

CHAPTER 7.0

ANALYSIS OF LONG-TERM EFFECTS

CEQA requires the discussion of the cumulative impacts, growth-inducing impacts, and long-term impacts of proposed projects. The following sections address these issues as they relate to implementation of the City of Orange General Plan.

7.1 CUMULATIVE IMPACTS

The CEQA Guidelines define cumulative effects as “two or more individual effects that, when considered together, are considerable or which compound or increase other environmental impacts.” The CEQA Guidelines further state that the individual effects can be the various changes related to a single project or the changes involved in a number of other closely related past, present, and reasonably foreseeable future projects (Section 15335). The CEQA Guidelines allow for the use of two alternative methods to determine the scope of projects for the cumulative impact analysis:

- List Method - A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency.
- Regional Growth Projections Method - A summary of projects contained in an adopted general plan or related planning document or in a prior environmental document which has been adopted or certified, which described or evaluated regional or areawide conditions contributing to the cumulative impact (Section 15130).

The proposed General Plan establishes policy to guide future development within the City and implementation that is long term in nature. The Regional Growth Projections Method is appropriate in evaluating cumulative impacts because it provides general growth projections for the region and considers long-term growth. SCAG has adopted growth forecasts for each subregion within the SCAG region, including Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial counties through the year 2030. The City of Orange is located in the Orange County Council of Governments Subregion. Therefore, the following cumulative impact analysis utilizes the regional growth projections contained in the Destination 2030 Final Draft

2004 Regional Transportation Plan, February 2004 for the Orange County Council of Governments Subregion.

As shown in Table 7.1, the adopted SCAG Growth Forecasts for the Orange County Council of Governments Subregion project a total population increase of 968,820 between 2000 and 2030. A total of 419,124 additional housing units are projected by 2030. Of the total projected growth in the subregion, the proposed General Plan could accommodate 6.0 percent of the population growth and 5.6 percent of the growth in housing units based on the capacity of the proposed General Plan post-2030 land use capacity.

**Table 7-1
City of Orange and SCAG Growth Forecasts**

	City of Orange Projected Growth through post 2030¹	SCAG Growth Forecast Orange County Subregion 2000-2030²
Population	57,844	968,820
Housing Units	23,478	419,124

Source:

¹ EDAW 2008; based on Proposed General Plan post 2030 Land Use Capacity

² Final Anaheim General Plan and Zoning Code Update EIR 2004

7.1.1 Cumulative Impacts

The following is a discussion of the cumulative impacts of the proposed General Plan when taken within the context of regional growth. Implementation of the mitigation measures (primarily derived from the Implementation Program of the proposed General Plan) and General Plan goals and policies identified in the previous sections of this EIR will serve to reduce cumulative impacts generated by the project to the extent feasible. In many cases, these mitigation measures and General Plan policies will reduce the project’s cumulative impact to a level less than significant. For other impacts, implementation of the identified mitigation measures will not avoid a significant cumulative impact. The following section identifies those significant, unavoidable cumulative impacts that will not be reduced to a less than significant level by implementation of the identified mitigation measures.

Aesthetics

New residential and nonresidential development will be allowed by the proposed General Plan that has the potential to disrupt scenic vistas and scenic resources such as hillsides, ridgelines, and open space compared to existing conditions. Many of these scenic vistas occur in the largely undeveloped Santiago Hills II and East Orange portions of the planning area, including Irvine Lake, grassy valleys, rugged hillsides, and winding canyons. Development in this area has already been entitled and aesthetic impacts were analyzed in an EIR at the time of development plan approval. Development in the East Orange area would be allowed under the proposed General Plan. New residential and nonresidential development allowed by the proposed General Plan may impact the visual character of the City of Orange by impacting scenic resources such as viewscape corridors. Development allowed by the proposed General Plan may be inconsistent with the character of existing structures and may impact the visual character of the City of Orange. Lastly, new development allowed by the proposed General Plan may increase the amount of light and glare within the planning area. All of these potential impacts could result in a significant impact to the visual quality of these areas. However, implementation of City regulations, General Plan policies, and mitigation measures identified in Section 5.1 of this EIR will reduce potential impacts related to aesthetics to a less than significant level. Additionally, future development projects will be reviewed by the City per CEQA to identify potential impacts to aesthetic resources on a project-by-project basis. If project-level impacts are identified, specific mitigation measures will be required. Thus, future development according to the proposed General Plan will not result in a cumulatively significant aesthetics impact.

