Creek Trunk Sewer in order to relieve capacity constraints in the sewer. The completion of this diversion structure will negate the need for future improvements to the Main Street Trunk Sewer within the reaches identified in the

Wastewater Master Plan and listed below. The required improvements are currently under design and construction and should be completed by the end of 2006.

- Reach 6331 to 6328 showed an increased flow depth in the Preferred Plan and all three scenarios. Scenarios 1 and 2 marginally exceeded the d/D threshold in two of the four sections within the reach, while Scenario 3 exceeded the threshold in these two reaches by a greater amount. The Preferred Plan exceeded the threshold in all three segments of the reach. The constraint arises in this reach due to relatively shallow sewer slope.

- Reach 5129 to 5127 showed significant flow depth increases under the Preferred Plan and all three scenarios buildout conditions. This reach is located in Main Street just upstream of a constrained reach identified under current GDP buildout conditions.

- Reach 5053 to 5092 showed significant increases in flow depths under the Preferred Plan and all three scenarios buildout conditions. The reach is located on Fresno Avenue, north of and tributary to a constrained reach in Main Street identified under current GDP buildout conditions.

- Reach 5045 to 5079 showed significant flow depth increases under the Preferred Plan and all three scenarios buildout conditions. This reach is located in Industrial Avenue north of and tributary to a constrained reach in Main Street identified under current GDP buildout conditions. Scenario 3 impacts only a portion of this reach.

INDUSTRIAL AVENUE TRUNK SEWER SYSTEM

- Reach 4492 to 4328 was impacted under all three scenarios. Additional loading from Scenarios 2 and 3 and the Preferred Plan resulted in significant increases in flow depth within this reach. Minor impacts resulted from Scenario 1 loading. This reach is located just upstream of a constrained reach in Colorado Avenue identified under current General Plan buildout conditions. Scenario 2 would result in the greatest impact due to proposed increased commercial density along Broadway.

G STREET TRUNK SEWER SYSTEM

- Reach 5316 to 5299 showed peak flow depths that exceeded the d/D threshold under Scenario 3 and the Preferred Plan loading, and no impacts under Scenario 1 and 2. This reach is located between Third and Fourth Avenue north of Memorial Park just upstream of a constrained reach identified under current GDP buildout conditions.

- Reach 3001 to 3094 showed minor impacts under Scenarios 1 and 3 and no impacts under Scenario 2 and the Preferred Plan buildout loading conditions. This reach is located in Colorado Street just north of G Street.

COLLECTION SYSTEM

Because of the general nature of planned uses, an analysis of smaller collectors was not possible at this time primarily because of the fact that pipeline data needed to create a model of the City's Wastewater Collection system was not readily available. City staff is continuing the effort to populate the database and update the layers which would ultimately give the City the ability to run such an analysis in the future. Such an analysis should be performed after more detailed building or redevelopment plans have been developed. Depending on the proposed land use changes, 8-inch diameter sewers serving new development in the Northwest and Southwest Planning Areas may be impacted by the additional loading. This is a significant impact.

METRO CAPACITY

The City owns capacity in the City of San Diego's Metropolitan Wastewater System (METRO), which provides conveyance of City wastewater flows to the Point Loma Treatment Facility and treatment and disposal of the wastewater at METRO facilities. Projected future flows generated by buildout of the current General Plan will exceed the City's current capacity. The Wastewater Master Plan will recommend a phased approach to acquire additional capacity in METRO. As summarized in Table 5.14-4 above, the City's METRO capacity requirement would be increased by approximately 5.3 MGD, 5.6 MGD, and 5.4 MGD for Scenarios 1, 2, and 3, respectively, and 6.3 MGD for the Preferred Plan. These additional amounts would need to be purchased as part of future capacity acquisitions.

As discussed above, Metro is in the process of completing the system capacity re-rating process to distribute additional capacity rights to participating agencies, including the city of Chula Vista. This effort will bring the city's total capacity rights to 20.870 MGD.

The land uses for any of the proposed scenarios would require additional lineal footage of constrained sewer ranging from approximately 2,800 to 4,500 feet. The majority of the additional constrained reaches are an extension of proposed future improvements and could be constructed as part of these projects. Further, the identified improvements represent the minimum improvements to support each of the scenarios. Acquisition of additional Metro capacity will be required with implementation of the proposed land uses for any of the scenarios.

In the East, proposed land uses would impact 36-inch diameter and larger reaches of the Salt Creek Interceptor. It is anticipated that these reaches have adequate capacity to convey the estimated flows from each of the proposed scenarios.

The proposed Public Facilities and Services Element contains two objectives and associated policies that address wastewater services and facilities. Policy PFS 1.2 requires that the City "Plan for adequate systems and facilities to manage the city's wastewater generation, treatment and disposal." Policy PFS 1.5 requires that the City "Accelerate infrastructure upgrades throughout the city, especially in older portions of western Chula Vista as growth places additional demands on existing, sometimes sub-standard facilities."

In addition, and as discussed in the Public Services section of this EIR, the proposed Growth Management Element contains Objective GM 1 and associated policies to assure public facilities and services are available to residents and visitors of Chula Vista in a timely manner as development occurs. Policies associated with GM 1 that address the provision of wastewater treatment include:

GM 1.1: Maintain a set of quantitative level-of-service measures (growth management "threshold standards"), as a tool to assess the relative impact of new facility and service demands created by growth, and apply those standards, as appropriate, to approval of discretionary projects.

GM 1.5: As part of the Growth Management Program, conduct an ongoing Development Monitoring Program focused on new development activity and related infrastructure and public facility construction to determine compliance with Threshold Standards and other City policies and programs.

GM 1.9: Require that all Major Development projects prepare a Public Facilities Financing Plan (PFFP) that articulates infrastructure and public facilities requirements and costs and funding mechanisms.

GM 1.11: Establish the authority to withhold discretionary approvals and subsequent building permits from projects demonstrated to be out of compliance with applicable Threshold Standards.

5.14.2.5 Level of Significance Prior to Mitigation

Threshold 1: The proposed General Plan Update would result in a significant wastewater impact if it would result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate planned capacity to serve projected demand in addition to the provider's existing commitments.

Chula Vista owns capacity in the METRO, which provides conveyance of city wastewater flows. Projected future flows generated by buildout of the current General Plan will exceed the city's current capacity. The General Plan Update would accommodate an incremental increase in population throughout the city. Increasing population will place additional demand on sewer services.

Each of the Scenarios and the Preferred Plan will require improvements to the collection system. As detailed in Appendix I, the Main Street Sewer, Industrial Avenue Sewer and the G Street Sewer each have reaches with depth to diameter ratios of greater than 0.85 under the Preferred Plan and each of the Scenarios. Additionally, the Preferred Plan would generate the greatest incremental increase in wastewater flows and, consequently, may necessitate the largest acquisition of additional METRO capacity. While it is the intent of the city to ensure that services are provided concurrent with need, as specified in Objective GM 1, the provision of sewer services is not solely within their authority. Although the City is in the process of acquiring additional capacity from Metro, that acquisition has not yet been finalized.

Adoption of the Preferred Plan or Scenarios 1, 2, or 3 would not result in a significant impact because Policies PFS 1.1, PFS 1.5, GM 1.9, and GM 1.11 of the proposed General Plan Update require that major development projects prepare a public facilities financing plan that provides facilities and identifies funding mechanisms at the time of need. These policies also provide the authority to withhold discretionary approvals and subsequent building permits from projects that are out of compliance with threshold standards established by the City. Implementation of Policies GM 1.1, 1.5, 1.9 and GM 1.11, avoid impacts resulting from completion of infrastructure. Also, Chula Vista Municipal Code Sections 18.16 and 19.09.050 state that the provision of adequate facilities is required for all discretionary permits. As such impacts to wastewater are in essence self-mitigated and not significant.

5.14.2.6 Mitigation Measures

No mitigation is required because impacts are avoided.

5.14.2.7 Level of Significance After Mitigation

No significant wastewater impacts have been identified.

5.14.3 Integrated Waste Management

5.14.3.1 Existing Citywide Conditions

While control and siting of disposal sites falls under the jurisdiction of agencies other than Chula Vista, including the County of San Diego and State of California, the City has the ability to control waste production within its General Plan area. It is the goal of Chula Vista to take action appropriate to its population and resources to promote reductions in solid waste production and plan for adequate disposal.

Control of solid waste collection and disposal for the General Plan area fall under several jurisdictions. The County of San Diego Solid Waste Planning and Recycling Section of the Department of Public Works administers regional planning and management for San Diego

County's solid wastes. This agency with the assistance of the AB 939 Local Task Force (SANDAG) are responsible for revising and updating the Countywide Integrated Waste Management Plan (CIWMP) which reviews current solid waste collection and disposal practices, predicts future waste generation trends and reviews the possible means for accommodating future collection and disposal needs. This document is the major planning tool for the County and includes solid waste planning for the cities within the County.

Enacted by Assembly Bill 939 and signed into law in 1990, the California Integrated Waste Management Act (IWMA) established an integrated system of solid waste management in the state whereby each city and county is required to develop and implement plans consistent with the mandated diversion rates of 25 percent by 1995 and 50 percent by 2000. Under IWMA, the county has prepared a Countywide Siting Element and Summary Plan describing areas to be developed as disposal or waste management facilities (PRC §41700). The Act further requires each city to prepare and implement the following solid waste management elements:

- Source Reduction and Recycling Element (SRRE) (PRC §41000) to:
    - Identify the constituents of solid waste by volume, type of material and source;
    - Describe the methods, including recycling and composting, by which the city will reduce the amount of solid waste being generated;
    - Identify and describe projected costs, revenues, and revenue sources necessary to implement the element; and
    - Describe existing handling and disposal practices for special wastes such as asbestos and sewage sludge.
- Household Hazardous Waste Element (PRC §41500) to identify a program for the safe collection, treatment, and disposal of hazardous wastes generated by residences that should be separated from the rest of the solid waste stream.
- Non-Disposal Facility Element (NDFE) (PRC §41730) to describe any new solid waste facilities and expansions of existing solid waste facilities needed to implement the jurisdiction's source reduction and recycling element. Facilities that will recover or recycle at least five percent of the total volume of materials they receive need not be included in the element.

