
3

Environmental Setting

In conformance with the CEQA Guidelines, Section 15125, an EIR must include a description of the physical environmental conditions in the vicinity of the project as they exist at the time of the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective. This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant. The description of the environmental setting shall be no longer than is necessary to reach an understanding of the significant effects of the proposed project and its alternatives.

3.1 Location and Land Use

The Northern Sphere Area encompasses approximately 7,743 acres of land located at the northern edge of the City of Irvine at the base of the Santiago Hills. The site is generally bounded by Trabuco Road and MCAS El Toro to the south and east, Jeffrey Road and existing residential development to the west, and the Santiago Hills to the north. The Foothill (SR-241) Transportation Corridor traverses the northern portion of the site. Surrounding land uses include the permanent open space to the north, and the residential communities of Northwood (Planning Area 8) and Northwood Point (Planning Area 5) to the west, as shown on Exhibit 2-3. Planning Area 40 and the former El Toro MCAS are located to the south of the site. The project site includes all of Planning Areas 3 (including Implementation Districts “C,” “D,” “E,” and “F”), 6 (including Implementation Districts “Q” and “R”), and 9 and portions of Planning Areas 5 and 8, as delineated in the City’s General Plan and Zoning Ordinance. Large, natural open spaces within the Santiago Hills, lie to the north. Implementation District “P” is located outside the Northern Sphere Area and consists of 748 acres analyzed solely due to dedication of the district as open space.

Approximately 3,300 acres of the Northern Sphere Area currently consist of agricultural lands, including active irrigated and non-irrigated annual crops, orchards, and nurseries. There are numerous underground irrigation lines throughout the site. The remaining undeveloped open space is composed of hills, canyons and several flat areas covered by coastal sage scrub, chaparral, native and non-native grassland, weeds, occasional cactus plants, wild artichoke bushes, and occasional rock outcroppings.

Please refer to Section 4.9, “Land Use,” for a detailed discussion of existing and planned land use policies, and an analysis of land use compatibility issues.

3.2 Geology and Landform

The upper elevations within Planning Areas 3 and 6 are located within the southwestern foothills of the Santa Ana Mountains, in the Peninsular Range Province of Southern California. The Peninsular Range is located at the southeastern portion of the middle-to upper-Miocene-age Los Angeles Basin. To the north, the Range is bounded by the Whittier-Elsinore fault zone (located 10 miles north of the site), and by the Newport-Inglewood fault zone to the south (located 13 miles south of the site). Cretaceous to early Pliocene-age marine and non-marine sedimentary bedrock units are exposed throughout the site with late Quaternary alluvium in-filling the canyons. Slopewash and landslide deposits were observed along the majority of the slopes, with landslide material more prevalent in the upper canyons.

The lower portions of the site, including Planning Areas 5B, 8A, and 9, are located within the Tustin Plain, the eastern-most subbasin of the Los Angeles Basin. Generally speaking, the Tustin Plain is comprised of approximately 1,400 feet of unconsolidated to semi-consolidated Holocene to Quaternary-age alluvial sediments. Soils within this zone consist predominately of interbedded discontinuous lenses of clays, silts, sands and gravel. For the site, the upper 20 to 30 feet is comprised of fine-grained soils that are unconsolidated with a wide range of consistency. The soils below approximately 20 to 30 feet are comprised of coarse-grained materials that are locally loose or friable, but generally dense. Underlying the Holocene to Quaternary deposits, at depth, are Tertiary bedrock units comprised of sandstone, siltstone, shale, and conglomerate that are several thousands of feet thick. No landslides are known to be located in Planning Areas 5B, 8A, or 9; however, there are numerous surficial landslides identified along the eastern and northern portions of Planning Area 6.

On-site elevations range between 170 feet above mean sea level (MSL) within Planning Area 8A and 1,700 feet MSL within Planning Area 3, as shown on Exhibit 3-1. Please refer to Section 4.6 for additional information concerning the site's geological and soils characteristics and an analysis of geotechnical constraints that would affect site development.

3.3 Hydrology

The Northern Sphere Area is located within the tributary watershed for San Diego Creek. Within the San Diego Creek watershed, there are distinct sub-area drainages or canyons which encompass the Northern Sphere Area, including the Bee Canyon, Road Canyon and Agua Chinon Wash. East of these area, flood retarding basins serve to reduce peak flows in channels at the Santa Ana (I-5) Freeway including the Trabuco Basin, the Marshburn Basin¹, Bee Canyon Basin, Round Canyon Basin and the Agua Chinon Basin. Planning Area 5B drains to an existing 42 inch storm drain s y s t e m w i t h i n I r v i n e B o u l e v a r d ,

¹ Marshburn Basin is located off-site.

Exhibit 3-1 Existing Topography

and is tributary to the Central Irvine Channel. Planning Area 6 spans all three of the canyon drainage systems, and runoff is tributary to the Trabuco, Marshburn, and Agua Chinon Retarding Basins. Planning Area 8A drains directly to the Central Irvine Channel downstream of the Trabuco Retarding Basin. Planning Area 9 is tributary to the Trabuco Retarding Basin. All basins and tributaries eventually drain to San Diego Creek and Upper Newport Bay. Portions of the Northern Sphere Area are subject to inundation by the 100-year flood event as indicated on Flood Insurance Rate Maps (FIRM) prepared by the Federal Emergency Management Agency (FEMA). All surficial deposits overlying bedrock are easily erodible by surface runoff and unprotected surface soils will likely require mitigation.

Please refer to Section 4.8 for additional information concerning the site's hydrological characteristics and an analysis of project impacts on surface drainage patterns.

3.4 Biological Resources

Presently, the Northern Sphere Area land uses mainly consist of agriculture, ornamental nurseries and undeveloped open space. A total of 13 vegetation types exist on-site including coastal sage scrub, chaparral, grassland, seasonal wetland, marsh, riparian, woodland, cliff and rock, lakes/reservoirs and basins, watercourse, agriculture, developed and disturbed. A total of 44 special status wildlife species are known to occur within the region and have the potential to occur on the project, including the Southwestern willow flycatcher, Least bell's vireo, and Coastal California gnatcatcher.

The project site is located within the Coastal/Central Subregion of the NCCP for Orange County. As a result, numerous open space areas are within the vicinity of the site, including: Limestone Canyon Regional Park, Peter's Canyon Regional Park, Irvine Regional Park, and Weir Canyon Regional Park. Open space areas within the Northern Sphere Area are contiguous with these other open space areas and have been included into the reserve designation. Open Space at the northern border of the site has been identified as a "Habitat Linkage" area within the reserve system. In addition, a 173-acre "Special Linkage" area is located within the north-central portion of the existing Frank Bowerman Landfill within Planning Area 3. The NCCP/HCP allows for the Bowerman Landfill Special Linkage portion to be developed as a golf course after landfill operation is terminated and landfill closure actions have been completed to minimize impacts to the adjacent reserve.

Please refer to Section 4.4 for further information concerning existing biological resources on-site and an analysis of project impacts on sensitive resources.

3.5 Climate and Air Quality

The project site is located within the South Coast Air Basin and is subject to regulation by SCAQMD. Climatic conditions in this area are controlled largely by the strength and position of the subtropical high pressure cell over the Pacific Ocean that maintains moderate temperatures, comfortable humidities and limits rainfall to a few storms during the winter wet season. Temperatures are normally mild, except during hotter summer months. Wind patterns are dominated by daytime on-shore sea breezes, while at night, winds are generally slow and reverse direction, blowing toward the ocean. Wind directions are also altered by canyon landforms, where wind tends to flow parallel to the canyons. Temperature inversions frequently occur in Southern California, both at the ground level and at higher elevations. During these conditions, very little air mixing or turbulence occurs, and air can become stagnant, allowing for a buildup in concentrations of air pollutants. Inversion conditions are the main factor in the continuing high levels of ozone (O₃) that represent the main air pollution problem in this area.

Please refer to Section 4.3 for further information concerning existing air quality conditions, an analysis of the project's impacts on local air quality, and an evaluation of consistency with the regional Air Quality Management Plan.