Agricultural Resources

Land within the planning area is designated as Important Farmland (Unique Farmland or Farmland of Statewide Importance) by the California Department of Conservation in four different locations (see Figure 5.2-1).

At location 1, approximately 15 acres of Important Farmland has already been developed with sports facilities and graded for further development. This site is not used for any type of agricultural production and has not been used for agricultural production in the previous 4 years. Furthermore, both the existing General Plan and the proposed General Plan have designated this area for urban development. Additionally, the area is not well suited for agricultural production as the site is surrounded by nonagricultural uses.

In the remaining locations containing Important Farmland in the planning area, the proposed General Plan does not alter existing land use designations. Additionally, none of these areas are under active cultivation and are also surrounded by existing or planned urban development.

The impacts of the proposed General Plan associated with farmland conversions, agricultural zoning, or Williamson Act contracts, and other changes to farmland have been evaluated in Section 5.2 of this EIR and were found to be less than significant.

Implementation of the proposed General Plan would not contribute to significant cumulative agricultural resource impacts throughout the region.

Air Quality

The planning area is located within the SCAB, where pollutant levels regularly exceed state and federal air quality standards. The basin is identified as a nonattainment area with regard to meeting federal standards for ozone (O₃), PM_{2.5}, and respirable particulate (PM₁₀). Future development in the planning area will continue to add pollutants to the atmosphere from both transportation and stationary sources. Potential cumulative air quality impacts will be partially reduced through implementation of the SCAQMD Air Quality Management Plan and policies and programs contained in local General Plans, including mitigation measures identified in Section 5.3 of this EIR. In particular, land use and transportation policies and programs that encourage more compact development and mixed use development near transit, service, and employment centers will reduce mobile source emissions relative to conditions absent such policies. Additionally, policies in the Circulation and Urban Design Elements encourage the development of a multimodal transportation system that expands walking, biking, and transit facilities. Policies are also directed at enhancing and improving streetscapes to facilitate walking and biking. These factors could lead to a reduction in VMT. Despite these policies, analysis within this EIR indicates that over the course of buildout, emissions will increase significantly even with implementation of mitigation measures. In light of the nonattainment status of the SCAB and SCAQMD regulations, the proposed General Plan would allow new growth and development that would contribute to a cumulatively considerable increase in daily emissions. Thus, the General Plan's contribution to cumulative air quality impacts will be significant and unavoidable.

Biological Resources

As development continues to occur in the region and throughout Orange County where development pressures have pushed development toward foothill areas, sensitive biological resources will be impacted. Development allowed by the proposed General Plan will have the potential to impact sensitive biological resources in the planning area. Although the majority of the planning area is characterized by urbanized areas with low habitat value for wildlife, a significant amount of the eastern portion of the planning area is currently undeveloped and some development will occur. However, development of vacant land in East Orange associated with the Santiago Hills Planned Community and East Orange Planned Community was previously analyzed and mitigation measures were required as part of the East Orange EIR and previous development plan approval.

The proposed General Plan does not allow development on the Irvine Ranch Land Reserve (IRLR) and the Orange County Central/Coastal NCCP reserve, which contain valuable ecological and biological resources. Construction activities and runoff generated by urban development may cause direct and indirect cumulative impacts to water quality and associated riparian biological resources such as in Santiago Creek. However, implementation of federal and state regulations, General Plan programs, and mitigation measures identified in Section 5.4 of this EIR and compliance with the NCCP/HCP will reduce impacts related to biological resources to a level less than significant. Additionally, future development projects will be reviewed by the City per CEQA to identify potential impacts to biological resources on a project-by-project basis. If project-level impacts are identified, specific mitigation measures will be required. With the implementation of these measures, the proposed General Plan's contribution to potential cumulative biological resource impacts will be less than significant.