In 2003, approximately 182,148 tons of solid waste generated in Chula Vista required landfill disposal (Hellman 2004). Existing solid waste disposal facilities in the area include the Otay Landfill and several recycling facilities in proximity to the landfill. The Otay Landfill accepts approximately 98 percent of the non-hazardous municipal waste collected in the

city. The remaining two percent is delivered to the Sycamore and Miramar Landfills (Meacham 2003). The Otay Landfill is expected to be in operation until 2028 based upon current waste generation rates. The Otay Landfill is located adjacent to the East Update Area.

5.14.3.2 Thresholds of Significance

Threshold 1: The proposed General Plan Update would result in significant impacts to integrated waste management if it would:

- Be served by landfills with insufficient permitted capacity to accommodate the project's solid waste disposal needs.

5.14.3.3 Impacts

As stated above, significant impacts to integrated waste management would result if adoption of the proposed General Plan area were served by landfills with insufficient permitted capacity to accommodate the project's solid waste disposal needs.

The proposed General Plan Update would not be served by landfills with insufficient permitted capacity to accommodate the project's solid waste disposal needs. The General Plan area would continue to be served primarily by the Otay Landfill until its capacity is reached. Table 5.14-5 contains projected solid waste disposal quantities for the Preferred Plan and Scenarios 1, 2, and 3 compared to existing conditions.

TABLE 5.14-5
PROJECTED SOLID WASTE DISPOSAL QUANTITIES

Condition	Disposal Quantity (tons)	Remaining Landfill Capacity (tons)
Existing	180,907	30,806,172
Scenario 1	265,750	26,297,187
Scenario 2	273,168	26,220,410
Scenario 3	257,757	26,369,559
Preferred Plan	274,063	26,211,147

SOURCE: City of Chula Vista calculations based upon the 2003 Chula Vista landfill disposal quantity as reported in the *California Integrated Waste Management Board Disposal Reporting System, San Diego Landfill Division Jurisdictional Report* (Revised March 23, 2004).

The Otay Landfill currently accepts an average daily rate of disposal of 2,260 tons, with a permitted maximum disposal rate of 5,000 tons, and has a permitted remaining capacity of 31,336,166 tons. The Preferred Plan would generate an estimated population at buildout of approximately 326,900 people. Using the per person average rate of daily disposal of trash into the Otay Landfill, and assuming the additional development at buildout of Preferred Plan and no additional recycling programs are implemented, the Otay Landfill has sufficient capacity to accommodate the increased waste disposal. Population growth in Chula Vista was used to estimate the growth in deposit of trash in the landfill but does not assume that all

of that trash comes from Chula Vista residents. Since there is sufficient capacity to accommodate projected development at buildout of any of the scenarios, there is no significant impact to integrated waste management services.

The proposed Public Facilities and Services Element and Environmental Element contain two objectives and associated policies that address solid waste disposal in the city:

Objective PFS 25

Efficiently handle solid waste disposal throughout the city.

Policy

PFS 25.1: Plan for adequate systems and facilities to manage the city's solid waste generation, treatment, and disposal.

Objective EE 8

Minimize the amount of solid waste generated within the General Plan area that requires landfill disposal.

Policies

EE 8.1: Promote efforts to reduce waste, minimize the need for additional landfills, and provide economically and environmentally sound resource recovery, management, and disposal facilities.

EE 8.3: Implement source reduction strategies, including curbside recycling, use of small collection facilities for recycling, and composting.

EE 8.6: Permit recycling operations and businesses that utilize recyclable materials within industrial zones in close proximity to Otay Landfill, subject to conformance with applicable SPA Plan-level policies and zoning regulations.

As discussed in the Public Services section of this EIR, the proposed Growth Management Element contains Objective GM 1 and associated policies to assure public facilities and services, including integrated waste management, are available to residents and visitors of Chula Vista in a timely manner as development occurs.

The Solid Waste Local Enforcement Agency (LEA) is currently processing a revision to the permit for the landfill that modifies the closure date. Based on this information from the LEA, revisions to the permit will increase the maximum allowable daily disposal rate of

5,830 tons and therefore, the amount of available capacity will decrease (McNeil pers com 2005). While LEA is in the process of updating the permit for the landfill, this action has not yet been approved and therefore, the current permitted capacity is appropriate. The Otay Landfill has sufficient capacity to accommodate projected population at buildout of the Preferred Plan or Scenarios 1, 2, or 3, and no significant impact to integrated waste management services would occur.

5.14.3.4 Level of Significance Prior to Mitigation

The General Plan area is primarily served by the Otay Landfill. Using the average rate of daily disposal and assuming the additional population at buildout of the proposed General Plan and no additional recycling programs are implemented, the Otay Landfill has sufficient capacity for approximately 25 years. Since there is sufficient capacity to accommodate projected population at buildout of any of the alternatives, there is no significant impact to integrated waste management services.

5.14.3.5 Mitigation Measures

No mitigation is required.

5.14.3.6 Level of Significance After Mitigation

No significant impacts to integrated waste management services have been identified as part of this EIR.

5.15 Hazards/Risk of Upset

5.15.1 Existing Conditions

5.15.1.1 Regulatory Plans and Policies

In conformance with the Tanner Act (AB 2948), local governments are required to adopt "siting criteria" for evaluating hazardous waste facility proposals within previously established "general areas." Figure 5.15-1 shows the general areas designated within the adopted General Plan.

With regard to siting of facilities, the City of Chula Vista retains the right to designate suitable general areas and to make changes consistent with changes to local plans, policies, and conditions should significant concerns regarding the continued protection of public health, safety and welfare, and the environment be raised. Consequently, the adopted General Plan includes a number of specific hazardous waste siting and design requirements to enhance the mandatory requirements listed in the Countywide Siting Element.

As such, the adopted General Plan includes additional criteria to further ensure the structural stability of facilities; prevent their location in flood hazard areas including areas subject to tsunamis, seiches, or storm surges along areas bordering bodies of water should they be exposed to flooding; prevent siting within 200 feet from a known active or potentially active fault; and finally, to prevent location on potentially unstable slopes or lands that may be subject to subsidence, liquefaction, or within a mapped dam failure inundation area. Requirements are also included to protect surface water, ground water, air quality, environmentally sensitive areas such as wetlands, threatened or endangered species, natural, recreational, cultural and aesthetic resources, prime agricultural lands, or mineral deposits from hazardous waste contamination such that the resource would not be degraded. Transportation measures are included to ensure the safe transport of hazardous waste through and within the City and plan area.

Each City within the County is required to adopt necessary provisions to implement the San Diego County Hazardous Waste Management Plan (COHWMP). Its principal goal is to "establish a system for managing hazardous materials, including wastes, to protect pubic health, safety and welfare, and maintain the economic viability of San Diego County." The COHWMP serves as the primary planning document providing overall policy direction toward the effective management of hazardous waste within San Diego County, including that within the City's General Planning Area, through establishment of goals, policies, and implementation measures. Several objectives of the Public Facilities Element of the General Plan incorporate the COHWMP and prescribe more specific, or stringent, planning requirements and siting criteria reflective of local conditions which shall prevail over the more general provisions of the COHWMP in favor of ensuring the utmost protection of

public health, safety and welfare, and environmental resources within the city of Chula Vista.

The Environmental Protection Agency has released Guidelines for Ground-Water Classification Under the EPA Ground-Water Protection Strategy (EPA 1986), defining protection policies for three classes of groundwater, based on their respective value and their vulnerability to contamination. Under these guidelines, facilities located in areas where existing groundwater quality is Class I, groundwater that is highly vulnerable to contamination and characterized by being irreplaceable or ecologically vital, or Class II, current or potential sources of drinking water and waters having other beneficial uses, shall conduct an appropriate groundwater impact study as part of the environmental review, and shall provide increased spill containment and inspection measures in addition to other identified mitigation.

Resource Conservation and Recovery Act (RCRA) of 1976 (40CFR 240-299) created a major new federal hazardous waste regulatory program that regulates the generation, transportation, treatment, storage, and disposal of hazardous wastes from “cradle to grave.” Pursuant to RCRA, California has implemented its own hazardous waste program, the Hazardous Waste Control Law (HWCL), which is administered by the California EPA Department of Toxic Substance Control. HWCL differs little from RCRA; both laws impose “cradle to grave” regulatory systems for handling hazardous wastes in a manner that protects human health and the environment.

The Emergency Planning and Community-Right-To-Know Act of 1986 (also known as Title III of the Superfund Amendments and Reauthorization Act or SARA) impose similar requirements regulating the handling, storage, use, and disposal of hazardous materials to prevent or mitigate for potential injury to health or the environment in the event that such materials are accidentally released.

The Hazardous Materials Release Response Plans and Inventory Law of 1985 (Business Plan Act) requires that any business that handles hazardous materials prepare a Business Plan, which must include details, including floor plans, of the facility and business conducted at the site, an inventory of hazardous materials that are handled or stored on the site, an emergency response plan, and a training program in safety procedures and emergency response for new employees, and an annual refresher course in the same topics for all employees.

The California Occupational Safety and Health Administration (Cal/OSHA) and the Federal Occupational Safety and Health Administration (Fed/OSHA) are the agencies responsible for assuring worker safety by developing and enforcing workplace safety regulations in the handling and use of chemicals in the workplace. These regulations concern the use of hazardous materials in the workplace including requirements for employee safety training,

availability of safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation.