3.6 Noise

A majority of noise in the local environment is generated by vehicular traffic on local and regional roadways. The nearest roadways and sources of traffic noise are the Santa Ana (I-5) Freeway located south of the project site, the Eastern (SR-133) Transportation Corridor that traverses the site on the northeastern edge of Planning Area 9, and the Foothill (SR-241) Transportation Corridor that traverses the northern portion of the site. In addition, arterials that traverse the project site include, Trabuco Road, Irvine Boulevard, Portola Parkway, Jeffrey Road, and Sand Canyon Avenue.

Please refer to Section 4.10 for further information concerning existing noise conditions in the project area and an analysis of this project's impacts on the local noise environment.

3.7 Scenic Features

Many portions of the project site, particularly the higher hills and slopes that occur along the northern boundaries, are visible to surrounding residential areas in Northwood and Northwood Point and/or to motorists of the project area traveling along the Foothill (SR-241) Transportation Corridor, the Eastern (SR-133) Transportation Corridor and the Santa Ana (I-5) Freeway and several of the arterial roadways in northern Irvine. Existing scenic features include major stands of vegetation, prominent slope banks, rock outcroppings, and drainage courses located within Planning Area 3 and portions of Planning Area 6.

Please refer to Section 4.1 for a detailed evaluation of the scenic characteristics of the project site from various surrounding vantage points and the visual impacts that would result from project implementation.

3.8 Public Services and Utilities

The project area is within the Irvine Unified School District boundary. Domestic and reclaimed water service, and sanitary sewer service is provided by the Irvine Ranch Water District (IRWD). Police protection services throughout this area are provided by the Orange County Sheriff Department. Fire protection services are provided by the Orange County Fire Authority.

For more information concerning existing public services and utilities that would be affected by this project, please refer to Sections 4.12 and 4.15, respectively.

3.9 General Plan and Zoning

City of Irvine General Plan

Future development of all land within the City of Irvine is guided primarily by the City of Irvine General Plan, which underwent a comprehensive amendment on March 9, 1999. The Housing Element was updated and certified in 2001. Full discussion of the proposed project's relationship and consistency to the General Plan is contained in Section 4.9. The General Plan consists of a series of State mandated as well as optional "elements" to direct the City's physical, social and economic growth. Elements include Land Use, Circulation, Housing, Noise, Public Facilities, Waste Management, Energy, Safety, Parks and Recreation, Conservation and Open Space, Seismic, Cultural Resources, and Growth Management. The following discussion is a description of the elements of the adopted General Plan as it relates to the project.

Land Use Element: As shown on previous Exhibit 2-4, land use designations within the Northern Sphere Area include: Agriculture, Preservation, Recreation, Water Body, and Estate-Density Residential (0-1 dwelling units per gross acre). A total of 263 dwelling units have been allocated to the Northern Sphere Area within Planning Area 6.

A total of 8,199 dwelling units are being redistributed to the Northern Sphere Area from developed areas in the City that contain fewer units than anticipated in the General Plan. The 8,199 dwelling units are designated within the City's General Plan for Planning Areas 2, 5A, 8, 11, 12, and 15 (please refer to Table 2-1 General Plan Residential Unit Reductions). In addition, 3,888 dwelling units are being transferred from the NCCP/HCP density bank consistent with implementation of the Central/Coastal Subregion NCCP/HCP (please refer to Section 2.3.1, "Project Background" for a complete discussion). The NCCP/HCP and adopted General Plan allow units lost due to implementation of the NCCP/HCP to be transferred to other areas of the City. As a result, the

landowner has requested that 3,888 units from the NCCP/HCP density bank and the 8,199 undeveloped units, totaling 12,087 units, be transferred to the Northern Sphere Area.

The General Plan designations surrounding the Northern Sphere Area generally consist of Residential and Conservation/Open Space land uses. Land within adjacent Planning Area 5 (Northwood Point) consists of Recreation, and Low, Medium and Medium-High Density Residential land uses. Land within the adjacent Planning Area 8 (Northwood) consists of Recreation, Neighborhood Commercial, Community Commercial, Educational Facilities and Low, Medium, and Medium-High Density Residential land uses. Natural open space areas are located to the north and northeast consisting of the Lomas de Santiago Hills and Limestone Canyon Regional Park. The City of Irvine has adopted the Millennium Plan II for the re-use of the former MCAS El Toro located south and east of the project site. Land uses designated for the former MCAS El Toro consist of Preservation, Recreation, Low Density Residential, Multi-Use, and Institutional development. The Irvine Open Space Initiative/General Plan Amendment 16 (see Section 2.3.1. “Project Background”) is incorporated into the Land Use Element through Objective A-3 which is to “[e]ncourage land use development that preserves the beauty of the natural environment.” Objective A-3 is supported by various policies including: 1) preservation of the City’s open space areas through implementation of the Phased Dedication and Compensating Development Program; 2) maintenance of the natural character and aesthetic value of hillside areas through use of the Hillside Development Ordinance; and, 3) designing roadways to preserve the natural topography and minimize their impact on any environmentally sensitive areas.²

Circulation Element: The project site is located in the vicinity of several major roadways. The Eastern (SR-133) Transportation Corridor traverses the project site in a northeast-southwest direction and is located west of the former MCAS El Toro. The Foothill (SR-241) Transportation Corridor transects Planning Area 6 in a northerly direction. Portola Parkway is designated as a Primary Highway (divided arterial highway with four through lanes) east of Jeffrey Road and is designated at a Major Highway (divided arterial highway with six through lanes) west of Jeffrey Road and traverses Planning Areas 6 and 9. Irvine Boulevard is designated as a Major Highway and transects the middle portion of the site. Trabuco Road is designated as a Primary Highway and forms the site’s southern border. Sand Canyon Road is designated as a Major Highway and transverses Planning Area 9. Jeffrey Road is designated as a Major Highway and borders the southwest edge of Planning Areas 6 and 9. In addition, the Circulation Element of the General Plan designates a Class I off-street trail along Jeffrey Road which may be incorporated into the Jeffrey Open Space Spine. The adopted level of service for the majority of intersections within the City is LOS “D.” However, LOS “E” is currently allowed within the Irvine Business Complex and certain intersections in Irvine Spectrum.

² *The Great Park initiative is currently pending but is not yet a part of the General Plan. Great Park land uses are reflected in the cumulative impact sensitivity analyses since it is a proposed but not yet approved project. The Orange County International Airport (OCX) is approved by the County, but not a part of the City’s General Plan. Therefore, OCX land uses are also analyzed as cumulative impact sensitivity analyses and for purposes of ALUP consistency.*

Housing Element: Development of housing in Irvine is guided by the goals, objectives, and policies of the Housing Element. The overall goal of the Housing Element is to provide safe and decent housing for all economic segments of the community. The City of Irvine includes housing ranging from studio apartments to large single-family homes. In addition, affordable for sale and rental housing for lower income households and households requiring special needs is available. The Housing Element includes a needs assessment, goals, objectives, and policies relative to the maintenance, improvement and development of housing; and a five year schedule of implementing actions designed to achieve the stated goals and objectives, in keeping with State Government Code and housing element guidelines for fair housing practices.

In accordance with SCAG's Regional Housing Needs Allocation (RHNA), the City's General Plan includes a goal of providing affordable housing units based on the total number of units built within the Planning Areas. The goals for affordable housing units include 5% with financial incentives for Income I and II (below 50% of median income), 5% units with financial incentives for Income III (50-80% of median income), and 5% units with or without incentives for Income IV buyers (80-120% of median income). The City has recently submitted a Draft Housing Element Update to the State of California for review and approval.

Noise Element: The Noise Element provides a means for protecting local citizens from the harmful effects of excessive exposure to noise. The noise objectives of the City are to consider noise impacts in land use, to reduce noise impacts along major transportation routes and during construction, to abate unnecessary outdoor noises, and to cooperate in intergovernmental efforts in noise control.