Cultural Resources

Development pursuant to the proposed General Plan will have the potential to impact historical, archaeological, and paleontological resources, and human remains. Historic resources, particularly in the Old Towne and Santa Fe Depot land use focus area, could be vulnerable to unchecked development activities and infrastructure or other public works improvements, and could result in damage to or demolition of historic resources. There is also potential for unknown and previously undisturbed archaeological and paleontological resources, and human remains to be found within the developed areas of the planning area, such as the land use focus areas, as redevelopment activities occur. However, implementation of regulations, standards, General Plan policies, and mitigation measures identified in Section 5.5 of this EIR will reduce

impacts related to cultural resources to a less than significant level. The proposed General Plan expands the City's historic preservation program to ensure recognition and preservation of the diverse cultural resources that exist citywide beyond the established Old Towne Orange Historic District. Additionally, future development projects will be reviewed by the City per CEQA to identify potential impacts to cultural resources on a project-by-project basis. If project-level impacts are identified, specific mitigation measures will be required. Thus, future development according to the proposed General Plan will not result in cumulatively significant impacts to cultural resources.

Geology/Soils

Future development allowed by the proposed General Plan will increase the number of people exposed to ground shaking, fault rupture, liquefaction, and earthquake induced-landslides as development occurs in these mapped hazard areas throughout the City. Future development may be constrained by unstable soils and will also have the potential to increase erosion throughout the planning area as earthwork occurs for development activities. However, implementation of regulations, General Plan policies and programs, and the mitigation measures described in Section 5.6 of this EIR will reduce impacts related to geology and soils to a level less than significant. Additionally, geotechnical studies will be required for any future development projects to identify constraints and to develop engineering parameters on a project-specific level. If project-level impacts are identified, specific mitigation measures will be required. Thus, future development according to the proposed General Plan will not result in cumulatively significant impacts related to geology and soils.

Hazards and Hazardous Materials

Future development allowed by the proposed General Plan will increase the number of people exposed to hazards related to hazardous materials, and wildland fires. For example, future development will be focused in eight focus areas located in developed portions of the City. The majority of new development is expected to occur in these areas. Therefore, hazard risks would be associated with locating mixed use residential development within previously commercial and industrial areas. Although none of the General Plan land use focus areas are located within wildland areas, new development in previously undeveloped areas especially in the hillsides and canyons of the eastern portion of the planning area, could increase risk of exposure to wildfire hazards. Additionally, improvements to roadways associated with new development could impede or slow emergency response during construction of the improvements. Similarly, development associated with the proposed General Plan, including the eight land use focus areas,

may also result in congestion at intersections and along roadways identified as evacuation routes, which could impede access by emergency vehicles. However, implementation of General Plan policies and programs, and the mitigation measures described in Section 5.7 of this EIR will reduce impacts related to hazards and hazardous materials to a level less than significant. Additionally, enforcement of state, county, and local hazardous material regulations will reduce significant public health hazards to a level less than significant. Thus, implementation of the proposed General Plan will not result in a significant cumulative hazards and hazardous materials impact.

Hydrology and Water Quality

Future development within the planning area and surrounding areas within Orange County has the potential to increase the amount of pollutants, runoff, and impervious surfaces within the region. Construction activities related to implementation of the proposed General Plan could contribute additional pollutants, including sediments from grading activities and contaminants associated with construction materials, construction waste, vehicles, and equipment, among others. Erosion and sedimentation may occur during construction activities, which may impact surface water bodies as well. Future infill development in the land use focus areas is not expected to substantially increase the amount of existing impervious surfaces and, in fact, site redevelopment may provide opportunities to create new pervious surfaces through new landscaping and use of porous pavements, which could reduce the amount of runoff and associated pollutants. Development associated with the proposed General Plan implementation in the hillside and basin areas, as well as the eight land use focus areas will contribute to the potential for flood hazards by altering existing runoff and absorption rates. Implementation of General Plan policies and programs, mitigation measures identified in Section 5.8 of this EIR, and implementation of BMPs in accordance with the NPDES Permit will reduce impacts related to hydrology and water quality to a level less than significant. In addition, cumulative impacts related to flooding will be reduced by implementation of public safety policies and programs implemented by other Orange County jurisdictions in conjunction with related General Plan policies and programs for the City of Orange. Thus, implementation of the proposed General Plan will not result in a significant cumulative hydrology and water quality impact.