The Medical Waste Management Act of 1990 created a classification for medical waste to be regulated by the Environmental Health Division of the Department of Health Services (DHS). These regulations require that infectious wastes be properly packaged and labeled. Steam sterilization units used to render infectious waste noninfectious must meet specific design and operating standards established by the DHS.

The Radiological Health Branch (RHB) of the Department of Health Services administers the Radiation Control Law, which governs the storage, use, transportation, and disposals of ionizing radiation (radioactive material). RHB regulations require registration for sources of ionizing radiation, licensing of radioactive material use, and protection against radiation exposure.

Pursuant to the Emergency Services Act and the Hazardous Materials Release Plans and Inventory Law of 1985 (the Business Plan Law), local agencies are required to develop plans for response to releases of hazardous materials and wastes. A plan must include pre-emergency planning of procedures for emergency response, notifications, and coordination of affected government agencies and responsible parties, training, and follow-up.

Signed into law in 1990, the California Integrated Waste Management Act (IWMA) established an integrated system of solid waste management. Under IWMA, the County has prepared a Countywide Siting Element and Summary Plan describing areas to be developed as disposal or waste management facilities (PRC §41700). It is in the goal of all jurisdictions within San Diego County that existing capacity be optimized through diverting materials in the most economically and environmentally safe way, using the IWMA hierarchy of reuse, source reduction, recycling, composting, and transformation.

5.15.1.2 Existing Citywide Conditions

Ninyo & Moore conducted limited site reconnaissance activities on January 25, 2003. The reconnaissance involved a “windshield” survey of properties of significant potential environmental concern (e.g., active and inactive landfills; large-quantity generators; treatment, storage, and disposal facilities) identified during the regulatory agency database review and through interviews with regulatory agency representatives.

Site reconnaissance activities were performed from public rights-of-way. Exteriors of individual properties were surveyed only to the extent that access was available to the general public. Interiors of individual facilities were not accessed. Pad-mounted and pole-mounted electrical transformers, owned and operated by SDG&E, were observed in the study area and are a potential source of PCBs. The transformers within the study area were not individually inspected at the time of the site reconnaissance. However, all known PCB

transformers were removed from the SDG&E system years ago. Additionally SDG&E has a mandated Corrective Maintenance Program which includes regular inspection of electric transformers located within the city of Chula Vista as well as its entire service territory. Based on the results of these inspections, each transformer is subject to maintenance, repair, replacement or removal as appropriate to avoid or minimize the release and/or exposure of workers or the public to potentially PCB-containing substances. In the event these substances are found or, in the rare event, released, they are properly handled and disposed of in accordance with all applicable federal, state, and local regulations.

The types of businesses in the plan area that are likely to store hazardous substances and petroleum products or generate waste include the following: power plants, gasoline service stations, automobile repair facilities, dry cleaning facilities, industrial facilities, chemical facilities, photograph developing facilities, medical and dental facilities, boat servicing businesses, and marinas.

A computerized environmental information database search of the subject site and areas located within a 500-foot radius of the plan area was performed by *Environmental FirstSearch*™ (*FirstSearch*) on December 19, 2002. The *FirstSearch* search included federal, state, and local databases including: the Multiple Agency, Leaking Underground Storage Tank (LUST) List; the Leaking Underground Storage Tanks Information System (LUSTIS); the United States Environmental Protection Agency, Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) List; the United States Environmental Protection Agency, Emergency Response Notification System (ERNS); the State Water Resources Control Board/s, SLIC (SPILLS) Lists; the United States Environmental Protection Agency, CORRACTS List; the United States Environmental Protection Agency, Toxic Release Inventory System (TRIS); the Department of Toxic Substances Control, State Sites List; Multiple Agency, State of California Solid Waste Landfill (SWL) List; the Multiple Agency, Underground Storage Tank (UST) Lists; and the County of San Diego Department of Environmental Health, HE17/58 (PERMITS). According to the environmental database search, 208 registered underground storage tank (UST) and aboveground storage tank (AST) facilities are located within the plan area. Due to the generalized nature of the technical study, a determination of the status of all documented unauthorized releases from USTs within the plan area was not possible.

Table 5.15-1 presents a summary of the number of properties of potential environmental concern in the plan area by database. Based on information contained in the environmental database report, Table 5.15-2 summarizes the properties of potential environmental concern within and in proximity to the plan area.

Figures 5.15-2 through 5.15-10 indicate approximate locations of properties that may pose environmental concerns. The majority of these properties are concentrated in western Chula Vista, as depicted in Figure 5.15-2. In addition, the database search identified 201 unmapped properties of potential environmental concern on various databases.

TABLE 5.15-1
POTENTIAL PROPERTIES OF ENVIRONMENTAL CONCERN
BY DATABASE CATEGORY

Environmental Database	Western Chula Vista	Eastern Chula Vista
LUST	238	28
CERCLIS	3	7
ERNS	27	9
SPILLS	3	0
RCRA CORRACTS	162	44
TRIS	4	2
STATE	3	5
SWL	15	10

SOURCE: Ninyo & Moore 2003.

NOTES:

LUST = Leaking Underground Storage Tank

CERCLIS = Comprehensive Environmental Response Compensation and Liability Information System

ERNS = Emergency Response Notification System

SPILLS = Spill Site

TRIS = Toxic Release Inventory System

STATE = State Hazardous Waste Site

SWL = Solid Waste Landfill

RCRA CORRACTS = Resource Conservation and Recovery Information System Corrective Action Sites

TABLE 5.15-2
HAZARDOUS MATERIAL/WASTE SITES
AND POTENTIAL RELEASE SITES

Category	Western Chula Vista	Eastern Chula Vista
Solid and hazardous waste generation sites within the study area[1]	165	49
Solid and hazardous waste disposal facilities within the study area[2]	177	58
Operational and closed waste disposal facilities within, and in the immediate vicinity of, the study area[3]	180	59
Use, storage, and transport of hazardous materials in the study area[4]	169	46
Potential releases of hazardous materials[5]	275	217
TOTAL	966	429

SOURCE: Ninyo & Moore 2003.

NOTES: (includes sites appearing on the following databases)

[1]CA, RC, ST

[2]CA, RC, ST, SW

[3]CA, RC, ST, SW

[4]CA, RC, ST, TR

[5]ER, CE, LU, SP, TR

The Leaking Underground Storage Tanks (LUST) Information System is maintained by the California State Water Resources Control Board, pursuant to Section 25295 of the Health and Safety Code. In addition, there are facilities in San Diego County that fall under the jurisdiction of the Local Oversight Program for unauthorized releases by the County of San Diego, Department of Environmental Health (DEH) (County LUST). Approximately 289 properties reported to be in the plan area appear on the LUST list. Refer to Figure 5.15-3 for the approximate locations of these properties.

The Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) database contains properties that are either proposed for listing or listed on the National Priorities List (NPL), and properties that are in the screening and assessment phase for possible inclusion on the NPL. Eleven properties reported to be in the plan area appear on the CERCLIS list. Refer to Figure 5.15-4 for the approximate locations of these properties.

The Emergency Response Notification System (ERNS) is a national database used to collect information on reported releases of oil and hazardous substances. Forty-three properties reported to be in the plan area appear on the ERNS list. Refer to Figure 5.15-5 for the approximate locations of these properties.

The state's nine Regional Water Quality Control Boards (RWQCBs) each maintain reports of sites that have records of spills, leaks, investigation, and cleanups for areas in their jurisdictions. Three properties reported to be in the plan area appear on the RWQCB, Region 9 Spills, Leaks, Investigation and Cleanup (SLIC) (SPILLS) list. Refer to Figure 5.15-6 for the approximate locations of these properties.

The CORRACTS List identifies facilities that are undergoing "corrective action" subject to the Resource Conservation and Recovery Act (RCRA). A "corrective action order" is issued pursuant to RCRA when there has been a release of hazardous waste into the environment from a RCRA facility. Approximately 216 properties reported to be in the plan area appear on the RCRA CORRACTS list. Refer to Figure 5.15-7 for the approximate locations of these properties.

The EPA Toxic Release Inventory System (TRIS) list identifies facilities that complete a Toxic Chemical Release Form (Form R) for specified chemicals. Fifteen properties reported to be in the plan area appear on the TRIS list. Refer to Figure 5.15-8 for the approximate locations of these properties.

The California EPA Department of Toxic Substances Control (DTSC) maintains a database of information on properties in California where hazardous substances have been released, or where the potential for such release exists. Eight properties reported to be in the plan area appear on the State Sites list. Refer to Figure 5.15-9 for the approximate locations of these properties.

As legislated under the Solid Waste Management and Resource Recovery Act of 1972, the California Integrated Waste Management Board (CIWMB) maintains the Solid Waste Information System (SWIS) that lists active solid waste disposal sites, inactive or closed solid waste disposal sites, and transfer facilities. Nineteen properties reported to be located in the plan area appear on the SWL list. Refer to Figure 5.15-10 for the approximate locations of these facilities.

The UST lists consist of properties that have registered tanks, and are not necessarily indicative of sites where a release of hazardous substances has occurred. Approximately 208 properties reported to be located within the plan area appear on the UST list. The properties listed in this database that have also experienced an unauthorized release of hazardous substances are shown on Figure 5.15-3 as LUST cases.

The DEH, HE17/58 (PERMITS) list tracks facilities that use hazardous materials or generate hazardous wastes in quantities that require regulation by the DEH. These properties are not necessarily indicative of facilities where a release of hazardous substances has occurred. Approximately 1,310 properties reported to be located in the plan area appear on the PERMITS list.

Wildfire Hazards

The potential wildfire risk zones are areas that have steep slopes, limited precipitation, and plenty of available fuel. As shown on Figure 5.15-11, large portions of eastern Chula Vista may be subject to high fire hazard severity. It should be noted that much of the area indicated as high wildfire hazard area has been developed. In these areas the map is out of date.

