

4. *Environmental Setting*

4.1 *INTRODUCTION*

The 2012 Modified Project is located in portions of City of Irvine (“City”) Existing Planning Area (PA) 51 and in Existing PA 30, both part of the former Marine Corps Air Station, El Toro, now closed and subject to civilian reuse. As used in this DSSEIR, the term “Proposed Project Site” refers to and encompasses; 1) the Heritage Fields Development, also known as the Great Park Neighborhoods, consisting of nine existing Development Districts; 2) an 11 acre parcel currently owned by the Transportation Corridor Agencies (TCA) located adjacent to the SR-133 Freeway between Trabuco Road and Irvine Boulevard (the “TCA Property”); 3) Lot D, Lot E, and Lot F as depicted on 2nd Amended Vesting Tentative Tract Map 17008 currently zoned 3.2 Transit Oriented Development” within Districts 2 and 3 (together, the “City Parcels”); and 4) approximately 132 acres owned by the City and zoned 1.4 Preservation that generally extends from Irvine Boulevard to the SCRRA rail lines, as depicted in Figure 3-5 and that is part of the “Approved Wildlife Corridor Feature”; and 5) a portion of the Great Park known as the “Sports Park District,” all of which are located within the areas designated as Existing PA 30 and Existing PA 51 in the City’s General Plan. The location of the 2011 Approved Project included Existing PA 30 and Existing PA 51 in their entirety (herein referred to as the “Approved Project Site”). Because the 2012 Modified Project is located within, but does not include all of, the Approved Project Site, this DSSEIR will specify when the Approved Project Site for the 2011 Approved Project is being referenced. Pursuant to CEQA and the CEQA Guidelines, the purpose of this section is to provide a “description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published, from both a local and a regional perspective.” The environmental setting provides a set of baseline physical conditions from which the City, as lead agency, will determine the significance of environmental impacts of the 2012 Modified Project. Because this is a Supplemental EIR, the baseline used for the analyses in this DSSEIR is the 2011 Approved Project, which includes the activities analyzed in the 2011 Certified EIR, which includes Addendum No. 8. Please refer to Section 2.1, *Purpose of The Environmental Impact Report*, for a discussion of the baseline used for this DSSEIR.

4.2 *REGIONAL ENVIRONMENTAL SETTING*

4.2.1 *Regional Location*

The Orange County Great Park (“Great Park”) is located in the south/central part of Orange County in Irvine (see Figure 3-1, *Regional Location*). Orange County is bordered by the Pacific Ocean to the west, Los Angeles County to the north and northwest, San Bernardino County to the northeast, Riverside County to the east, and San Diego County to the south. Orange County comprises 798 square miles, with approximately 40 miles of coastline and extending inland approximately 20 miles.

The natural topography of Orange County is a combination of mountains, hills, flatlands, and shoreline. Orange County lies predominantly on an alluvial plain, which is generally less than 300 feet in elevation in the west and central section. The western portion of the County is made up of a series of broad sloping plains (Downey and Tustin Plains) formed of alluvium transported from the mountains by the Santa Ana

4. Environmental Setting

River, Santiago Creek, and other local streams. Several low-lying mesas interrupt the plain along the northern coast. Orange County is partly enclosed by the Puente and Chino Hills to the east. The Puente and Chino Hills, which identify the northern limit of the plain, extend for 22 miles and reach a peak height of 1,780 feet. To the east and southeast of the plain are the Santa Ana Mountains, which have a peak height of 5,691 feet.

4.2.2 Regional Climate

The climate of Orange County is generally temperate. The average monthly high temperatures range from about 52°F in the coastal areas in January to 86°F in the inland areas of the coastal plain in August. The average annual rainfall across the County is 14 inches, with most rain typically occurring in the winter months. Rainfall also exhibits characteristically wide variations annually, from a low of 3.6 inches in 1961 to a high of 32.1 inches in 1940.

4.2.3 Regional Planning Considerations

Air Quality Management Plan

An air basin generally has similar meteorological and geographic conditions throughout. California is geographically divided into 15 air basins, and Irvine is located in the South Coast Air Basin (“SoCAB”). This air basin contains the largest urban area in the western United States. It is a 6,600-square-mile coastal plain with connecting broad valleys and low hills and is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The SoCAB includes all of the non-desert portions of San Bernardino, Los Angeles (non–Antelope Valley portion), and Riverside Counties, and all of Orange County.