Land Use and Planning

Development pursuant to the proposed General Plan will be implemented according to the recommended distribution and intensity identified in the Land Use Element. Additionally, future development will comply with adopted land use standards, policies, and ordinances and will be

compatible with surrounding land uses consistent with the Land Use Element. The proposed General Plan is consistent with the SCAG Regional Comprehensive Plan and Guide, which includes the adopted Regional Transportation Plan and the Compass Blueprint Growth Vision as it incorporates policies that call for more compact mixed use development in primarily eight land use focus areas. Many of the focus areas are adjacent to employment centers, existing transit services and within walking distance of commercial services. Implementation of the proposed General Plan will not physically divide established communities either within the City or surrounding areas. In addition, the General Plan contains policies and implementation programs intended to ensure that development is compatible with existing regional plans. Therefore, implementation of the proposed General Plan will not contribute to a significant cumulative land use impact.

Noise

The assumptions in the noise analysis for the proposed General Plan include traffic and other noise sources from all other potential areawide development pursuant to policies in the proposed General Plan. As such, the analysis of potential noise impacts addresses cumulative noise impacts as well.

Implementation of the proposed General Plan will result in additional development within the planning area, particularly the land use focus areas, which will generate noise and potentially vibration during construction activity. If construction activities occur during more noise sensitive hours or if construction equipment is not properly equipped with noise control devices, construction noise and vibration could exceed applicable standards. A substantial temporary increase in the ambient noise environment at nearby noise sensitive receptors could also occur.

Development pursuant to the proposed General Plan will also increase traffic volumes and associated noise levels. Significant noise levels already occur along many of the region's transportation corridors. Of the over 220 roadway segments analyzed in the proposed General Plan, only 2 segments exceed the noise significance thresholds: Meats Avenue between Tustin Street and SR-55 southbound on-ramps, and Rampart Street between Chapman and Orangewood avenues.

Implementation of the proposed General Plan also has the potential to expose existing and future noise sensitive receivers to noise levels and vibration from railroads that exceed the City's General Plan noise standards. Point source noise levels associated with commercial and industrial land uses could potentially exceed the City of Orange noise standards at nearby

existing and future noise sensitive receptors, particularly mixed use development in the land use focus areas.

Implementing local noise ordinances, constructing buildings according to state acoustical standards, proper land use planning, and implementation of the mitigation measures and proposed General Plan policies identified in Section 5.10 of this EIR will reduce cumulative impacts to new noise sensitive land uses to a less than significant level. Thus, future development according to the proposed General Plan will not result in cumulatively significant noise impacts.

Population and Housing

Development allowed under the General Plan will result in an increase in the population and housing units in the planning area. As indicated in Table 7.1, the adopted SCAG Growth Forecasts for the Orange County Council of Governments Subregion project a total population increase of 968,820 and 419,124 housing units between 2000 and 2030. Of the total projected subregional growth, the proposed General Plan would accommodate 6.0 percent of the population growth and 5.6 percent of the growth in housing units. Even though the proposed General Plan does not propose new development, the development capacity allowed by the proposed General Plan could result in a substantial increase in population (43 percent) and housing units (54 percent) over 2004 levels. However, the proposed General Plan anticipates and plans for this growth through numerous policies aimed at reducing the impacts associated with population and housing unit growth in the planning area. Additionally, proposed General Plan policies require improvements to the City's infrastructure and public facilities to be made incrementally to support anticipated growth. The increase in population and housing unit growth would not contribute to a cumulatively significant population and housing impact.