5.15.1.3 Update Areas

Northwest Update Area

The majority of sites of potential environmental concern are located in the western portion of the plan area. Several landfill sites of potential environmental concern are located in the Northwest Update Area (see Figure 5.15-2). There are several LUST and ERNS sites of potential concern within this Update Area (see Figures 5.15-3 and 5.15-5, respectively). As seen in Figure 5.15-4, there are two CERCLIS sites of potential concern located along the northwestern boundary. There are three SWRCB SLIC spill sites of potential concern along the western edge of this update area (see Figure 5.15-6). Several RCRA CORRACTS sites of potential concern are located within this Update Area (see Figure 5.15-7). No EPA TRIS sites of potential concern occur within the Update Area. There are two state DTSC sites of potential concern within the Northwest Update Area, and one located just outside and east of the southern planning boundary along I-5 (see Figure 5.15-9).

One area of possible incompatible land use in the vicinity of operational and closed waste disposal facilities was identified. This property is presently occupied by Bayscene Mobile Home Park, 100 Woodlawn Avenue. According to information obtained through the LEA, this mobile home park may be located on land that was used as a disposal area for burn ash excavated and hauled from a residential development project in Coronado. In addition, the properties adjacent to the mobile home park on the north, south, and east are occupied by residences, which may also represent an incompatible land use. No additional obvious incompatible land uses were observed in the immediate vicinity of the sites visited.

The Northwest Update Area is not located in a designated wildfire hazard area as defined by the California Department of Forestry and Fire Prevention.

The following facilities of potential environmental concern are located within this Update Area:

FORMER GUNPOWDER POINT (ALSO KNOWN AS PARADISE MARSH LANDFILL)

This former landfill reportedly is located to the west of I-5, adjacent to and south of the Sweetwater River, and approximately 850 feet north of Gunpowder Point Drive. Railroad tracks cross the central portion of the former landfill in a north-northwesterly to south-southeasterly direction. According to a representative of the LEA, this landfill is a former burn site. Known contaminants at this burn site include lead and other metals. During the site reconnaissance, soil stockpiles covered with plastic sheeting were observed on the southern portion of the burn site.

FORMER BAYSCENE LANDFILL

This former landfill reportedly is located in the vicinity of the western terminus of Flower Street, between Woodlawn Avenue to the east, I-5 to the west, and D Street to the north. Residences border the property to the north, south, and east. A steeply descending slope also borders the property to the west, followed by trolley tracks. Burn ash, reportedly from land on which the Coronado Cays project subsequently was constructed, was deposited at this location. (Reportedly, during construction of the Coronado Cays residential development project, burn ash was excavated and hauled to various locations throughout San Diego County.) Soil and groundwater sampling has not been performed to date at the Bayscene Landfill. However, lead and other metals are expected to be present in this area at elevated concentrations. In addition, based on previous burn dump investigations, low levels of total recoverable petroleum hydrocarbons or low to no detectable levels of semi-volatile organic compounds (SVOCs), PCBs, dioxins, and furans may also be present in burn ash. Bayscene Mobile Home Park, located at 100 Woodlawn Avenue, presently occupies the property.

Southwest Update Area

The Southwest Update Area contains several sites of potential environmental. As seen on Figure 5.15-2, several landfill sites of potential environmental concern are located in the Southwest Update Area. Additionally, the former Shinohara I Landfill is located along the southeastern boundary of this Update Area and described below. There are several LUST and ERNS sites of potential concern within these Update Areas (see Figures 5.15-3 and 5.15-5, respectively). One CERCLIS site of potential concern located just outside of and west of the northern portion of the Southwest Update Area (see Figure 5.15-4). No SWRCB SLIC spill sites of potential concern occur within the Southwest Update Area. Several RCRA CORRACTS sites of potential concern are located within the Southwest Update Area (see Figure 5.15-7). There are two EPA TRIS sites of potential concern in the south-central portion of the Southwest Update Area (see Figure 5.15-8). Although no state DTSC sites are located within the Southwest Update Area, there are three located just north of the planning boundary east of I-805 and two located to the northeast (see Figure 5.15-9).

The Southwest Update Area is not located in a designated wildfire hazard area as defined by the California Department of Forestry and Fire Prevention.

East Update Area

The East Update Area is directly adjacent to the Otay Landfill, which is a potential environmental concern. The Otay Landfill, described below, is an active landfill and reportedly accepts approximately 98 percent of the non-hazardous municipal waste collected in the City. No LUST sites are known to occur within this Update Area. Additionally, no CERCLIS, ERNS, SWRCB SLIC spill, RCRA CORRACTS, TRIS, or DTSC sites of potential concern are located within the East Update Area.

Several automobile salvage yards were observed primarily along Nirvana Avenue and Energy Way. Because automobiles use various hazardous materials and petroleum products (e.g., transmission fluid, motor oil, coolant, gasoline or diesel fuel, and acid batteries), and the automobiles in these facilities tend to be in poor condition, it is possible that the hazardous materials and petroleum products contained within the automobiles could pose a threat to the environmental integrity of these facilities.

This update area is within a High Wildfire hazard area as designated by California Department of Forestry and Fire Prevention, which means it may contain substantial forest fire risks and hazards (see Figure 5.15-11).

The following facilities of potential environmental concern are located within this Update Area:

FORMER SHINOHARA I LANDFILL

This former landfill reportedly is located to the south of Auto Park Drive and west of Brandywine Avenue. This former landfill is a burn site, most of which has been cleaned by excavating and hauling away the burn ash from the area and subsequently closed.

FORMER SHINOHARA II LANDFILL

This former landfill reportedly is located to the south of the former Shinohara I Landfill, and south of the Otay River. Like Shinohara I, Shinohara II is also a burn ash site. However, the LEA believes that "…there could be up to a 30- or 40-foot-thick deposit of burn ash at this site." Soil and groundwater testing has not been performed at this facility to date.

OTAY LANDFILL (ACTIVE)

This active County of San Diego Class III landfill is located at 1700 Maxwell Road, at the northern terminus of Maxwell Road. The Otay Landfill occupies approximately 464 acres and is privately owned by Allied Waste Industries, Inc. and operated in the County of San Diego by Otay Landfill, Inc. Approximately 10 percent of the facility's waste is generated by the City of Chula Vista; the rest is diverted from other cities throughout the region.

The facility accepts an average of 2,260 tons per day and, as of 2002, had an estimated remaining capacity of 40.5 million cubic yards/31 million tons. It is permitted to accept up to 5,000 tons per day and has an estimated closure date of 2028. In addition, the landfill operator has recently committed up to 30 free acres on the landfill site for the composting of green waste, which is estimated to comprise up to 25 percent of the total waste stream. The design capacity of the facility is estimated at just less than 60 million cubic yards. The discussion of the capacity of the landfill is provided in Section 5.14 of this report.

A portion of the Otay Landfill, consisting of approximately 22 acres, was operated as a Class I hazardous materials disposal facility according to the 1989 FEIR (City of Chula Vista 1989). The Class I hazardous materials disposal area is located in the central portion of the landfill. The disposal area presently is closed and no longer accepts wastes. The Otay Landfill is monitored on a regular basis by the LEA.

FORMER OMAR RENDERING FACILITY

This former facility was reportedly located at 4826 Otay Valley Road (note: Otay Valley Road has subsequently been renamed Main Street). The site was used for an animal by-products processing plant but other industrial operations were also conducted on-site during various times including an auto-wrecking yard and operation of a fleet of trucks during the 1950s to transport Class I liquid wastes for the Omar facility. Three USTs that contained diesel and gasoline were located north of the rendering plant and were used to support of the

trucking operations. Of the three tanks removed in 1987, one was found to be leaking. Contaminated soil was removed from the tank excavation and a groundwater monitoring well was installed down gradient. Subsequently, the county DEH closed the UST regulatory case with a determination of no further action needed for this area.

However, groundwater beneath the site has been impacted with volatile organic compounds (VOCs), SVOCs, and inorganics in varying degrees. The VOCs have been observed site-wide and off-site to the south and east, but are mostly concentrated in the vicinity of the former waste ponds.

In addition, chlorinated solvents have been detected across the site in soil, soil vapor, and groundwater but have been determined not to pose a significant human health risk for commercial/industrial workers. Placement of a deed restriction has been recommended on the property to prevent future use of the site for residential purposes since this use was not evaluated in a risk assessment conducted in 1996.

A Cleanup and Abatement Order was issued by the RWQCB on March 27, 2003 to formalize the voluntary semi-annual groundwater monitoring program that has been conducted on the site; require additional off-site groundwater monitoring; and detail the steps necessary to evaluate remedial options and ultimately support a revised containment zone application by the current property owners in addition to posting financial assurances to cover future monitoring costs. On April 9, 2003, the RWQCB authorized the Executive Officer to enter into a Polanco Act agreement with the City of Chula Vista which has resulted in preparation of a Remedial Action Plan (RAP). Upon completion of the soils requirements outlined in the RAP, a No Further Action (NFA) determination for soils will be issued by the RWQCB.

APPROPRIATE TECHNOLOGIES II FACILITY

According to the *FirstSearch* report, this facility is located at 1700 Maxwell Road. The P&D Technologies report (P&D 1989) describes this facility as a ". . . fully permitted hazardous waste treatment facility. . ." located immediately south of the Otay Landfill. Reportedly, at the time of the P&D Technologies investigation, the facility was active and ". . . permitted to receive all hazardous wastes for treatment with the exception of explosives, radioactive wastes and PCB's." The P&D report further states "suspended solids are removed through a settling process which produces sewerable water and a filter cake material which is then transported to another facility." This facility has not been in operation since approximately 1997.

5.15.2 Thresholds of Significance

The proposed General Plan Update would result in a significant hazards/risk of upset impact if it would:

- Threshold 1: Create a significant hazard to the public or the environment through the routine transport, use, disposal or accidental release of hazardous materials.