The South Coast Air Quality Management District (“SCAQMD”) and the Southern California Association of Governments (“SCAG”) are responsible for formulating and implementing the Air Quality Management Plan (“AQMP”) for the SoCAB, a comprehensive plan that includes control strategies for emissions from stationary and area sources, as well as from on-road and off-road mobile sources. Every three years since 1979, SCAQMD has prepared a new AQMP, with updates to the previous plan and a 20-year horizon. The most recent AQMP iteration was adopted by SCAQMD on June 1, 2007 (“2007 AQMP”). The 2007 AQMP incorporates significant new scientific data, primarily in the form of updated emissions inventories, ambient measurements, new meteorological episodes, and new air quality modeling tools. It proposes attainment demonstration of the federal fine particulate matter (“PM_{2.5}”) standards through a more focused control of sulfur oxides (“SO_x”), directly emitted PM_{2.5}, and nitrogen oxides (“NO_x”) supplemented with volatile organic compounds (“VOC”) by 2015. The eight-hour ozone control strategy set forth in the 2007 AQMP builds upon the PM_{2.5} strategy, augmented with additional NO_x and VOC reductions to meet the federal standard by 2024, assuming a bump-up (extended attainment date) is obtained.

The AQMP acts as local guidance related to California’s State Implementation Plan, which provides the framework for air quality basins to achieve attainment of the State and federal ambient air quality standards. Areas that meet ambient air quality standards are classified as attainment areas; areas that do not meet these standards are in nonattainment. Severity classifications for ozone nonattainment are marginal, moderate, serious, severe, and extreme. The 2012 Modified Project’s consistency with the applicable policies and standards of the 2007 AQMP is analyzed in detail in Section 5.3, *Air Quality*, of this DSSEIR.

4. Environmental Setting

Southern California Association of Governments

Orange County and the City are at the western edge of a six-county metropolitan region composed of Orange, Los Angeles, Ventura, Riverside, San Bernardino and Imperial Counties. SCAG is the federally recognized Metropolitan Planning Organization (“MPO”) for the region, which encompasses over 38,000 square miles. SCAG is a regional planning agency and a forum for addressing regional issues concerning transportation, the economy, community development, and the environment. SCAG is also 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. As the Southern California region’s MPO, SCAG cooperates with SCAQMD, the California Department of Transportation (“Caltrans”), and other agencies in preparing regional planning documents. Orange County and its jurisdictions constitute the Orange County Subregion of the SCAG region. The Orange County Subregion is governed by the Orange County Council of Governments (“OCCOG”). SCAG has developed a variety of plans to achieve specific regional objectives. The plans most applicable to the 2012 Modified Project are discussed below.

Regional Comprehensive Plan

The 2008 Regional Comprehensive Plan (“RCP”) is a major advisory plan prepared by SCAG that addresses important regional issues such as housing, traffic/transportation, water, and air quality. The RCP serves as an advisory document to local agencies in Southern California for their information and voluntary use in the preparation of local plans and the handling of local issues of regional significance.

The RCP presents a vision of how Southern California can balance resource conservation, economic vitality, and quality of life. The RCP identifies voluntary best practices to approach growth and infrastructure challenges in an integrated and comprehensive way. It also includes goals and outcomes to measure progress toward a more sustainable region. The 2012 Modified Project’s consistency with the advisory policies of the 2008 RCP is analyzed in detail in Section 5.7, *Land Use and Planning*, of this DSSEIR.

Regional Transportation Plan

On April 4, 2012, SCAG adopted the 2012 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) to help coordinate development of the region’s transportation improvements. The RTP is a long-range transportation plan that is developed and updated by SCAG every four years. The RTP provides a vision for transportation investments throughout the region. Using growth forecasts and economic trends that project out over a 20-year period, the RTP considers the role of transportation in the broader context of economic, environmental, and quality-of-life goals for the future, identifying regional transportation strategies to address our mobility needs.

The 2012 Modified Project’s consistency with the applicable 2012 RTP policies is analyzed in detail in Section 5.7, *Land Use and Planning*, of this DSSEIR.