According to the land use compatibility chart of the Noise Element, mobile home residential land use is "clearly compatible" in exterior noise environments up to a Community Noise Equivalent Level (CNEL) of 55 and "normally compatible" up to 60 CNEL. "Clearly compatible" shall designate specified land as satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements. "Normally compatible" states that new construction or development should be undertaken only after detailed analysis of the noise reduction requirements are made and needed noise insulation features in the design are determined. Conventional construction, with closed windows and fresh air supply systems or air conditioning, will normally suffice. (General Plan Comprehensive Update Noise Element, March, 1999.) Single-family residential areas are "clearly compatible" up to 55 CNEL and "normally compatible" up to 65 CNEL. Hospitals, churches, libraries, and schools are "normally compatible" up to 60 CNEL. Recreational uses, such as golf courses, nature centers, and wildlife reserves are "normally compatible" up to 70 CNEL, while parks are "normally compatible" up to 65 CNEL. The Noise Element is implemented through the City's Noise Ordinance which is applied throughout the various discretionary and ministerial review and permitting procedures.

Due to the undeveloped nature of the majority of the project area, on-site noise levels are relatively low. The major noise sources in the area include traffic from the Foothill (SR-241) Transportation

Corridor, the Eastern (SR-133) Transportation Corridor, the Santa Ana (I-5) Freeway, Portola Parkway, Irvine Boulevard, Trabuco Road, Sand Canyon Avenue, and Jeffrey Road.

Public Facilities Element: Public facilities are defined as institutional responses to basic human needs, such as health, education, safety, recreation, and worship. Examples of typical public facilities include churches, hospitals, and police stations. The Public Facilities Element includes implementing actions, policies, and standards for various public facilities including schools and places of worship.

Waste Management Element: Waste management is described as a system for the collection and disposal of waste products generated by residential, institutional, commercial, and industrial land uses. Waste can be liquid and solid, hazardous and non-hazardous. The Waste Management Element includes implementing actions for the collection and disposal of waste.

Energy Element: The Energy Element of the General Plan provides a basis for long-range energy planning. In addition, it summarizes information on energy supply and demand. The associated state and local objectives when implemented will result in efficient energy consumption by the City and its residents, businesses, and industries. The Energy Element includes implementing actions for the conservation of energy resources.

Safety Element: The Safety Element provides guidelines for the protection of the community from aircraft operations, fires, floods, and geologic hazards, such as soil limitations. The northern portion of the Northern Sphere Area within Planning Area 6 and lands to the north and northeast of the Northern Sphere Area are designated with a “Very High Fire Severity Rating.” Fire hazard areas within the City are usually the result of large quantities of combustible vegetation, poor access to fire hazard areas, and lack of water supply for fire protection. In addition, portions of Planning Areas 6, 8A, and 9 are located within a “Flood Hazard Area.”

Parks and Recreation Element: This Element establishes guidelines for the orderly development of Irvine’s park and recreation facilities. The Parks and Recreation Element includes goals, objectives and implementing actions for the development of recreational facilities. According to the Parks and Recreation Element, community parks shall serve a minimum population of 10,000 and shall be generally twenty (20) acres in size, excluding greenbelts, trails and school grounds. Public neighborhood parks shall serve a minimum population of 2,500 and shall be a minimum of four (4) acres in size, excluding greenbelts, off-street trails and school grounds. Private neighborhood parks, a minimum of one third of an acre, serve the immediate neighborhood and are privately maintained by Homeowner’s Associations (HOAs).

Conservation and Open Space Element: The Conservation and Open Space (C/OS) Element of the General Plan also establishes policies that guide decisions on land use. This element provides long-term guidance for the preservation of significant natural resources and open space areas. The natural hills and canyons in the northern most area of the project site adjacent to the Foothill (SR-241)

Transportation Corridor and the Jeffrey Open Space Spine are designated for preservation. This is consistent with the areas designated for preservation in the Land Use Element. Objective L-10, Policy (k) states:

Resolve any phased dedication and compensating development opportunities program involving land in the agriculture land use category at the time of annexation.

A major component of the C/OS Element is the Phased Dedication and Compensating Development Opportunities Program which transfers development opportunities from conservation and open space areas and consolidates development in appropriate areas. This Phased Dedication and Compensating Development Opportunities Program, also known as the “Implementation Action Program,” implements the Irvine Open Space Initiative/General Plan Amendment 16 by linking the Land Use and C/OS Elements together through the development entitlement process. The program provides for permanent protection of significant, large scale conservation and open space areas by public ownership. Through this program, visually significant ridgelines and hillsides, significant biotic communities (e.g., Riparian, Freshwater marsh, and Oak woodland), recreational lands, archaeological and paleontological resources and areas subjected to geophysical and societal hazards are permanently preserved. Please refer to Section 2.3.1, “Project Background” for a more detailed discussion of General Plan Amendment 16 and the Irvine Open Space Initiative.

Seismic Element: This Element identifies seismic hazards and discusses strategies for reducing disasters. In addition, the Seismic Element evaluates five general types of geologic conditions called Seismic Response Areas (SRA). Planning Area 3 is designated as SRA-4 (Highlands Over 20 Percent Slope) and SRA-5 (Less Stable Geologic Formations). The majority of Planning Area 5B is designated as SRA-2 (Denser Soils/Deeper Ground Water), with a small portion of SRA-3 (Alluvium/Shallow Bedrock) located in the northern portion of the site. Planning Area 6 is designated as SRA-5, SRA-4, SRA-3, and SRA-2. Planning Area 8A is designated as SRA-2. The majority of Planning Area 9 is designated as SRA-2, with a small northern portion of land designated as SRA-3. Portions of Planning Areas 6 and 9 are located within liquefaction zones.

Cultural Resources Element: This Element recognizes the importance of historical, archaeological, and paleontological resources in the City of Irvine and establishes a process for their early identification, consideration, and where appropriate, preservation. The Element contains a map of all known historical and archaeological landmarks located within the City of Irvine. Within the project site there are four known historical landmarks including Lambert Reservoir, Tomato Springs Bandit, the Portola Campsite, and the Portola Expedition Route which are located in Planning Area 6. A natural landform site, The Sinks, is also designated within Planning Area 3. In addition, portions of the project site are located within a “High Paleontological Sensitivity Zone.”

Growth Management Element: In November 1990, Orange County voters approved a Revised Traffic Improvement and Growth Management Ordinance. This ordinance imposed an increase to the retail sales tax by ½ cent for a twenty-year period for the funding of transportation related

improvements. To receive a portion of these revenues, the City must satisfy the requirements established by the Countywide Growth Management Program. The City's Growth Management Element comprises a series of objectives and implementing actions to carry out the goals of the program and ensure that growth and development is based upon the City's ability to provide adequate circulation system and public facilities. The intent of the Growth Management Element is to establish the basic policy framework for future implementing actions and programs within a single general plan element.

City of Irvine Zoning Classifications

As shown on Exhibit 2-7, existing zoning classifications within the project site include: Development Reserve, covering the potential development area within Northern Sphere Area, Conservation/Open Space Reserve, for those open space areas within Northern Sphere Area that are designated for preservation, Exclusive Agriculture covering areas designated for permanent agriculture, and Landfill Overlay for the area containing the Frank Bowerman Landfill. The Development Reserve and Conservation/Open Space Reserve are "holding zones" that restrict ongoing land uses to a limited number of activities until permanent zoning is put into place. Surrounding zoning classifications include:

- A1-General Agricultural, under the jurisdiction of the County of Orange located north of the project site, beyond Planning Area 3 and outside the Sphere of Influence.
- Preservation, Recreation, Low and Medium-Density Residential, Multi-Use, Community Commercial, Commercial Recreation, Medical and Science, and Institutional in the former MCAS El Toro (Planning Area 51) south of the Northern Sphere Area. Approval of a general plan amendment and zone change for this planning area was granted by the Irvine City Council in May of 1999 to allow for development of a maximum of 5,897 Multi-Use and Residential dwelling units, 192,000 square feet of Community Commercial, 12,148,600 square feet of Medical and Science, and 791,900 square feet of Institutional development.
- Recreation, General Industrial, and Medical and Science in Planning Area 40 south of Planning Area 9. Approval of a general plan amendment, zone change, development agreement, and annexation for this planning area was granted by the Irvine City Council in January 2001 to allow for the development of 1,312,352 square feet of General Industrial and 8,900,000 square feet of Medical and Science development.
- Recreation, Low, Medium and Medium-High Density Residential, Neighborhood Commercial, Community Commercial and Institutional adjacent to Planning Area 8A Northwood (Planning Area 8).
- Recreation, and Low, Medium, and Medium-High Density Residential adjacent to Planning Area 5B Northwood Point (Planning Area 5).