- Threshold 2: Place potential emitters of hazardous or acutely hazardous materials or substances in close proximity to sensitive receivers.

- Threshold 3: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

- Threshold 4: Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

5.15.3 Impacts

5.15.3.1 Threshold 1: Hazardous Materials

Threshold 1 states that a significant impact would result if adoption of the plan creates a significant hazard to the public or the environment through the routine transport, use, disposal, or accidental release of hazardous materials.

Implementation of the proposed land uses identified in the General Plan Update has the potential to result in the routine transport, use, disposal, or accidental release of hazardous materials. The reconnaissance survey described in Section 5.15.1.2 identified 169 and 46 properties in the western and eastern portion of the plan area, respectively, that are of potential environmental concern that use, store, and transport hazardous materials. Under the proposed plan, these uses would continue. Development in accordance with the Preferred Plan or Scenarios 1, 2, or 3 has the potential to place people adjacent to these sites, such as the Otay Landfill, and, therefore, has the potential to expose people to hazards. However, Objective EE 19 assures that new development would not be approved and would not result in a significant impact due to the potential for hazardous materials use and transport to affect residents because Policy EE 19.1 requires that:

> Proposals for hazardous waste storage, collection, treatment, disposal and transfer facilities shall be accepted for review only if located within a designated "general area" as shown in Figure 9 [of the environmental element]. The proposal shall be reviewed based upon the following criteria:
>
> - The application shall include risk assessments, environmental reviews and other reports necessary to determine project impacts on the environment.

- A health risk assessment, as described in the Chula Vista Zoning Code, shall be prepared under the direction of the city, the Local Assessment Committee (LAC)and any Ad Hoc Technical Committees that may be created to advise the City and LAC on such matters.

- All facilities shall be a minimum of 1,000 feet from any residential zone, residence, school, hospital, hotel, motel or other similar land use.

- Setback or buffer areas shall be precluded from future residential uses through property restrictions such as easements or covenants, and where appropriate, through zoning.

- Special design features and/or on-site emergency services may be required where deemed necessary to facilitate the adequate handling of hazardous materials accidents.

- A traffic/transportation study shall be prepared as part of the environmental analysis and health risk assessment. The study shall address the proximity of the proposed facility to areas of waste generation; the distance along minor and major routes in the city from areas of waste generation to the facility and from the proposed facility to the freeway; the number and types of residences, schools, hospitals and shopping centers fronting the affected minor and major routes; and the highway accident rate, as determined by the California Department of Transportation, along highways identified as part of the transportation route.

Implementation of these policies is assured through Police EE 20.2 and 20.3 which specify:

EE 20.2: Through the environmental review of proposed developments in accordance with the California Environmental Quality Act, the City shall ensure that significant and potentially significant adverse effects from facilities using, storing, and handling hazardous materials and waste to existing and planned surrounding land uses will be avoided.

EE 20.3: Prior to the renewal of business licenses for businesses involving hazardous materials and/or generating hazardous waste, the city shall continue to require licensees to prepare and submit an acceptable Business Plan and Risk Management Prevention Program to the County Department of Environmental Health, as applicable, and to obtain all other necessary licenses and permits.

Therefore, impacts from hazardous materials resulting from development completed in conformance with the proposed General Plan are self-mitigated by the adoption and implementation of Objectives EE 19 and EE 20 and associated policies.

5.15.3.2 Threshold 2: Hazardous Materials Emitters

Threshold 2 states that a significant impact would result if adoption of the plan would place potential emitters of hazardous or acutely hazardous materials or substances in close proximity to sensitive receivers.

Proposed Policy EE 19.1 addresses the siting of potentially hazardous materials and provides that development proposals for hazardous waste storage, collection, treatment, disposal, and transfer facilities will only be considered if they are located within a designated "General Area" as shown in Figure 9 of the City's General Plan (see Figure 5.15-12 of this EIR) and meet specific siting, design and operating criteria established by the Chula Vista Zoning Code and pursuant to the established City siting criteria guidelines. The proposed General Plan Update would revise the "General Areas" map to refine allowable hazardous waste materials handling adjacent to SR-54 and near the Otay Landfill. The proposed adjustments to the general areas coincide with the proposed industrial land use designations of the Preferred Plan and reflect non-industrial uses that have been developed on industrially designated lands subsequent to the adoption of the General Plan in 1989. The modified general areas map is included as Figure 5.15-12.

Policy EE 19.1 requires that all facilities shall be a minimum of 1,000 feet from any residential zone, residence, school, hospital, hotel, motel or other similar land use and that setback or buffer areas shall be precluded from future residential uses through property restrictions such as easements or covenants and, where appropriate, through zoning.

By limiting the location for potential emitters to general areas and by designing those areas in accordance with Policy 19.1, the adoption of the Preferred Plan or Scenarios 1, 2, or 3 would avoid placement of potential emitters of hazardous or acutely hazardous materials or substances in close proximity to sensitive receivers. Therefore, impacts from hazardous materials resulting from development completed in conformance with the proposed General Plan are self-mitigated by the adoption and implementation of Objective EE 19 and associated policies.

5.15.3.3 Threshold 3: Emergency Response

Threshold 3 states that a significant impact would result if adoption of the plan would impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

There are no objectives or policies contained in the proposed General Plan Update that would interfere with or impair implementation of an adopted emergency response or evacuation plan. In addition, the land uses identified in the proposed Preferred Plan and Scenarios 1, 2, or 3 would not physically interfere with any known adopted emergency plans. The plan contains Policy EE 19.1, which specifies that "special design features and/or on-site emergency services may be required where deemed necessary to facilitate the adequate handling of hazardous materials accidents." Therefore, impacts to adopted emergency response or evacuation plans are self-mitigating.

5.15.3.4 Threshold 4: Wildland Fires

Threshold 4 states that a significant impact would result if adoption of the plan exposes people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Implementation of the proposed Preferred Plan or Scenarios 1, 2, or 3 would increase development intensities in areas of the built environment and convert open land to residential, commercial, and industrial uses. Since Chula Vista receives limited precipitation, the potential for wildland fires represents a significant hazard within areas of the city in close proximity to wildland fuels, particularly in eastern Chula Vista. Development completed in conformance with the Preferred Plan or Scenarios 1, 2, or 3 in close proximity to wildland fuels, particularly in eastern Chula Vista, has the potential to result in a significant impact.

Wildland fire hazard impacts resulting from adoption of the plan are self-mitigating because the plan includes Policy EE 16.1, which specifies that the City shall:

- Implement brush management programs, which are consistent with the Chula Vista MSCP Subarea Plan and the City's Urban-Wildland Interface Code, within urban development and open space interface areas in order to reduce potential wildland fire hazards. Brush management guidelines contained in the MSCP Subarea Plan and the Urban-Wildland Interface Code shall include limits and measures to prevent increased risk of erosion.

Therefore, impacts from wildland fires resulting from development completed in conformance with the proposed General Plan are self-mitigated by the adoption and implementation of Objective EE 16.1.

5.15.4 Level of Significance Prior to Mitigation

Threshold 1: Create a significant hazard to the public or the environment through the routine transport, use, disposal, or accidental release of hazardous materials.

Development in accordance with the proposed plan will be completed in compliance with policies in Objective EE 19, which assure that new development will not be approved if there is the potential for hazardous materials use and transport to affect residents. Implementation of these policies is assured through accordance with CEQA as indicated in Policy EE 20.2. As such, impacts in regard to Threshold 1 are not significant.

Threshold 2: Place potential emitters of hazardous or acutely hazardous materials or substances in close proximity to sensitive receivers.

Proposed Policy EE 19.1 provides that development proposals for hazardous waste storage, collection, treatment, disposal, and transfer facilities will only be considered if they are located within a designated "General Area" and meet specific siting, design, and operating criteria established by the Chula Vista Zoning Code and pursuant to the established City siting criteria guidelines. The proposed General Plan Update would revise the "General Areas" map to coincide with the proposed industrial land use designations of the Preferred Plan and reflect non-industrial uses that have been developed on industrially designated lands subsequent to the adoption of the General Plan in 1989. By limiting the location for potential emitters to general areas and by designing those areas in accordance with Policy 19.1, the adoption of the Preferred Plan or Scenarios 1, 2, or 3 would avoid placement of potential emitters of hazardous or acutely hazardous materials or substances in close proximity to sensitive receivers. As such, impacts in regard to Threshold 2 are not significant.

Threshold 3: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

The proposed General Plan Update does not contain any objectives or policies and does not propose any land uses that would interfere with or impair implementation of an adopted emergency response or evacuation plan. Implementation of Policy EE 19.1 avoids potential impacts by requiring special design features and/or on-site emergency services where deemed necessary to facilitate the adequate handling of hazardous materials accidents. Therefore, impacts to adopted emergency response or evacuation plans are self-mitigating and not significant.

Threshold 4: Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Due to the limited amount of precipitation the City receives, the potential for wildland fires represents a significant hazard in areas of wildland fuels. Development completed in conformance with the Preferred Plan or Scenarios 1, 2, or 3 in close proximity to wildland fuels, particularly in eastern Chula Vista, has the potential to result in a significant impact. However, in accordance with Policy EE 16.1, implementing appropriate techniques,

consistent with the Chula Vista MSCP Subarea Plan and the City's Urban-Wildland Interface Code, would reduce hazards to an acceptable level. Therefore, impacts are self-mitigated and not significant.

5.15.5 Mitigation Measures

There are no significant hazards/risk of upset impacts with the adoption of the proposed General Plan Update; therefore, no mitigation is necessary.

5.15.6 Level of Significance After Mitigation

No significant hazards/risk of upset impacts have been identified.