Compass Blueprint

In 2004, SCAG adopted the Compass Blueprint 2% Strategy (“2% Strategy”), which is the part of SCAG’s 2004 regional growth forecast policy that attempts to reduce emissions and increase mobility through strategic land use changes. Through extensive public participation and land use and transportation

4. Environmental Setting

modeling and analysis, the 2% Strategy has resulted in a plan that identifies strategic growth opportunity areas (“2% Strategy Opportunity Areas”). These areas amount to roughly 2 percent of the land area in the six-county SCAG region. These are the areas where the 2% Strategy will help cities and counties reap the maximum benefits from regional planning implemented in cooperation and partnership with the local community. The 2% Strategy is a guideline for how and where the vision for Southern California’s future can be implemented toward improving measures of mobility, livability, prosperity, and sustainability for local neighborhoods and their residents. Goals for the 2% Strategy Opportunity Areas include locating new housing near existing jobs and new jobs near existing housing, encouraging in-fill development, promoting development with a mix of uses, creating walkable communities, providing a mix of housing types, and focusing development in urban areas. The 2012 Modified Project’s consistency with the 2% Strategy guidelines is addressed in detail in Section 5.7, *Land Use and Planning*, of this DSSEIR.

4.3 LOCAL ENVIRONMENTAL SETTING

Location and Land Use

Irvine occupies 69.7 square miles in south/central Orange County. There are seven cities bordering Irvine: Tustin to the north, Lake Forest to the east, Laguna Hills and Laguna Woods to the southeast, Newport Beach to the south, Santa Ana to the northwest, and Costa Mesa to the west. Unincorporated Orange County land is located north of the Irvine. The Great Park, encompassing Existing PAs 30 and 51, is northeast of the freeway junction of Interstate 5 (I-5) and Interstate 405 (I-405), within Irvine. Figure 3-1, *Regional Location*, depicts the location of the Proposed Project Site in a regional context and Figure 3-2, *Local Vicinity*, shows its local context. The boundaries of Existing PA 51 generally include the Eastern Transportation Corridor to the west, the Foothill Transportation Corridor to the east, the SCRRA rail lines to the south, and Irvine Boulevard and the storm water channel near Alton Parkway to the north. Existing PA 51 abuts Existing PAs 30 and 32 to the south, Irvine Spectrum 2 - PA 35 to the east, and PAs 9 and 40 to the west. The boundaries of Existing PA 30 generally include Interstate 5 (Santa Ana Freeway) to the south, the SCRRA rail lines to the north, and the Irvine Spectrum to the east and west (Irvine Spectrum 2 - PA 35, and Irvine Spectrum 3 - PA 32).

Major roadways bordering the Proposed Project Site are Sand Canyon Avenue to the west, Portola Parkway and Irvine Boulevard to the north, and Alton Parkway to the east. The Irvine Station, a major multimodal transit center linking Orange County Transportation Authority (“OCTA”) bus, Metrolink commuter rail, and AMTRAK rail services, is located adjacent to the SCRRA rails, which traverse the Proposed Project Site and separate Existing PAs 30 and 51. Surrounding the Proposed Project Site are residential and nonresidential uses to the north and west, open space to the northeast, and nonresidential and mixed land uses to the east and southeast within Lake Forest and Irvine. An aerial photograph of the Proposed Project Site is shown in Figure 3-3.

The existing facilities and uses within the Proposed Project Site include agricultural operations and RV storage. The 2011 Certified EIR also described interim activities that might occur within Existing PAs 30 and 51, including short-term use of the land or existing buildings on-site. Currently, some of the existing buildings on-site are occupied by offices of the Orange County Great Park Corporation (“GPC”). The other current tenant is the Orange County Great Park Western Sector Development. Finally, a portion of the pre-existing runway has been removed within the southern portion of Existing PA 51.

Ownership of Existing PAs 30 and 51 has changed since certification of the 2003 OCGP EIR, including the transfer by fee title conveyance or by Lease in Furtherance of Conveyance (“LIFOC”) of certain

4. Environmental Setting

parcels to the Federal Aviation Administration (“FAA”), City of Irvine, County of Orange, and Heritage Fields El Toro, LLC by the Department of the Navy (“DON”). The DON LIFOC properties are currently undergoing remediation of residual contamination from previous military activities on the site.

Surrounding Land Uses

The Proposed Project Site is generally bounded by the Woodbury and Woodbury East residential developments to the west, the Portola Springs residential development and the FAA property with the Natural Community Conservation Plan/Habitat Conservation Plan (“NCCP/HCP”) overlay to the north, the Irvine Spectrum to the south, and the Irvine Spectrum 2 industrial/business park area and general industrial/research and development uses as well as the City of Lake Forest to the east. Other nearby local jurisdictions include the cities of Laguna Hills, Laguna Niguel, Laguna Woods, Mission Viejo, Aliso Viejo, and Tustin.