The Northern Sphere Area is located outside of the City limits. The City has initiated Zone Change (48405-ZC) to allow for the development of 12,350 residential units, up to 575,000 sq. ft. of Multi-Use development, up to 175,000 sq. ft. of Community Commercial uses, up to 6,566,000 sq. ft. of Medical and Science uses, and 13 acres of Institutional uses. The State of California requires consistency between a City's General Plan and zoning regulations. The proposed Zone Change would be consistent with the General Plan Amendment discussed previously in Section 2.3.1. The Jeffrey Open Space Spine is zoned Recreation. The open space in PA 3 and portions of PA 6 containing Implementation Districts "C," "D," "E," "F," "Q" and "R," are zoned for Preservation, consistent with the Land Use Element (LUE) and C/OS policies. Implementation District "P" within PA 2 is zoned development reserve and conservation open space reserve, which will not change as a result of this project.

Lomas de Santiago Hills Hillside Overlay District

A portion of the project area, including Planning Area 3 and the northeast border of Planning Area 6, is located in the Lomas de Santiago Hills area of north Irvine and is classified as a Hillside Overlay District. The purpose of this overlay district is to provide regulations for land development that ensure that the natural character of this area is maintained, and environmental and aesthetic values are preserved. Regulations for the Hillside Overlay District involve special planning procedures and specific application requirements for the various stages of project planning, starting with zone change applications such as this project, and continuing with subsequent tentative subdivision maps, master plans, and grading and building permits.

County of Orange General Plan

Land Use Element

The Orange County Land Use Element includes objectives, policies, and land use patterns for all unincorporated territory and establishes development criteria and standards necessary for orderly growth and development, including population density and building intensity. The majority of the project site including all of Planning Areas 5B, 8A, and 9 and portions of Planning Areas 2 and 6 are designated (5) Open Space. However, portions of Planning Area 6 and Implementation District "P" within Planning Area 2 are designated (1B) Suburban Residential Communities which allows for residential densities ranging between .5 and 18 dwelling units per acre. A portion of Planning Area 3 consisting of the Bee Canyon Landfill Site is designated (4) Public Facilities with a (LS) Landfill Site Overlay.

Transportation Element

The Transportation Element of the County of Orange General Plan sets forth a comprehensive strategy for planning, developing, and maintaining a surface transportation system to accommodate the orderly growth of the county. The Element consists of three main components: a Circulation

Plan, a Bikeways Plan and a Scenic Highways Plan. Relevant aspects of each of these components as they pertain to the transportation system in the project area are identified below.

Circulation Plan: The Foothill (SR-261) Transportation Corridor runs northwest-southeast through Planning Area 6 from Coto de Caza to the SR-261 in Orange County. The Eastern (SR-133) Transportation Corridor runs west of the former MCAS El Toro and is an extension of the Eastern (SR-133) Transportation Corridor. The Eastern Transportation Corridor provides access to the Santa Ana (I-5) and San Diego (I-405) Freeways. Several arterial highways traverse the project site, including Portola Parkway (Primary Arterial - 4 lane undivided roadway), Irvine Boulevard (Major Arterial - 6 lane undivided roadway), Trabuco Road (Primary Arterial), Sand Canyon (Primary Arterial north of Irvine Boulevard) and Jeffrey Road (Major Arterial south of Irvine Boulevard).

Bikeways Plan: The Master Plan of Countywide Bikeways identifies many Class I (off-road) bicycle trails through and around the subject project site. Bikeway 62 is planned along Jeffrey Road to Portola Parkway and Bikeway 102, which ultimately connects to the Peters Canyon Wash Trail (Bikeway 40). Class II bikeways that traverse the project site include Bikeway 41 along Portola Parkway, Bikeway 73 along Irvine Boulevard, and Bikeway 53 along Bryan Road.

Scenic Highways Plan: No viewscape or landscape corridors are located on the projects site according to the Master Plan of Scenic Highways component of the County's Transportation Element.

Recreation Element

The Orange County Recreation Element includes the Master Plan of Regional Riding and Hiking Trails. This plan identifies the Hicks Canyon Trail through the northern portion of the Northern Sphere Area and into the Limestone Canyon Regional Park. Traveling west from the project site the Hicks Canyon Trail joins the Peters Canyon Trail which connects to the Peters Canyon Regional Park to the north.

Resources Element

The Resources Element contains official County policies on the conservation and management of resources, including natural resources, energy, water, air, open space and cultural-historic resources. The Resources Element designates portions of Planning Area 3 as "General Areas of Sensitivity" for Paleontology and Prehistoric Archaeology. In addition, the Open Space/Conservation Program Map designates areas within Planning Area 3 as "Large Open Space, Conservation & Scenic Corridors," "Narrow Open Space, Conservation & Scenic Corridors," and "County Regional Parks" (Limestone Canyon Regional Park).

Housing Element

The goal of the Housing Element is to promote the provision of a wide variety of housing opportunities to meet the needs of all economic segments of the community. The Northern Sphere Area is located within Regional Statistical Area E-44, which is projected to grow by 27,346 housing units between the year 2000 and 2025.

Safety Element

The Safety Element contains County policies on identified and potential hazards and safety considerations, their mitigation and implications for development. The California Government Code requires general plans to include “a safety element for the protection of the community from any unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides, subsidence and other geologic hazards known to the legislative body; flooding; and wildland and urban fires.” The Safety Element designates Planning Areas 3 and 6 as “High Fire Hazard” areas.

Growth Management Element

The Growth Management Element contains County policies on the planning and provision of traffic improvements and public facilities that are necessary for orderly growth and development. The element presents policies and programs for traffic improvement phasing and facility and development phasing plans and provides guidance for future facility implementation plans for the County. The goals of this element are to: reduce traffic congestion, ensure that adequate transportation facilities, public facilities, equipment, and services are provided for existing and future residents; and protect the natural environment of Orange County.

Noise Element

The purpose of the Noise Element is to provide a statement of public policy and a decision framework for the maintenance of a quiet environment. The Noise Element identifies the sources of noise, analyzes the extent of the noise intrusion, and estimates its potential impact upon the County. The objective achieved by the development of the Noise Element are the identification in quantitative, numerical terms, of existing and projected noise levels, noise sources, and noise-sensitive land uses in the County, and direction for implementation programs which may be used to achieve and maintain a desirable noise environment.

Public Services and Facilities Element

The Public Services and Facilities Element contains County policies on the planning and provision of public services and facilities that are necessary for orderly growth and development. The Public Services and Facilities Element presents policies and programs for public services and facilities and provides guidance for future public facility planning studies for the County. Six service system categories are included in this element: Water, Transportation, Waste Management, Wastewater, Flood Control, and Community Facilities.

3.10 Regional Planning Considerations

Adopted Plans

Natural Community Conservation Plan

A portion of the project site and Implementation District “P” are located within the NCCP/HCP reserve area. The Natural Community Conservation Act, Cal. Fish and Game Code §§ 2800-2840 was signed into law in October 1991, which authorized the preparation of Natural Community Conservation Plans (NCCP). The NCCP program is an innovative effort by the State of California to protect vegetative communities and their dependent wildlife species. The purpose of an NCCP is to protect important habitat before it becomes necessary to declare certain species that utilize the habitat endangered, while allowing a reasonable amount of economic development. The NCCP process provides an alternative to protecting species on a “single species basis” as do the federal and state Endangered Species Acts.