5.16 Mineral Resources

5.16.1 Existing Conditions

5.16.1.1 Regulatory Plans and Policies

The California Department of Conservation is the primary state agency with regard to mineral resource protection. The Department is charged with conserving earth resources (Cal. Pub. Res. Code § 600 et/ seq.). The State Mining and Geology Board (SMGB) serves as a regulatory, policy, and appeals body representing the state's interests in conservation of mineral resources and reclamation of lands following surface mining activities. The SMGB operates within the Department of Conservation, and is granted certain autonomous responsibilities and obligations under several statutes including the Surface Mining and Reclamation Act (SMARA).

The State of California Surface Mining and Reclamation Act of 1975 (Cal. Pub. Res. Code §2710 et seq.) addresses the protection and subsequent beneficial use of mineral resources considered essential to the economic well-being of the state and to the needs of society while at the same time providing for the reclamation of mined lands to prevent or minimize adverse effects on the environment and to protect public health and safety (SMARA Section 2711[a]; http://www.consrv.ca.gov/omr/smara/2000Note26.pdf). Under SMARA (Sections 2762 and 2763), the City is required to provide justification of a conflicting land use to show why the approved use is more important to the region than the loss of the designated mineral resource.

5.16.1.2 Existing Citywide Conditions

Construction Aggregate

Since most of the western portions of the General Plan area are fully developed or nearly so, the potential for mineral resources and production in the General Plan area is generally limited to undeveloped portions of the Eastern Territories, floodplains, or biologically sensitive preserve areas. Significant aggregate reserves have been mapped in the vicinity of the Sweetwater and Otay River valleys as shown on Figure 5.16-1.

Alluvial material within the lower Sweetwater River extends from the San Diego Bay, easterly along Chula Vista's northern study area boundary and northeast to the Sweetwater Reservoir. Significant construction aggregate resources designated MRZ-2 and located within the approximate 150 acres comprising Sector N have been mapped by the California Geological Survey (CGS) as "urbanized" since originally mapped in 1982. Resources in this area are no longer available because the area has been dedicated as a habitat mitigation area. In addition, mining operations upstream in Sectors O and P located outside the study area

but nearby along the Sweetwater River, which were active as recently as 1982, have subsequently ceased operations.

The Otay River valley area encompasses approximately 3,193 acres and has been a major source of aggregate production for the south San Diego County area in the past. Sector R of the Otay River valley is an approximate 2,727-acre alluvial fill, which by 1982 had been mined to a depth of 15 feet over most of the entire area. The California Division of Mines and Geology (DMG) Open-file Report 96-04 estimates that this sector may contain up to 100 million tons of portland cement concrete (PCC)-grade quality sand and an additional 70 million tons of PCC-grade quality gravel. Replenishment of any mined resources occurs only from tributaries as the dam forming Otay Lakes prevents transport of sediment from upstream. Sector S comprises an approximate 360-acre mass of metavolcanic rock known as Rock Mountain. The Otay Mesa Pit at Rock Mountain is the only active mining operation currently permitted to operate within the city of Chula Vista and larger study area. The Otay Mesa Pit produces quarried rock from a metavolcanic deposit at Rock Mountain, which meets the quality specifications for PCC-grade aggregate.

Designated land uses and zoning within regionally significant MRZ-2 areas are shown on Figure 5.16-2. The majority of land in these sectors has been designated open space. An estimated 200 acres are designated or zoned for other uses, such as limited industrial or freeway.

OTHER MINERAL RESOURCES

Magnesium Chloride

The Chula Vista Food Machinery and Chemical Corporation plant produces magnesium chloride by evaporating bittern from seawater supplied from an adjoining salt plant on San Diego Bay. No other mineral resources are currently generated within the study area.

Historic Mineral Resources

Records indicate the historic presence of other mineral resources in or near the study area that are no longer permitted or in production. These include limestone-dolomite deposits at Jamul Ranch east of the Proctor Valley portion of Otay Ranch; lead at the Cedar Creek (Lost Spanish) lead mine located in Cedar Canyon less than a mile southeast of the San Ysidro parcel within Otay Ranch; and bentonite clay at two locations: south of the Otay River parcel of Otay Ranch and a second to the west. Bentonite is a highly expansive clay with a variety of practical industrial and other uses. Potentially feasible bentonite clay extraction sites are also believed to occur in Poggi, Wolf, and Telegraph Canyons although the resource is not considered to be of regional significance on the Otay Ranch property.

5.16.1.3 Update Areas

The Northwest Update Area is underlain with Quaternary Terrace Deposits (see Figure 5.5-1). As stated above, the majority of western Chula Vista, including the Northwest Update Area, has been previously developed so the potential for significant mineral resources is considered low. No regionally significant MRZ-2 aggregate resource areas are designated within this update area.

The Southwest Update Area is underlain with quaternary alluvium, tertiary sedimentary rocks, and quaternary terrace deposits (see Figure 5.5-1). As with the Northwest Update Area, the Southwest Update Area has been previously developed so the potential for significant mineral resources is considered low. No regionally significant MRZ-2 aggregate resource areas are designated within this update area.

The East Update Area is underlain with quaternary alluvium, tertiary sedimentary rocks, quaternary terrace deposits, and metavolcanic rocks (see Figure 5.5-1). Regionally significant MRZ-2 aggregate resource areas are designated within this update area along the southern boundary. A small portion of this update area, just east of I-805, is located in an urbanized regionally significant MRZ-2 aggregate resource area (see Figure 5.15-1). The current zoning and existing land use for this portion of the update area is Limited Industrial (see Figure 5.16-2).

As seen in Figure 5.16-2, the majority of the land designated as “regionally significant” MRZ-2 aggregate resource area is currently designated as open space and is within the MSCP Preserve. Additionally, the East Update Area contains portions of Sector S, which includes Rock Mountain. As stated above, the Otay Mesa Pit at Rock Mountain is the only active mining operation currently permitted to operate within the city of Chula Vista, and produces quarried rock from a metavolcanic deposit at Rock Mountain, which meets the quality specifications for PCC-grade aggregate (California Division of Mines and Geology 1996).

5.16.2 Thresholds of Significance

The proposed project would result in a significant impact to mineral resources if it would:

- Threshold 1: Result in the loss of availability of a valuable mineral resource that would be of value to the region and the residents of the state.

5.16.3 Impacts

5.16.3.1 Threshold 1: Loss of Valuable Mineral Resources

Threshold 1 states that the proposed General Plan Update would result in a significant impact if the plan would result in the loss of availability of valuable mineral resource that would be of value to the region and the residents of the state.

There are no "regionally significant" MRZ-2 aggregate resource areas in western Chula Vista and no mining activities are currently occurring. Significant mineral resources occur in eastern Chula Vista, along the Otay River valley (see Figure 5.16-1).

Loss of access to mineral resources would primarily be the result of conversion of lands underlain by these resources to other uses, or within close proximity to the resources, such that the construction and occupancy of future projects would restrict or eliminate safe and environmentally sound measures to implement extractive operations. Loss of access could also be the result of changes in land ownership (e.g., non-renewal of a lease where active mining is occurring) or due to regulations for the protection of sensitive habitat and wildlife.

Currently, there is only one active mining site within the city; the Otay Mesa Pit at Rock Mountain. The Otay Mesa Pit is located at the southern limits of the city of Chula Vista. Existing operations are located within a larger 800+-acre ownership, of which approximately 188 acres are located within the boundaries of a reclamation plan approved in 1980. The approved reclamation plan for the Otay Mesa Pit originally considered a five-phased mining operation. Phases 1-4, located within the Otay River where sand and gravel resources were to be mined, have been eliminated. Phase 5 operations were planned for the mining of hard rock Santiago Peak Metavolcanics at Rock Mountain. Information on remaining extractable resources is proprietary and not currently available.

In the East Update Area, mining operations could conflict with nearby existing or proposed uses. Significant mineral resources occur in eastern Chula Vista, along the Otay River valley (see Figure 5.16-1). Development in the Otay River, an MRZ-2 aggregate resource area, exists in the Otay Valley District of the Otay Ranch Subarea and in the East Main Street Subarea. Because of the limited area affected by the land use recommendation, development of this portion of the MRZ-2 in accordance with the Open Space Active Recreation designation would prevent the extraction of a valuable mineral resource. Therefore, impacts would not be significant.

The proposed Environmental Element contains one objective and associated policies that address mineral resources and their extraction:

Objective EE 5

Efficiently extract regionally significant mineral resources in accordance with the Chula Vista MSCP Subarea Plan and require the appropriate reclamation of mined areas for suitable future development, recreation, open space, and/or habitat restoration.

Policies

EE 5.1: Ensure that permit applications for proposed mineral resource extraction are consistent with the Chula Vista MSCP Subarea Plan.

EE 5.2: Consider and minimize impacts from mining operations to existing and future surrounding land uses.

EE 5.3: Ensure that approved reclamation plans fully comply with requirements of the Chula Vista MSCP Subarea Plan, Chula Vista Greenbelt Master Plan, Otay Valley Regional Park Concept Plan, and all other applicable plans regarding the restoration of biological habitats and the creation of trails and parkland.

As noted above, because of the limited area affected by the land use recommendation, it is not anticipated that development of this portion of the MRZ-2 in accordance with the Open Space Active Recreation designation would prevent the extraction of a valuable mineral resource. The only potential situation that could result in the loss of availability of a valuable mineral resource stems from the location of the resource at Rock Mountain relative to the City's MSCP preserve.

Impacts resulting from development completed in conformance with the proposed General Plan are avoided because the plan contains Policies EE 5.1 and EE 5.3, which ensures that permits issued for extraction will not adversely impact MSCP lands. Application of Policy EE 5.1 requires that a permit for the operation for mineral extraction will not be issued if impacts to adjacent sensitive land uses cannot be reduced to below a level of significance in accordance with MSCP policies and regulations. In addition, the plan contains Policy EE 5.3 which requires that reclamation plans will only be approved if they are consistent with the requirements of the MSCP and all other applicable plans.