Public Services and Utilities

Future growth within the planning area will increase demand for police protection, fire protection, schools, and libraries. To meet this increased demand, City service providers will continue to evaluate their levels of service available and the funding sources available to meet increases in demand. Although the ability of local service providers to provide specific levels of services varies throughout the planning area, sound local planning to accommodate future growth, along with implementation of General Plan policies and programs, including mitigation measures included in Section 5.12 of this EIR, will reduce impacts related to public services to a

less than significant level. Thus, implementation of the proposed General Plan will not result in a significant cumulative impact to public services.

Future regional growth within both the planning area and surrounding areas within Orange County will increase demand for water supply, wastewater service, energy, and solid waste disposal. To meet this increased demand, service providers will continue to evaluate both their levels of service available and the funding sources available to meet increases in demand. In particular, the Orange County Sanitation District (OCSD) is responsible for the collection, treatment, and disposal of wastewater for most of central and northwestern Orange County after City of Orange Public Works Department wastewater collection facilities convey wastewater to OCSD trunk sewers. The OCSD's current Sewer Master Plan anticipates regional growth to year 2030, which includes the growth anticipated in Orange. The City's Sewer Master Plan also addresses capacity needs over time to address planned growth.

The Orange County Water District (OCWD) manages the Orange County Groundwater Basin (Basin), which is the main source of the City's water supply. OCWD has studied the basin replenishment needs and potential projects to address growth in demand until 2020. OCWD has invested over \$250 million in seawater intrusion control, recharge facilities, laboratories and monitoring to effectively manage the basin. Although the basin may be defined as "over-drafted" from time to time, it is actually managed to allow utilization of up to 500,000 AF or more of storage capacity during dry periods, thereby acting as an underground reservoir and buffer against drought periods. The recently completed GWR System is designed to provide sufficient additional drinking supplies to accommodate an estimated 300,000 to 500,000 residents in north and central Orange County, which includes the City's projected population increase.

Although the ability of service providers to provide specific levels of services varies throughout the region, sound local planning to accommodate future growth, along with implementation of General Plan policies and programs, including mitigation measures identified in Section 5.12 of this EIR, will reduce impacts related to the utilities to a level less than significant. Thus, implementation of the proposed General Plan will not result in a significant cumulative impact to the utilities.

Recreation

Future growth within both the planning area and surrounding areas within Orange County will increase demand for recreation facilities. To meet this increased demand, the City of Orange and other local governing bodies and regional agencies like the County of Orange will continue to

evaluate both the amount of recreational facilities available and the funding sources available to meet increases in regional demand. The proposed General Plan contains numerous policies to encourage the acquisition of additional parkland and open space through joint use, incentives, and creative techniques to exceed the minimum park requirements of 3.0 acres per 1,000 population per the Quimby Act. Although the ability of local governing bodies and regional agencies to provide recreational facilities varies throughout the region, sound local planning to accommodate future growth, along with implementation of General Plan policies and programs, including mitigation measures identified in Section 5.13 of this EIR, will reduce impacts related to recreational facilities to a less than significant level. Thus, implementation of the proposed General Plan will not contribute to a cumulative recreation impact.

Transportation

The traffic analysis considers the impacts of traffic traveling through, as well as within, the planning area.

Future traffic conditions are based on forecast year 2030 post-model adjusted arterial segment volumes and peak hour (AM and PM) intersection turning movement volumes for selected City intersections. The Orange Traffic Analysis Model (OTAM) was updated for the proposed General Plan traffic analysis by incorporating the most recent adopted demographic forecast data external to the City of Orange and recertified as consistent with the Orange County Transportation Analysis Model (OCTAM 3.2). A post-processing methodology, consistent with OCTAM methodology, is applied to model outputs to achieve future forecasts that reflect appropriate growth in comparison to existing traffic volumes. Post-processing is common among traffic models since the procedure pivots off of a known value, i.e., a traffic count volume, to generate future forecast volumes. The post-processor applies the model's projected growth to existing daily arterial and AM and PM peak hour turning movement count data to develop forecast future turning movement volumes. The arterial post-model adjustment methodology uses a growth ratio, i.e., applying the model forecast ADT growth between 2000 and 2025 to the base year count volume, or an incremental growth method, i.e., applying the model forecast ADT ratio between 2000 and 2025 to the base year count volume, dependent upon whether the base year model volume is greater or less than the existing count volume. For intersections, the post-processing methodology is similar to the arterial segment post-processor and applies a ratio of increment growth. This methodology is based on procedures developed by FHWA.