The first application of the NCCP program was Orange County’s NCCP/HCP which established The Nature Reserve of Orange County, a 37,000 acre reserve that was approved on July 17, 1996, (“Reserve”) that provides regional biological benefits which would be unlikely to occur with a piecemeal, project-by-project conservation strategy. At the same time, the NCCP/HCP also established development areas where development could occur. Establishment of the Reserve System will protect approximately forty Identified Species, including three Target Species (gnatcatcher, cactus wren and orange-throated whiptail lizard) which are the focus of NCCP

planning. NCCP planning also focused on preservation of coastal sage scrub (CSS) habitat primarily utilized by the Target Species. The implementation of the NCCP/HCP, including dedication of Reserve lands, interim and long term adaptive management of Reserve lands, and endowment by the participating landowners, all mitigate impacts of proposed and future development in the delineated development area on covered habitats and identified species.

The City is a signatory to the NCCP/HCP Implementation Agreement. There are 20 participants to the agreement including state, regional and local agencies and jurisdictions, affected landowners and utility companies, and UCI. The Irvine Company was one of the participating landowners in the NCCP/HCP. The NCCP/HCP Implementation Agreement states that, “[b]ased on the deed restrictions, grant restrictions, provisions of dedication offers, commitments pursuant to adopted CEQA mitigation measures and other encumbrances against those current and future public lands which are to be included in the Reserve System and Special Linkage Areas as established by the NCCP/HCP, the USFWS and the California Department of Fish and Game (CDFG) have determined that the habitat protection afforded under those encumbrances, and by commitments of lands for Reserve System or Special Linkage Area purposes pursuant to this Agreement, constitute commitments in perpetuity to uses consistent with the purposes of the NCCP/HCP as set forth herein.”

Regional Comprehensive Plan and Guide

The Southern California Association of Governments (SCAG) is a council of governments representing Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura Counties. SCAG is a regional planning agency and serves as a forum for addressing regional issues concerning transportation, the economy, community development and the environment. Policies and programs adopted by SCAG to achieve regional objectives are expressed in its Regional Comprehensive Plan and Guide (RCPG). Some of these policies are advisory in nature. SCAG also serves as the regional clearinghouse for projects requiring environmental documentation under federal and state law. In this role, SCAG reviews proposed development and infrastructure projects to analyze their impacts on regional planning programs. In its response to the Notice of Preparation of an EIR for this project (see Appendix B), SCAG requested that this EIR address the project’s consistency with the RCPG, and identified a number of specific policies as a focus of this consistency evaluation, which are analyzed in detail in Section 4.9.

Pending Plans

Special Area Management Plan (SAMP), 404 Permit and Master Streambed Alteration Agreement (MSAA) for the San Diego Creek Watershed

The Corps of Engineers, Los Angeles District, and the California Department of Fish and Game are jointly preparing a Special Area Management Plan/Master Streambed Alteration Agreement (SAMP/MSAA) for the San Diego Creek Watershed, which is a comprehensive aquatic resource plan to achieve a balance between aquatic resource protection and reasonable economic development.

Under Section 404 of the Clean Water Act (CWA), the Corps of Engineers is authorized to regulate discharge of dredged or fill material into waters of the United States. Federal law also authorizes the SAMP approach, which allows the Corps to take into account not only direct, but also indirect and cumulative effects on aquatic resources in a way not possible in the project-by-project process. Potential impacts are analyzed at the watershed scale in order to identify priority areas for preservation, identify potential restoration areas, and determine the least environmentally damaging locations for proposed projects. The SAMP is not a "super permit" and will not accelerate development in the watershed, but it does provide the basis for a programmatic permit. It will provide a watershed-based analysis of, and framework for, all future 404 and 1603 permits and agreements for projects in the watershed, as well as a regional approach to preservation, restoration and mitigation.

Under state law, certain riparian or aquatic areas also fall under the jurisdiction of the California Department of Fish and Game (CDFG) pursuant to Fish and Game Code section 1600 et seq. In California, the jurisdiction of CDFG is often over a greater area than that of the Corps jurisdiction over wetlands. The state statute generally provides that when a project will impact certain riparian resources, conservation and mitigation measures to protect those resources should be proposed by CDFG and included in the project. For certain large-scale projects, CDFG has developed under state law the Master Streambed Alteration Agreements (MSAA). The MSAA authorizes the alteration of riparian areas that are analyzed in detail for the purposes of the Fish and Game Code and sets out a process and standards by which other later projects will be reviewed and considered.

There are two main goals of the SAMP/MSAA process: to establish a watershed-wide aquatic resource reserve program, based on a comprehensive planning level evaluation of watershed resources and values and to minimize individual and cumulative impacts of future projects in the watershed. At the end of the SAMP/MSAA process, there will be higher resource value areas in the watershed that will be identified to be protected and preserved, as well as lower resource value areas where development activities would be allowed to occur, provided that they meet specific criteria developed for protection of the watershed and specified in the SAMP/MSAA.

The SAMP/MSAA study area, San Diego Creek watershed, encompasses 32,000 hectares (122 square miles or 78,000 acres) in central Orange County, California. The watershed drains westerly into San Diego Creek and then Upper Newport Bay. Urban areas within the SAMP/MSAA study area include the cities of Irvine and Tustin, and portions of Santa Ana, Orange, Laguna Hills, Laguna Woods, Lake Forest and Newport Beach. Large parts of the SAMP/MSAA study area are currently developed with residential, commercial and industrial uses. Large portions of the watershed are also committed to permanent open space through the Orange County Central and Coastal Subregion of the NCCP/HCP. The NCCP/HCP established a 37,378 acre reserve addressing primarily upland habitat species conservation, but also preserving significant waters of the United States and of the State. The NCCP/HCP Reserve area within the watershed is about 12,855 acres. (GIS calculation, LSA Associates, Inc., 2001). There is an additional 1,045 acres of special linkage open space within the watershed. (GIS calculation, LSA Associates, Inc., 2001). While the purpose of the NCCP was primarily conservation of upland habitats and species, aquatic resources are also preserved in the Reserve and Special Linkage areas. Aquatic resources in the remaining undeveloped portions of the SAMP/MSAA study area include riparian drainages and wetlands. The major drainages in the SAMP study area are San Diego Creek, Peters Canyon Wash, Hicks Canyon Wash, Bommer Canyon Creek, Shady Canyon Creek, Round Canyon Wash, Bee Canyon Wash, Marshburn Channel, Trabuco Channel, Bonita Canyon Wash, and Sand Canyon Wash.

The SAMP/MSAA will describe an approach and set of actions to preserve, enhance, and restore aquatic resources, while allowing reasonable economic development, and construction and maintenance of public infrastructure facilities within the study area. Key objectives of the SAMP/MSAA for the San Diego Creek watershed are to: (1) evaluate the extent and condition of existing aquatic resources; (2) develop a comprehensive aquatic resources reserve program for the protection, restoration and management of such resources; and (3) identify and evaluate alternative land development scenarios in the context of the aquatic resource reserve program.

Based on the SAMP/MSAA, the Army Corps of Engineers (ACOE) will identify potential areas and/or evaluate proposed activities suitable for coverage using a programmatic permitting process under Section 404 of the Clean Water Act. These regulated activities would include residential, commercial, industrial, and recreational development; and construction and maintenance of public infrastructure facilities such as roads and utilities.

Similarly, the California Department of Fish and Game will participate in the SAMP/MSAA process by formulating a Master Streambed Alteration Agreement (MSAA) under Sections 1601 and 1603 of the California Fish and Game Code for the same regulated activities in the SAMP/MSAA Study area that affect drainages subject to the Department's jurisdiction.

The SAMP/MSAA will be subject to environmental analysis pursuant to a joint state and federal document. The ACOE will prepare an Environmental Impact Statement (EIS) in accordance with the National Environmental Policy Act (NEPA). The California Department of Fish and Game will prepare a Program EIR in accordance with CEQA for the actions described in the SAMP/MSAA.

The ACOE issued a Notice of Intent to prepare the EIS on July 31, 2001. A Draft EIS/EIR is expected to be issued in approximately the second quarter of 2002.