5.16.4 Level of Significance Prior to Mitigation

There are no "regionally significant" MRZ-2 aggregate resource areas in western Chula Vista and no mining activities are currently occurring. As such, adoption of the update would not have a significant mineral resource impact in these areas. Significant MRZ-2 zones occur along the Otay River valley and mining operations could conflict with nearby

existing or proposed uses. Significant mineral resources occur in eastern Chula Vista, along the Otay River Valley (see Figure 5.16-1). Because of the limited area affected by the land use recommendation, it is not anticipated that development of this portion of the MRZ-2 in accordance with the Open Space Active Recreation designation would prevent the extraction of a valuable mineral resource.

Potential impacts to important mineral resources resulting from mineral extraction in areas adjacent to MSCP preserve lands that are completed in conformance with the proposed General Plan Update are self-mitigating because the plan contains Policies EE 5.1 and 5.3, that require permit applications for proposed mineral resource extraction are consistent with the Chula Vista MSCP Subarea Plan (Policy EE 5.1) and that approved reclamation plans fully comply with requirements of the Chula Vista MSCP Subarea Plan, Chula Vista Greenbelt Master Plan, Otay Valley Regional Park Concept Plan, and all other applicable plans regarding the restoration of biological habitats and the creation of trails and parkland (Policy EE 5.3). Therefore, implementation of Policies EE 5.1 and EE 5.3 will avoid significant impacts to the availability of valuable mineral resources.

5.16.5 Mitigation Measures

Since no significant mineral resource impacts would result, no mitigation is necessary.

5.16.6 Level of Significance After Mitigation

There are no significant mineral resource impacts anticipated to result from the adoption of the General Plan Update.

5.17 Housing and Population

5.17.1 Existing Conditions

5.17.1.1 Regulatory Plans and Policies

Housing Element

The Housing Element of the General Plan is an important planning tool for the City of Chula Vista. It identifies the existing and projected housing needs of the City and recommends ways to meet these needs while balancing other community objectives and resources. The California State Legislature has identified the attainment of a decent home and suitable living environment for every Californian as the State's main housing goal. Recognizing the important part that local planning programs play in pursuit of this goal, the Legislature has mandated that all cities and counties prepare a housing element as part of their comprehensive general plans.

The City of Chula Vista Housing Element contains the following goals to address a number of important housing-related issues.

- Goal 1: Conserve existing affordable housing opportunities.
- Goal 2: Maintain and enhance the quality of residential neighborhoods in Chula Vista.
- Goal 3: Ensure that an adequate and diverse housing supply is available to meet the City's existing and future needs.
- Goal 4: Increase home ownership opportunities for low- and moderate-income households.
- Goal 5: Enable homeless individuals and families to find permanent housing.
- Goal 6: Encourage energy and waste conservation as an integral part of homes.
- Goal 7: Promote equal opportunity for all residents to reside in housing of their choice.
- Goal 8: Reduction and/or removal to the greatest extent possible of identified constraints to the development, maintenance, and improvement of housing.

Among its numerous policies and programs, the Housing Element includes the Affordable Housing Program (AHP) that requires new projects involving 50 or more units to set aside a

minimum of 10 percent of the project's units as affordable to low- and moderate-income households. The AHP, through its Implementation Guidelines, offers flexibility in meeting affordable housing goals by considering alternatives to actual developer built-in production. These alternatives include land set-asides, off-site projects, and in-lieu contributions.

There are no amendments to the Housing Element proposed as part of the General Plan Update. The existing Housing Element is located in Chapter 7 of the General Plan Update. Local Housing Element updates are subject to a regional council-of-governments (COG) process and are performed on a five-year cyclic basis as prescribed through the State Housing Element Law. The current Chula Vista Housing Element covers the five-year period from 1999 to 2004, and was originally self-certified by the City on December 19, 2000, pursuant to a State-approved program for jurisdictions in the San Diego Region. The current Chula Vista Housing Element covers the five-year period from 1999 to 2004, and was originally self-certified by the City on December 19, 2000, pursuant to a state-approved program for jurisdictions in the San Diego Region. Based on later financial qualifying provisions for particular housing assistance funds, in 2002, the City submitted the Housing Element for additional certification by State HCD, and re-adopted the state-certified document on May 28, 2002. Jurisdictions within the San Diego Association of Government's COG are currently working on Housing Element updates for the 2005 to 2010 planning cycle. Chula Vista currently anticipates adoption of the Housing Element update by early 2006. The updated Housing Element will be structured to include formatting consistent with the overall General Plan, and will be incorporated at such time as it is adopted.

Otay Ranch General Development Plan

The Otay Ranch GDP established a five-year objective that requires each village to proportionately assist the City of Chula Vista to meet or exceed Otay Ranch's share of the five-year regional allocation as provided by Chula Vista's Housing Element. The Otay Ranch GDP requires that prior to or concurrent with the approval of a SPA plan, a housing plan shall be approved that addresses the type and location of housing to be provided pursuant to the regional share allocation.

5.17.1.2 Existing Citywide Conditions

Table 5.17-1 summarizes the current population and the total number of housing units within each of the planning areas. The total number of housing units in the City of Chula Vista planning area as of January 1, 2004 was 74,231, with a population of 222,300 people. Within the incorporated City boundaries, there were 70,067 housing units and 209,200 people.

5.17.2 Thresholds of Significance

According to Appendix G of the CEQA guidelines, impacts to housing and population would be significant if the proposed project:

TABLE 5.17-1
PROJECT STATISTICS BY SCENARIO

		Planning Area					
		Northwest	Southwest	East	Bayfront	Total GPU Area	Incorporated Area
Existing Conditions	Dwelling Units	19,711	18,368	36,152	–	74,231	70,067
	Population	56,931	53,562	111,807	–	222,300	209,200
Adopted Plan	Dwelling Units	21,140	18,851	57,046	1,000	98,037	89,124
	Population	59,011	53,372	169,411	2,519	284,300*	257,376
Preferred Plan	Dwelling Units	27,497	22,281	64,315	1,000	115,093	105,762
	Population	74,861	61,790	187,655	2,519	326,900*	298,529
Scenario 1	Dwelling Units	27,749	21,806	61,581	1,000	112,136	102,805
	Population	75,624	60,687	181,013	2,519	319,843	291,546
Scenario 2	Dwelling Units	26,323	22,527	65,508	1,000	115,358	106,027
	Population	71,850	62,442	191,323	2,519	328,134	299,837
Scenario 3	Dwelling Units	26,837	23,124	59,203	1,000	110,164	100,833
	Population	73,327	63,920	174,187	2,519	313,953	285,656

*Totals vary due to rounding.

- Threshold 1: Induces substantial population growth in an area, either directly or indirectly;

- Threshold 2: Displaces substantial numbers of existing housing, necessitating the construction or replacement of housing elsewhere;

- Threshold 3: Displaces substantial numbers of people, necessitating the construction or replacement of housing elsewhere.

5.17.3 Impacts

5.17.3.1 Threshold 1: Substantial Population Growth

Threshold 1 states that impacts to housing and population would be significant if the proposed project would induce substantial population growth in an area, either directly or indirectly.

Assessment of this threshold includes a determination of whether substantial growth in population is induced by the proposed General Plan Update, and where that population growth might occur.

SANDAG is the agency responsible for forecasting regional growth. They indicate that population grows in two ways: (1) natural increase, which results from the number of births over deaths; and (2) net migration, which is primarily based on the condition of the local economy (SANDAG 2003). The growth effects of the General Plan Update are manifest, not in how many people arrive in the San Diego area, but in where those people elect to live and work, either in Chula Vista or elsewhere in the region.

The regional population is a function of the relative strength of the San Diego area economy. The location of that population is, in large part, a function of the planning decisions made by specific jurisdictions through their planning and approval processes; namely their current General Plans and zoning SANDAG has a cyclic process for updating these forecast every 3-5 years to reflect changes in factors affecting the overall region, as well as to reflect changes made to local General Plans and zoning..

Once SANDAG has developed the regional housing and population growth figures, they are distributed. That distribution of projected growth is based, in large part, on the housing and employment capacities of the current, adopted land use plans and policies of each jurisdiction. As a result, it can be assumed that the adoption of a General Plan that allows for a greater regional proportion of housing, the planning area will also receive a greater proportion of the population projected for the San Diego region. This effect, and SANDAG's model, is commonly referred to as a "gravity" model, as housing and population allocations gravitate to where housing and employment capacity exists

The extent to which the proposed General Plan Update will result in people living in the San Diego region that would not otherwise live there depends to a large part on the base employment opportunities that are created by the plan. The existing condition for projected future population is based on the potential for the region to generate base employment. The effect of the General Plan Update on causing a significant increase in substantial regional population growth, as projected by SANDAG, is contingent upon the extent to which the plan results in more base employment potential than the assumptions used in the SANDAG modeling process. Those assumptions are based on the existing General Plan.

The Preferred Plan proposes to increase industrial land over the adopted plan by 174 acres, and to increase land designated for commercial use by 156 acres. In the year 2000, SANDAG reports that there were 25,130 acres of industrial land and 37,334 acres of commercial property in the county. The proposed land use change represented by the Preferred Plan is a 0.7 percent increase in industrial land and a 0.4 percent increase in commercial property relative to the year 2000 condition for the county. Assuming 10 to 15 jobs per acre, the small proportional increase of industrial land, the use most likely to provide base employment, is insufficient to represent a potential regional population increase. It will, therefore, not cause a significant increase in the regional growth projections and, therefore, does not represent a significant impact to regional population growth.