Future cumulative travel patterns within and through the City of Orange would be directly influenced by changes to the surrounding regional transportation system. Many of the arterial deficiencies in the planning area occur at freeway interchanges as traffic filters through the City and onto the regional transportation system. Several improvements are planned to the regional transit system. As an example, in 2005, the Orange County Transportation Authority approved the Metrolink Service Expansion Program to provide train service every 30 minutes throughout the day between certain stations, including the Orange station. Increased weekday service will begin in early 2010.

Implementation of the proposed General Plan will generate traffic that could impact City roadway segments and intersections. Based on the analysis contained in Section 5.14 of this EIR, the proposed General Plan would result in reductions in level of service for roadway segments (at Batavia Street, Chapman Avenue, Collins Avenue, Glassell Street, Katella Avenue, Main Street, Meats Avenue, Prospect Street, Taft Avenue, and Wanda Road) and intersections (Cannon Street at Santiago Canyon Road, Main Street at La Veta Avenue, Wanda Road at Villa Park Road, and Tustin Street at Lincoln Avenue). Mitigation measures have been identified that will reduce intersection impacts to a less than significant level, but impacts to several roadway segments cannot be mitigated to a less than significant level. Mitigation is considered infeasible for Chapman Avenue and Glassell Street through the historic Orange Plaza as capacity enhancements (i.e., widening) to these facilities would be detrimental to preserving the heritage of the Orange Plaza. Mitigation to other roadway segments that would operate at unacceptable levels with implementation of the project would result in additional impacts and in some cases would not improve roadway conditions to acceptable service levels. Therefore, implementation of the proposed General Plan along with regional growth will contribute to a cumulatively considerable increase in transportation and traffic impacts in the Orange County area.

Impacts on Climate Change

Effects related to climate change are inherently cumulative in nature. A detailed discussion of effects of the proposed General Plan on climate change, as well as climate change effects on the planning area that could affect implementation of the General Plan, is presented in Section 5.15 of this EIR. In this discussion, it is demonstrated that the proposed General Plan would make a cumulatively considerable contribution to the significant cumulative impacts associated with climate change.

7.2 GROWTH-INDUCING IMPACTS

Section 15126 of the CEQA Guidelines requires that an EIR discuss the ways in which a proposed project could directly or indirectly foster economic or population growth, or the construction of additional housing. Direct growth-inducing impacts are generally associated with the provision of urban services and the extension of infrastructure to an undeveloped area. The extension of services and facilities to an individual site can reduce development constraints for other nearby areas and can serve to induce further development in the vicinity. Indirect or secondary growth-inducing impacts consist of growth induced in the region by the additional demands for housing, employment, and goods and services associated with population increase caused by, or attracted to, new development.

The purpose of a General Plan is to guide growth and development in a community. Accordingly, the General Plan is premised on a certain amount of growth taking place. Orange County, as well as the entire southern California region, has experienced dramatic growth the past two decades and this trend is expected to continue into the next century. The focus of the General Plan, then, is to provide a framework in which the growth can be managed and to tailor it to suit the needs of the community and surrounding area.

During the past several decades, the SCAG region, including Imperial, Riverside, San Bernardino, Los Angeles, Orange and Ventura counties, has been one of the fastest growing regions in the nation. Between 1950 and 1970, the population doubled in size, growing at a rate of 5 percent per year. Between 1980 and 1990, the region's population grew by over 25 percent to 14.6 million. Between 1990 and 2000, the region's population grew by nearly 15 percent to 16.5 million.

The City of Orange proposed General Plan contains policies and an Implementation Plan that provides a framework for accommodating the orderly growth of the planning area. The proposed General Plan provides the necessary tools to accommodate future growth and defines the geographical limits of future growth in the planning area. The proposed General Plan provides direction for new development and redevelopment projects and establishes the desired mix and relationship between land use types.