Relationship of SAMP/MSAA to the Proposed Project

The SAMP/MSAA is being prepared at a level of detail commensurate with both the large size of the study area and the programmatic nature of a planning document that addresses multiple activities.

The SAMP/MSAA EIS/EIR will address impacts on waters of the State and the United States associated with future land uses in the watershed and actions to protect aquatic resources. By examining the entire watershed, the SAMP/MSAA EIS/EIR will provide a thorough analysis of cumulative impacts. Key environmental impacts to be addressed include the following:

- Aquatic resources
- Water quality
- Threatened and endangered species

The manner in which the SAMP/MSAA EIS/EIR will be used for assessing later 404 and 1603 determinations for specific projects is based on two key concepts also found in CEQA: tiering and the use of the Program EIR.

Although the SAMP/MSAA EIS/EIR is not expected to be in public circulation prior to certification of this EIR, a description is included here because of the importance of the SAMP/MSAA as a regional planning program and mechanism to address cumulative impacts and protection of higher value aquatic resources.

As part of the SAMP/MSAA, the San Diego Creek Watershed Functional Assessment has been prepared by the Corps' Waterways Experiment Station (WES) and the Cold Regions Research and Engineering Laboratory (CRREL). As part of the functional assessment, the Corps assessed the following endpoints: hydrologic integrity, water quality integrity and habitat integrity. Hydrologic integrity refers to the frequency, magnitude, and location of stream water flow and the interaction of the stream with the floodplains. Water quality integrity refers to the processing of nutrients and sediments within streams. Habitat integrity refers to the quality and quantity of habitat necessary to support functioning riparian systems.

The Functional Assessment includes a Planning Level Delineation of jurisdictional areas within the San Diego Creek Watershed. The Planning Level Delineation denotes at a landscape level those areas that, for special area management planning purposes, should be considered for preservation and development. The Planning Level Delineation is not as detailed as a site specific delineation, and its purpose is not to make site specific determinations regarding exact boundaries of ACOE jurisdiction within a project site. Therefore, given the SAMP/MSAA landscape level analysis, it is possible that project specific studies will categorize resources differently or reach some different

conclusions than the Planning Level Delineation. The site specific delineation, rather than the Planning Level Delineation, is the appropriate level of analysis to rely on in making project specific Section 404 jurisdictional decisions and may be used for analyzing project impacts under CEQA. Information from the site specific delineations may be incorporated into the SAMP/MSAA to provide more detailed information. Any inconsistencies between the SAMP/MSAA and specific project delineations or impact proposals will be resolved as part of the environmental clearance and 404/1603 review and/or permitting processes for the subsequent projects.

At the same time, since the initial phase SAMP/MSAA data collection and generation is complete, the proposed project and the project specific delineations set forth in Appendix E can be analyzed in this DEIR under CEQA, Section 404 and Section 1603 in the context of the available SAMP/MSAA information. Because this DEIR contains and analyzes a site specific delineation, the project impacts can be determined now and it is not necessary to wait for completion of the SAMP/MSAA to analyze such impacts under CEQA. The SAMP/MSAA process shall constitute the framework for the 404 and 1603 permitting decisions.

Natural Treatment System Master Plan Component for the San Diego Creek Watershed

The Irvine Ranch Water District (IRWD) has initiated a process for preparing a Natural Treatment System Master Plan (NTSMP) to improve water quality in the San Diego Creek watershed and ultimately Upper Newport Bay. Implementation of the NTSMP Component is intended, along with other programs, to meet regional, federal and State water quality objectives for San Diego Creek and Upper Newport Bay through the installation of a network of “natural treatment” wetland facilities throughout the San Diego Creek Watershed.

The Plan includes expanding and or enhancing existing public flood control facilities to include wetland treatment, the construction of new wetlands at some Irvine Company project sites, and the construction of new wetlands to treat existing flows in the San Diego Creek watershed.

The Plan facilities will help meet the requirements associated with the Total Maximum Daily Load (TMDL), the Nationwide Pollutant Discharge Elimination System (NPDES) stormwater permit, the Federal Clean Water Act Section 401 water quality certification; and requirements of the County of Orange, local municipalities, and special districts. The Plan, which focuses on treatment on a watershed scale, is to be a component of current watershed planning activities, including those of the ACOE, and Department of Fish and Game (SAMP/MSAA) and the County of Orange NPDES stormwater program. The Plan is comprehensive and represents a major commitment to the management of water quality in San Diego Creek watershed and the Upper Newport Bay.

The facilities are primarily water quality wetlands and biofilters that use natural physical, chemical, and biological processes to treat low flows and smaller stormwater runoff events. Natural treatment facilities do not require extensive engineering structures that are typically employed to treat drinking

water and wastewater. The use of water quality wetlands will also enhance wildlife diversity and abundance, and protect and preserve open spaces.

Description of Natural Treatment System Master Plan Components

The Plan will contain natural treatment facilities consisting primarily of wetlands to improve water quality for “first flush” stormwater flows and nuisance flows. The use of wetlands is proposed because of the documented effectiveness of constructed wetlands for wastewater and stormwater treatment in arid areas. A local example is San Joaquin Marsh, which includes five wetland treatment cells having a total area of about 70 acres. About 10 cubic feet per second (cfs) of the low flow, which is typically 12-18 cfs, of San Diego Creek is diverted into the marsh and, following treatment, is returned to the Creek. An example of the water quality benefit of such a marsh is that marsh monitoring data indicate that about 200 pounds per day of nitrate are removed during dry weather, reducing the total loading to Upper Newport Bay by about 30%.

The facility locations were selected based on a variety of factors including hydrology, water quality, ecology and land availability. Examples of facility types include:

- In-line wetland treatment facilities sized to treat nuisance and small storm flows from the upstream tributary area. Storm flows are allowed to pass through the facility; however, the facility is designed to limit re-mobilization of trapped pollutants.
- Off-line wetland treatment facilities designed to treat a portion of the flow in the stream that is diverted into the off-line facility. Larger flows bypass the facility.
- Combination facilities that incorporate wetlands into existing or planned flood control

Extended detention in combination with wetlands and wet pond facilities could be an added feature for any of the above configurations.

Relationships of Natural Treatment System Master Plan to Proposed Project

The NTSMP addresses water quality objectives on a watershed scale. The facilities planned as part of the NTSMP can still be built as needed with individual projects. However, there may be differences in maintenance responsibility and economies of scale in implementation and maintenance of such facilities may be lost if the facilities are implemented individually instead of as part of a larger program.

Within the proposed project, one facility currently being considered as a part of the NTSMP exists: the Trabuco Basin. The water quality section of this DEIR analyzes as a project design feature retrofitting of this flood control basin to serve as a water quality basin consistent with the NTSMP. The water quality section of this DEIR also fully analyzes the water quality impacts of the proposed project with and without this project design feature. Because the project and cumulative impacts on water quality can be fully analyzed under CEQA, and the enhancement of the Trabuco Basin to a water quality basin can be analyzed as a feature of the proposed project that stands alone, but is consistent with the NTSMP, the environmental review of this project can proceed independently of the NTSMP if the timing so requires. At the same time, from a cumulative impact standpoint, the NTSMP will provide further assurance over the long term that activities will be in place to help achieve the objectives of TMDLs, the NPDES Stormwater permit, and CWA Section 401.

3.11 Assumptions Regarding Cumulative Impacts

Section 15130 of the CEQA Guidelines states that cumulative impacts shall be discussed where they are significant. It further states that this discussion shall reflect the level and severity of the impact and the likelihood of occurrence, but not in as great a level of detail as that necessary for the project alone. Section 15355 of the Guidelines defines cumulative impacts to be "... two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." Cumulative impacts represent the change caused by the incremental impact of a project when added to other proposed or committed projects in the vicinity.

The CEQA Guidelines (Section 15130 (b)(1)) state that the information utilized in an analysis of cumulative impacts should come from one of two sources, either:

- A. A list of past, present and probable future projects producing related cumulative impacts, including, if necessary, those projects outside the control of the agency; or
- B. A summary of projections contained in an adopted general plan or related planning document designed to evaluate regional or area-wide conditions.