As with the Preferred Plan, the land uses proposed for Scenarios 1, 2, and 3 will not cause a significant increase in regional growth projections. Scenarios 1 and 2 propose to decrease industrial land over the adopted plan by 30 and 16 acres, respectively. Scenario 3 proposes to increase industrial land over the adopted plan by 375 acres. Scenarios 1, 2, and 3 propose to increase land designated for commercial use by 186, 167, and 211 acres, respectively. The proposed land use change represented by Scenario 1 is a 0.1 percent decrease in industrial land and a 0.5 percent increase in commercial property relative to the year 2000 condition for the county. Scenario 2 represents a 0.06 percent decrease in industrial land and a 0.4 percent increase in commercial property. Scenario 3 represents a 1.5 percent increase in industrial land and a 0.6 percent increase in commercial property. Assuming 10 to 15 jobs per acre, the small proportional increase of industrial land for Scenario 3, the use most likely to provide base employment, is insufficient to represent a potential regional population increase. Additionally, the land uses proposed for Scenarios 1 and 2 result in a decrease in the amount of industrial land and therefore do not represent a potential regional population increase. Therefore, Scenarios 1, 2, or 3 will not cause a significant increase in the regional growth projections and, therefore, do not represent a significant impact to regional population growth.

Substantial local population growth, however, is possible. The Preferred Plan and all other Scenarios would accommodate a substantial increase in the population that can be compared to the existing condition. Table 5.17-1 summarizes the proposed population and the total number of housing units proposed for the Preferred Plan and each of the Scenarios within each of the planning areas. Table 5.17-2 compares the increase in population and housing

units for the Preferred Plan and all three Scenarios. The table shows that there would be a 47 percent increase in population and a 55 percent increase in housing units for the Preferred Plan over the existing condition. The smallest increase in population (40 percent) and number of housing units (47 percent) is projected for Scenario 3.

TABLE 5.17-2
INCREASE IN POPULATION AND HOUSING COMPARED TO EXISTING CONDITIONS FOR THE ENTIRE GENERAL PLAN PLANNING AREA

	Population	Increase	Percent Change	Housing Units	Increase	Percent Change
Existing	222,300	–	–	74,231	–	–
Preferred Plan	326,900	104,600	47	115,093	40,862	55
Scenario 1	319,843	97,543	44	112,136	37,905	51
Scenario 2	328,134	105,834	48	115,358	41,127	55
Scenario 3	313,953	91,653	41	110,164	35,933	48

SOURCE: City of Chula Vista 2005.

The Preferred Plan and all three Scenarios target the higher density and higher intensity development into specific areas to protect stable residential neighborhoods and to create mixed-use urban environments that are oriented to transit and pedestrian activity. Development is directed primarily to transit or commercial corridors, multi-family areas, vacant lands, and underutilized areas.

The proposed General Plan Update is specifically intended to provide for the orderly growth of the City of Chula Vista, define the limits to that growth, and act as a mechanism to accommodate and control future growth. Development permitted by land use policy would provide needed housing for all income levels, create compact and pedestrian-friendly urban development, and protect natural resources. The General Plan Update would result in a more inclusive community, improve the balance between housing and employment, and foster a stable economic base and diverse employment opportunities.

The General Plan Update would provide guidance to citizens, developers, City staff, and decision-makers over the next 25 years, through the Year 2030. It pays particular attention to "Smart Growth" principles being promoted throughout the country, California, and the region through SANDAG's Regional Comprehensive Plan. The Smart Growth principles are incorporated in the General Plan's Vision and Themes, which guide the Land Use Plan and also provide the basis for many of the Land Use and Transportation Element's policies. While there is no single definition of "smart growth" that everyone embraces, there are certain common elements.

The basic smart growth principles are summarized as follows:

- Provide a mix of compatible land uses
- Take advantage of compact building design
- Create a range of housing opportunities and choices
- Create walkable neighborhoods
- Foster distinctive, attractive communities with a strong sense of place
- Preserve open space, natural beauty, and critical environmental areas
- Strengthen and direct development towards existing communities
- Provide a variety of transportation choices
- Make development decisions predictable, fair and cost effective
- Encourage community and stakeholder collaboration in development decisions

The General Plan Update contains objectives and policies that provide needed housing for all income levels, supporting infrastructure within and adjacent to the General Plan area, allow for an increase of mixed-use development and transit-oriented uses in the vicinity of major transit corridors, and provide circulation improvements that facilitate mobility throughout the city and between the city and surrounding jurisdictions.

The Preferred Plan and all three Scenarios would accommodate growth that may occur. The General Plan is, therefore, growth inducing. Growth inducement is discussed in Chapter 7 of this report. West of I-805, the proposed General Plan Update would direct growth to already developed areas of the City. East of I-805 the potential increase in population would occur in areas not currently developed. The environmental impacts associated with this increased population are discussed in the individual topical sections of this report. Impact to issues, such as traffic, air quality noise, etc., due to population and housing increases from the adoption of the Preferred Plan and all three Scenarios are discussed in the Sections 5.1 through 5.16 and Chapter 7 of this document.

As noted above, population increases as evaluated as part of Threshold 1 can occur both regionally and locally. While there will not be a substantial increase in regional population as a result of the proposed Preferred Plan or any of the Scenarios, there will be a substantial increase in the population in the City of Chula Vista compared to the existing condition. This is considered a significant impact. Growth inducement is discussed in Chapter 7 of this report.

5.17.3.2 Threshold 2: Displaces Substantial Numbers of Existing Housing

Threshold 2 states that impacts to housing and population would be significant if the proposed project would displace substantial numbers of existing housing necessitating the construction or replacement of housing elsewhere.

The Preferred Plan and all other Scenarios would result in a substantial increase in the number of housing units over the existing condition. Development of the land uses under the

Preferred Plan and all three Scenarios would result in houses being temporarily displaced in the Northwest and Southwest Planning Area of the City as individual projects are completed that conform to the plan. The Preferred Plan allows for an increase of 7,815 dwelling units in the Northwest, and 3,913 units in the Southwest. Replacement of housing would be provided within the same area and would not occur elsewhere. As discussed above, build-out of the General Plan area under the Preferred Plan results in a total increase of 40,891 homes relative to existing conditions within the General Plan area.

The General Plan Update would help meet a projected long-term regional need for housing by providing a wide variety of housing types and prices. SANDAG housing capacity studies indicate a shortage of housing will occur in the project area within the next 20 years. In recent years, the cost of housing has risen disproportionately to the cost of other uses in the project area (e.g., commercial, industrial), reflective of imbalances between housing supply and demand.

The displacement of housing as evaluated relative to Threshold 2 is not considered a significant impact because the housing that may be removed by projects completed in compliance with the Preferred Plan or any of the Scenarios is accommodated within the General Plan area, and the number of units planned for all options increases.

5.17.3.3 Threshold 3: Displaces Substantial Numbers of People

Threshold 3 states that impacts to housing and population would be significant if the proposed project would displace substantial numbers of people, necessitating the construction or replacement of housing elsewhere.

The Preferred Plan and all other Scenarios would result in a substantial increase in population over the existing condition. People will be displaced as individual projects are developed in the Northwest and the Southwest planning areas. The increase in the numbers of units within these planning areas; however, will be able to accommodate those displaced and will not require construction of housing elsewhere, because the Preferred Plan projects an increase of 3,913 residential units in the Southwest Planning Area, and 7,815 units in the Northwest Planning Area will be able to accommodate the existing population.

The displacement of people as evaluated relative to Threshold 3 is not a significant impact because the housing will not need to be constructed elsewhere. The displacement is not considered a significant impact because the numbers of units planned in the Update areas are sufficient to accommodate the affected population.

5.17.4 Level of Significance Prior to Mitigation

5.17.4.1 Threshold 1: Substantial Population Growth

The Preferred Plan and all three Scenarios would result in a substantial increase in the population of Chula Vista because it would accommodate growth that may occur locally. It is, therefore, considered growth inducing. Growth inducing effects are described and evaluated in Chapter 7 of this report.

West of I-805, the proposed General Plan Update would direct that growth to developed areas of the City. East of I-805 the potential increase in population would occur in areas not currently developed. The environmental impacts associated with this increased population are discussed in the individual topical sections of this report. Impact to issues, such as traffic, air quality, noise, community character, land use, utilities and services, cultural and biological resources, geology, soils, and energy due to population and housing increases from the adoption of the Preferred Plan and all three Scenarios are discussed in the Sections 5.1 through 5.16 and Chapter 7 of this document. Because the Preferred Plan and any of the Scenarios would induce growth it is a significant impact in accordance with Threshold 1.

5.17.4.2 Threshold 2: Displaces Substantial Numbers of Existing Housing Necessitating the Construction or Replacement of Housing Elsewhere

The displacement of housing as evaluated relative to Threshold 2 is not a significant impact, because the housing will not need to be constructed elsewhere. Housing that may be removed by individual projects completed in compliance with the Preferred Plan or any of the Scenarios does not necessitate the construction of housing elsewhere because the proposed plan increases the number of housing units accommodated within the General Plan area. The number of units planned for all scenarios increases relative to the existing condition.

5.17.4.3 Threshold 3: Displaces Substantial Numbers of People Necessitating the Construction or Replacement of Housing Elsewhere

The displacement of people as evaluated relative to Threshold 3 is not a significant impact because the housing will not need to be constructed elsewhere. The displacement is not considered a significant impact because the numbers of units planned in the update areas are sufficient to accommodate the affected population.

5.17.5 Mitigation Measures

Impacts resulting from the projected population growth and the development permitted by the Preferred Plan or any of the Scenarios and associated mitigation measures are described in the individual sections of this report. Impacts in accordance with Threshold 1 are

significant because the plan accommodates an increase in population. No mitigation is available to avoid this effect, because adoption of the Preferred Plan or any of the Scenarios will result in that potential increase.

5.17.6 Level of Significance After Mitigation

Because there is no mitigation available to avoid an increase in population resulting from the adoption of a General Plan Update that establishes greater capacity than the existing condition, the impact remains significant and not mitigated.