The majority of development under the proposed General Plan would occur within eight land use focus areas in already developed areas of the City. Many of these areas are within the City's Redevelopment Area, which contains underutilized land, land used previously for industrial or commercial activity, and/or areas in need of revitalization. Additionally, many of the land use

focus areas are adjacent to existing employment centers, transit, and services. Some development will occur on previously undeveloped land in the eastern portion of the planning area. This area is already entitled and could be developed under the existing and proposed General Plan.

The proposed General Plan also ensures that the City of Orange will have a diversity of land uses and balanced development, encourages mixed use development, promotes commercial enterprise, ensures that City interests are achieved through interjurisdictional and regional planning, and encourages public involvement in land use planning decisions.

Table 7-2 shows the change in development capacity between existing conditions and proposed General Plan buildout.

Based on the proposed General Plan, after the year 2030, the City of Orange could have approximately 194,543 residents, 66,850 housing units, and 70.7 million square feet of nonresidential building floor area. These changes represent an increase of approximately 23,478 dwelling units, 57,844 residents, and approximately 35.7 million square feet of nonresidential building floor area over existing conditions. The proposed General Plan provides appropriate land use designations, and a land use pattern that provides sufficient land for orderly development. The proposed General Plan also contains polices that address the provision of sufficient infrastructure to accommodate projected growth. The increase in population and development allowed under the proposed General Plan has the potential to induce substantial growth within the planning area.

**Table 7-2
Planning Area Development Changes**

	Existing (2004)	Post 2030 General Plan Capacity (2030)	Net Change	Percentage Change
Dwelling Units	43,372	66,850	23,478	54.1%
Nonresidential development, square feet	35,000,000	70,716,000	35,716,000	50.5%
Population	136,699	194,543	57,844	42.3%

Source: EDAW and Parsons Brinkerhoff 2008; California Department of Finance 2004

7.3 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Section 15126(f) of the CEQA Guidelines requires that an EIR describe any significant irreversible environmental changes that would be involved in the proposed action should it be implemented.

Development allowed by the proposed General Plan will consume nonrenewable energy resources that will have an irreversible effect on such resources and develop currently vacant land into urban uses. Although the majority of growth in the City would occur in areas previously developed (the land use focus areas), some growth would occur in the eastern portion of the planning area on undeveloped land where residential development was previously entitled. Growth in previously undeveloped areas would consume resources and require infrastructure and ongoing services that previously did not exist. The City updates its Operating Budget to maintain current levels of public facilities and infrastructure, and to coordinate development of community facilities and amenities and capital projects. Additionally, the City uses the 7-year Capital Improvement Program process to prioritize, finance, and complete various infrastructure and other projects identified in the Capital Improvement Program, which may include the provision of water and wastewater facilities; road maintenance; and fire, police, and library services.

Once land is developed, it is highly infeasible to revert such land uses to a less urban use or open space. Commitments of limited resources, such as lumber and other related forest products, sand, gravel, concrete, asphalt, petrochemical construction materials, steel, copper, lead and other metals, and water consumption, would result in irreversible losses of those resources. Based on development levels that could occur by 2030, implementation of the proposed General Plan would also result in large-scale consumption of fossil fuel oil, natural gas, and gasoline for construction; lighting; heating, and cooling of residences; and transportation of people within, to, and from the planning area.

7.4 SIGNIFICANT UNAVOIDABLE ENVIRONMENTAL IMPACTS

According to Sections 15126.2(a) and 15126.2(b) of the State CEQA Guidelines, an EIR shall identify and focus on the significant environmental effects of the proposed project, including effects that cannot be avoided if the proposed project were implemented.

This section describes significant environmental impacts, including impacts that are mitigated but would not be reduced to a less than significant level. With implementation of the proposed

General Plan, significant effects related to air quality, population and housing, transportation, and climate change cannot be avoided. Individual impacts are discussed below.