The cumulative impact analyses contained in this DEIR uses method B, as described above. The Land Use Element of the Irvine General Plan ("LUE") designates the general distribution and location of land to be used for residential, business, industry, open space and other types of land use.

The land use categories established in the LUE guide future development and growth in a way that promotes the health, safety and welfare of the community. To regulate the amount of building intensity, the LUE also includes several statistical tables that define the amount of physical development that will be allowed in each land use category. To further regulate the spatial distribution of planned growth, land use intensities are allocated throughout the City's Planning Areas, as shown on Exhibit 3-2. This geographic planning framework is used in both the General Plan and the Zoning Ordinance. Planning Areas are also used for organizing the City's development monitoring database.

As shown on Table 3-1, the adopted City of Irvine General Plan includes a total of 5,905,389 square feet designated as "Multi-Use," 119,726,242 square feet designated as "Industrial" uses, 21,600,404 square feet designated as "Commercial," 17,563,095 square feet designated as "Institutional," and a total of 88,494 residential units.

The City has adopted growth projections for planning horizon years 2007, 2025, and post-2040 (representing General Plan buildout), based upon the City's General Plan, and demographic forecasts adopted by the Orange County Council of Governments (OCCOG) in June, 2000 (OCP-2000). The County of Orange, its cities, and public agencies, have executed a Memorandum of Understanding with the OCCOG to contract with the Center for Demographic Research at California State University, Fullerton, to develop and periodically update demographic growth projections for Orange County, based on adopted General Plans and historic growth trends. OCP-2000 is the most current adopted growth projection. The City of Irvine has developed an Irvine Transportation Analysis Model (ITAM) utilizing OCP-2000, and Irvine's General Plan, for purposes of forecasting cumulative growth within the City of Irvine, and regionally. The growth projections adopted by the City for years 2007, 2025 and post-2040 for ITAM are used for the cumulative impact analyses of this DEIR. OCP-2000 projections were modified as follows to reflect even more recent data:

1. The recently approved City of Tustin's proposed reuse plan (land uses and circulation) for the former Tustin Marine Corps Air Station (MCAS) was used for its corresponding Traffic Analysis Zones (TAZ), in place of OCP-2000 assumptions.
2. The recently approved Santiago Hills II development in the City of Orange's Sphere of Influence was assumed in the appropriate East Orange TAZs rather than the prior plan reflected in OCP-2000.
3. Updated land uses in the already developed Tustin Ranch area in the City of Tustin north of the project were utilized by the City.

Exhibit 3-2 City of Irvine Planning Areas

**Table 3-1
General Plan Land Use by Planning Area**

Planning Area	Military (Sq. ft.)	Multi-Use (Sq. ft.)	Industrial (Sq. ft.)	Commercial (Sq. ft.)	Institutional (Sq. ft.)	Dwelling Units
1	0	0	0	23,769	0	4,602
2	0	0	0	0	0	2,521
3	0	0	0	0	0	0
4	0	0	1,350,000	990,000	494,430	9,390
5	0	0	0	150,000	0	2,885
6	0	0	0	0	0	263
8	0	0	0	1,114,600	188,174	8,705
9	0	0	0	0	0	0
10	0	119,850	2,822,921	887,269	39,950	3,755
11	0	0	0	546,099	573,861	7,685
12	0	470,000	2,871,081	1,117,000	344,440	4,812
13	0	0	5,734,893	0	1,585,263	0
14	0	0	0	776,000	318,635	5,660
15	0	198,539	0	896,480	842,449	12,116
16	0	0	0	0	0	0
17	0	0	910,000	300,000	0	2,030
18	0	0	0	0	0	750
19	0	0	0	294,390	9,374	2,835
20	0	0	0	173,542	192,014	3,775
21	0	0	0	0	568,921	5,048
22	0	0	0	0	0	400
23	0	0	0	0	112,230	1,000
24	0	654,000	0	68,953	25,850	2,889
25	0	0	1,436,170	0	0	0
27	0	0	0	0	210,740	2,155

Table 3-1 General Plan Land Use by Planning Area						
Planning Area	Military (Sq. ft.)	Multi-Use (Sq. ft.)	Industrial (Sq. ft.)	Commercial (Sq. ft.)	Institutional (Sq. ft.)	Dwelling Units
28	0	0	0	0	0	0
29	0	0	0	0	761,000	0
30	0	0	1,676,000	201,000	41,000	0
31	0	0	4,700,000	128,912	350,370	0
32	0	0	4,355,127	1,398,947	0	0
33	0	0	0	9,902,980	0	0
34	0	0	6,743,300	1,324,430	0	0
35	0	0	12,815,738	1,010,583	62,101	0
36	0	0	55,917,660	0	0	0
38	0	0	0	0	0	4,270
39	0	0	0	0	0	0
40	0	0	10,212,352	0	0	0
50	0	0	0	58,450	9,810,293	0
51	0	4,463,000	8,181,000	177,000	1,032,000	948
Unallocated	0	0	0	60,000	0	0
Total	0	5,905,389	119,726,242	21,600,404	17,563,095	88,494

Note: Only Planning Areas which are planned for development are shown. As a result, some Planning Areas are not listed above since they are designated for permanent open space. In addition, Planning Area 26 was detached from the City and annexed to the City of Newport Beach.

For the General Plan Buildout analysis, Millennium Plan II, as adopted by the City of Irvine, was assumed for the reuse plan for the former MCAS El Toro (Planning Area 51). City of Irvine General Plan land uses are assumed for Planning Areas 1 and 2, which are in the City's Sphere of Influence.

In addition to the foregoing modifications, the cumulative impact analyses is tested by two sensitivity runs including: 1) City of Irvine General Plan Buildout with OCX (El Toro Aviation Plan); and, 2) “Probable Future” Projects which assumes the “Great Park” plan for reuse of MCAS El Toro, in addition to other “probable future” projects which were not approved when the NOP for this EIR

was released. A discussion of the land uses assumed in the cumulative impact analysis and the special future case scenarios are described below.

Cumulative Impact Analysis

Two separate reuse plans have been approved for the former Marine Corps Air Station (MCAS) - El Toro, designated as Planning Area 51 by the City's General Plan. Planning Area 51 consists of approximately 4,359 acres located within the City's Sphere of Influence. The El Toro MCAS was closed in July 1999, as was recommended by the Base Realignment and Closure Commission in a report to President Clinton in 1993. The Base Realignment and Closure (BRAC) process, established by the Base Realignment and Closure Acts of 1988 and 1990, acts to reduce the number of military facilities while transferring ownership to civilian control. As part of BRAC, the Department of Defense requires that a reuse plan guide this transfer. Two competing reuse plans have been approved, consisting of the Orange County International Airport by the County of Orange and the Millennium Plan II by the City of Irvine. For purposes of this Draft EIR, the cumulative impact analysis was prepared based on buildout of the City's General Plan (see above) with Millennium Plan II, since it is the adopted reuse plan for the City of Irvine and is reflected in the City's General Plan.

Millennium Plan II

The Millennium Plan II as it pertains to Planning Area 51 consists of a General Plan Amendment (39399-GA) and Pre-Zoning (39400-ZC) to allow conversion of approximately 4,298 acres of land from Military land uses to a variety of uses, including Preservation, Recreation, Residential (948 units), Multi-Use (4,465,313 square feet), Industrial (8,181,000 square feet), Commercial (177,000 square feet), and Institutional (1,032,000), as shown on Table 3-1. The proposed project would convert over 50 percent of the site to Open Space for Preservation and Recreational purposes. Phase II of the Millennium Plan consists of the development of Planning Area 51 into a highly complex urban center, emphasizing high-technology industries. Development of the site is organized around four districts, each with its own mix of uses. The districts include: 1) Education, Research, and Technology; 2) Arts and Culture; 3) Sports and Entertainment; 4) Habitat Preserve. Each of the three developed districts contains a mixed-use village as its core activity center. The mixed-use villages are envisioned as intensive activity areas comprised of both residential and non-residential uses that establish the theme for each district. The Millennium Plan II was approved by the Irvine City Council in February 2000.