7.4.1 Air Quality

Implementation of the proposed General Plan will result in significant unavoidable project-level and cumulative air quality impacts. The proposed General Plan contains numerous policies to reduce air quality impacts. Additionally, implementation of mitigation measures in Section 5.3 of this EIR will reduce the air quality impacts to an extent; however, as the planning area is located in an air basin that is a nonattainment region by both federal and state standards, the impact to short-term and long-term regional air quality resulting from increased emission generation will remain **significant and unavoidable**.

7.4.2 Transportation and Circulation

Implementation of the proposed General Plan would lead to significant unavoidable impacts to arterial segments on Chapman Avenue, Glassell Street, Katella Avenue, Meats Avenue, and Taft Avenue. Mitigation measures to reduce impacts, such as roadway widening, are not recommended for Chapman Avenue and Glassell Street through the historic Orange Plaza as capacity enhancements, i.e., widening, to these facilities would be detrimental to preserving the heritage of the historic Orange Plaza. Specific economic, social, and historical factors that support this decision are explained in Section 5.14 of this EIR. Mitigation for Katella Avenue, Meats Avenue, and Taft Avenue would result in additional impacts and in some cases would not improve roadway conditions to acceptable service levels.

Several segments of Katella Avenue are forecast to operate at LOS E under future conditions. As many of these segments are on the threshold of deficient operations, widening of Katella Avenue is not recommended and could have significant adverse impacts to fronting retail, office, and industrial uses.

The implementation of the Meats Avenue interchange with SR-55 requires upgrading Meats Avenue between Tustin Street and the SR-55 southbound ramps. Even with the improvement of the segment west of the southbound ramps, this segment is forecast to operate at LOS E. Widening to an eight-lane segment is not recommended. Implementation of the interchange would have right-of-way impacts to residential uses on all four quadrants of the interchange, likely displacing several residential units, including trailer park units north of Meats Avenue west of SR-55 in the Orange Mobile Home Park.

Taft Avenue at the west City limits, east of SR-57, is forecast to operate at LOS E. Taft Avenue at the west City limits is not recommended for improvement without detailed peak hour analysis to warrant physical arterial segment widening. In addition, evaluation of this segment must be coordinated with the City of Anaheim as widening of this segment in Orange will necessitate widening in the City of Anaheim to maintain consistency across jurisdictional boundaries.

None of the above-mentioned segments/roadways would operate at an acceptable level with implementation of the proposed General Plan. Impacts to these roadway segments would remain **significant and unavoidable**.

7.4.3 Climate Change

Since annual GHG emissions under buildout of the proposed project are projected to exceed the existing level by the substantial margin of 52 percent, the proposed General Plan would contribute to the exacerbation of climate change and the significant adverse environmental effects thereof. Furthermore, increased GHG emissions associated with the proposed project could potentially impede implementation of the state's mandatory requirement under AB 32 to reduce statewide GHG emissions to 1990 levels by the same year. Therefore, the incremental GHG emissions associated with development under the General Plan would cause a cumulatively considerable incremental contribution to the significant cumulative (worldwide) impacts when viewed in connection with worldwide GHG emissions.

Implementation of mitigation measures would reduce the incremental GHG emissions associated with buildout of the proposed General Plan, although not to a less than significant level. Even with these mitigation measures, buildout of the General Plan will continue to contribute to global climate change. Therefore, this impact would remain **significant and unavoidable**.

7.5 AREAS OF NO SIGNIFICANT IMPACT

The CEQA Guidelines Section 15128 requires a statement indicating the reason why various possible significant effects are determined not to be significant and therefore are not discussed in the EIR.

The Initial Study identified one impact category among a number of environmental issues that would not be significantly impacted by the proposed General Plan and, therefore, did not warrant further review in the EIR. The impact category found not to be significant was **mineral**

resources. Each environmental issue under the mineral resources section of the Initial Study was evaluated and determined not to be a significant effect of the proposed General Plan.

As described in the Initial Study, the planning area contains areas identified by the State Mining and Geology Board as regionally significant aggregate resources. These areas are designated as Resource Areas or Open Space in the existing General Plan. The proposed General Plan would continue to implement these land use designations and would not result in the loss of these resources.