Special Future Case Scenarios

In addition to the cumulative impact analysis that assumed development in accordance with the City's General Plan, this DEIR tests the cumulative impact analysis by considering several special future case scenarios which analyze changes that may affect projections contained in the City's

General Plan. These sensitivity analyses include development of the Orange County International Airport pursuant to the County's General Plan and "probable future projects," described below.

General Plan Buildout with OCX (El Toro Aviation Plan)

The County has prepared a plan for the civilian reuse of the former MCAS El Toro. A Draft EIR (DEIR 573) analyzing the civilian reuse of MCAS El Toro and an Airport System Master Plan was released in December 1999. The Airport System Master Plan describes a two-airport system in Orange County comprised of a commercial international airport at the El Toro Site, operation of John Wayne Airport, a land development plan for the El Toro site including non-aviation land uses compatible with an international airport, and a plan for transition from military installation to commercial airport. The project, if built, would convert approximately 3,722 acres of military uses into civilian airport related land uses. As proposed by the County of Orange, OCX would provide long haul domestic and international air passenger service for an estimated 28.8 million annual passengers (MAP), 5.4 MAP of which are passengers with connecting flights. OCX is also forecast to annually handle 2.01 million tons of cargo.

On Tuesday, October 23, 2001, the Board of Supervisors of the County of Orange, acting as the MCAS El Toro Local Redevelopment Authority (LRA), certified Final EIR 573, including CEQA Findings of Fact, Statement of Overriding Considerations, and Mitigation Monitoring and Reporting Plan (MMRP) and adopted the Airport System Master Plan (ASMP) and Airport Layout Plans (ALPs) for John Wayne Airport and Orange County International Airport and the Base Transition Plan (BTP) for MCAS El Toro. Furthermore, the LRA authorized implementation actions for an 18.8 MAP airport with 1.18 million tons of annual air cargo for the El Toro portion of the ASMP.

The 573 EIR states that significant unavoidable environmental impacts resulting from the implementation of the Orange County International Airport Plan after implementation of mitigation include aviation and traffic-related noise impacts; permanent loss of agricultural soils; energy resources impacts due to the large amounts of jet fuel consumed; short term air quality impacts during construction; aircraft and associated operations air quality impacts for NO_x and PM₁₀; regional air quality impacts for all criteria pollutants (CO, NO_x, ROC, and PM₁₀); toxic air contaminant impacts for lifetime cancer risk; increased resident population growth from non-resident project employees relocation into the surrounding area and the related demand for all types and prices of housing, including low and moderate income housing, in the surrounding area; traffic impacts to freeway/tollway mainlines and off-site highways; land use impacts to nearby cities do not adopt or maintain restrictions on airport-incompatible land uses or developments; impacts to public health and safety due to the risk of upset related to highway truck transport of jet fuel using tanker trucks; noise impacts to the use of proposed new recreational facilities, existing local and private parks and open space in the City of Lake Forest, future off-site trails, and portions of existing Class II bikeways in Lake Forest; as well as cumulative impacts related to traffic and circulation, noise, air quality, biological resources, natural resources and energy, and socioeconomics.

“Probable Future” Projects

In addition to the cumulative impacts associated with buildout of the City’s adopted General Plan, this scenario tests the cumulative impact analysis by adjusting the Irvine General Plan assumptions to account for the proposed Irvine Spectrum Housing (Planning Areas 17, 31, 33 and 34), Great Park Plan, Lower Peters Canyon Intensity Transfer (Irvine Planning Area 4), the recently approved Woodbridge General Plan Amendment (Irvine Planning Area 15), and recently announced open space dedications by The Irvine Company. These “Probable Future” projects are described in greater detail below.

Great Park Plan

An initiative known as “The Orange County Central Park and Nature Preserve Initiative” has been proposed for the former El Toro Marine Corps Air Station (MCAS). This Initiative amends the Orange County General Plan to authorize the closed El Toro MCAS to be used for non-aviation uses, including a multi-purpose central park, open space, nature preserve, universities and schools, cultural facilities, and other interim and long-term uses described therein. These designations permit the development of El Toro over time, thus allowing future generations to determine specific uses consistent with the Initiative. The City of Irvine has adopted a resolution stating that the Great Park is the City’s preferred alternative for the development of the former El Toro MCAS. The City is currently preparing a land use plan in anticipation of amending its General Plan and zoning designations within Planning Areas 30 and 51. Therefore, this sensitivity analysis substitutes land uses and circulation improvements assumed for the City of Irvine's proposed Great Park Plan for the former Marine Corps Air Station (MCAS) El Toro, for the assumptions that are otherwise included in the cumulative impact analysis which assumed Millennium Plan II.

Spectrum Housing

The City of Irvine has proposed a General Plan amendment, a zone change, and if necessary, an amendment to the Irvine Center Development Agreement to allow housing in the Spectrum. With the closure of the MCAS El Toro to military use on July 2, 1999, noise and crash hazards associated with the base are no longer present. The project proposes to introduce residential land uses in the Spectrum, which includes the commercial and industrial land uses that generally surround the MCAS El Toro. This proposed project is located in portions of Planning Areas 17, 31, 32, 33, 34, 35.

Lower Peters Canyon Intensity Transfer (Irvine Planning Area 4)

The Lower Peters Canyon Intensity Transfer proposes a zone change to allow for the transfer of 479 unbuilt dwelling units within Planning Area 4 to 479,000 square feet of business park uses within Lower Peters Canyon Business Park.

Woodbridge General Plan Amendment (Irvine Planning Area 15)

At the time studies for this Draft EIR were prepared, Sanderson J. Ray Development had submitted an application to modify the Woodbridge Square master plan by expanding the boundaries of the center with conditional use permit applications for a mini-warehouse facility, synagogue, church, and an office/retail building. The applicant has also proposed to dedicate 0.67 acres at the east end of the site adjacent to East Yale Loop as an extension to Windrow Community Park and as an amenity to the adjacent senior housing project. Windrow Community Park is located on the east side of East Yale Loop. Before the City can act on the master plan and conditional use permits, the General Plan and Zoning Code must be amended to accommodate commercial uses on these properties and provide additional building intensity.

The applicant also filed four concurrent applications. These include a major modification to the Woodbridge Square Master Plan for a commercial/office building, a conditional use permit for a mini-warehouse facility, a conditional use permit to relocate the Chabad Synagogue in a new building, and a major modification to the Woodbridge Community Church conditional use permit. The proposed General Plan and Zoning Code intensity increases and transfers will only accommodate the square footage for the expanded commercial/office building and the mini-warehouse facility. The Woodbridge Community Church expansion and the new synagogue are "additive" and do not need to be counted toward the intensity caps.

The Irvine Ranch Land Reserve

The Irvine Ranch Land Reserve encompasses approximately 11,000 acres of open space which will be dedicated by The Irvine Company. The expanse includes a 17-square-mile swath of the northern part of the ranch, stretching from Weir Canyon to the Cleveland National Forest, and including Fremont and Blind canyons and parts of Gypsum, Silverado, Santiago and Baker canyons. In addition, this open space area includes a 173-acre link to Laguna Coast Wilderness Park, Crystal Cove State Park and Aliso and Wood Canyons Wilderness Park in Laguna Canyon. Due to the deletion of land uses in areas to be preserved in East Orange by conservation easement before or shortly after consideration of this EIR, cumulative impact assumptions were revised to reflect the effect of these dedications on the sensitivity run. Other open space dedications proposed in Anaheim and Laguna Canyon as part of the Irvine Ranch Land Reserve were not considered in this sensitivity run.

Miscellaneous Sensitivity Analyses

Several additional sensitivity analyses have been conducted for discrete impact categories to address additional possible future projects and their potential cumulative impacts with the Northern Sphere Area. Examples include the proposed amendment to the Master Plan for Arterial Highways to delete Culver Drive between Portola Parkway and SR-241, alternative 2025 traffic and related analyses assuming the Toll roads are either "tolled" or "untolled," and a sensitivity analysis assuming extension of Oak Canyon under the 2025 "tolled" tollway condition.