4.4 ENVIRONMENTAL RESOURCES AND INFRASTRUCTURE

Aesthetics

The 2011 Certified EIR discussed the Approved Project Site's visual setting associated with its location adjacent to various arterial highways and State and federal highways. As noted above, the Proposed Project Site is located within the Approved Project Site. None of the roadways adjacent to the Proposed Project Site are designated as a County or State scenic highway, although Sand Canyon Avenue is designated as a highway with rural/natural character. The City's General Plan also designates I-5 as an urban character Scenic Highway.

Generally, views of the Proposed Project Site are from the surrounding highways. From these highways, a variety of land uses, structures, and facilities of differing ages, sizes, and architectural styles may be viewed. Though agricultural areas are adjacent to and within the Proposed Project Site, the predominant features visible on the site are associated with the former military use of the base, including runways, aprons, hangars, warehouses, barracks housing, recreational facilities, former golf course, vacant single-family housing, vacant offices, and vacant commercial structures, and the Orange County Great Park Western Sector Development Plan (Phase 1). Since the 2003 OCGP EIR was certified, the majority of the structures on-site that were associated with the site's prior military activities have been demolished, a portion of the pre-existing runway has been removed, and the former golf course has been closed. These changes were anticipated and were analyzed in the 2011 Certified EIR.

The city of Lake Forest and the James A. Musick Branch Jail are located to the southeast of the Proposed Project Site, the Irvine Spectrum abuts the Proposed Project Site along the eastern and southern boundaries, and existing and developing residential developments are to the north and west. Further to the south are the residential areas of the cities of Laguna Woods and Laguna Hills. These communities are at higher elevations and therefore have panoramic views of the Proposed Project Site.

A description of the 2012 Modified Project's aesthetics impacts as compared to the 2011 Approved Project is included in Section 5.1, *Aesthetics*, of this DSSEIR.

4. Environmental Setting

Agricultural Resources

Conversion of Prime Farmland, Unique Farmland, and Farmland of Statewide Importance was found to be a significant and unavoidable impact in the 2003 OCGP EIR. However, as discussed in more detail in Section 5.2, *Agriculture and Forestry Resources*, of Addendum No. 5 concluded that the City's General Plan Objective L-10 established the Irvine Agricultural Legacy Program to mitigate the loss of existing agricultural land throughout Irvine where development under the General Plan is designated to occur, and concluded that the impact was no longer significant, in part because farmland was being provided elsewhere in the City. Addendum No. 5 further stated that the loss of the 173 acres of Prime Farmland in PAZ 1 would not be a significant impact because none of the acres were being used to grow crops. The 2010 Farmland Mitigation Mapping Program shows the majority of the Proposed Project Site as Urban and Built-Up Land and Other Land, although portions are designated as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Grazing Land. (California Department of Conservation, 2010)

A description of the 2012 Modified Project's agricultural resources impacts as compared to the 2011 Approved Project is included in Section 5.2, *Agriculture and Forestry Resources*, of this DSSEIR.

Air Quality and Greenhouse Gas Emissions

The Proposed Project Site is located in the western portion of the SoCAB. The climate in the SoCAB is mild, tempered by cool ocean breezes. Temperatures are normally mild (62 to 72 degrees Fahrenheit (°F)), with rare extremes above 100°F or below freezing (32°F). The climate of Orange County is classified as temperate. In January, the average high temperature is about 69°F and the low temperature averages about 47°F. In August, the average high is about 86°F and the low averages about 64°F. (Western Regional Climate Center, 2012) Precipitation is typically 9 to 15 inches annually in the SoCAB. The average annual rainfall across Orange County is 14 inches, the vast majority of which occurs between September and April. The County's rainfall also exhibits characteristically wide variations annually, from a low of 3.6 inches in 1961 to a high of 32.1 inches in 1940. (Western Regional Climate Center, 2012)

Pollutants originating in Orange County are transported by the daytime onshore air flow, where they react to form ozone some distance from where the primary pollutants are emitted. The SoCAB is a "nonattainment" area for ozone (O₃) and particulate matters (PM₁₀ and PM_{2.5}) under both the federal and California ambient air quality standards ("AAQS"). In addition, the SoCAB was proposed in 2010 to be designated as nonattainment for oxides of nitrogen (NO_x) (entire basin) under the new California AAQS and lead (Pb) (Los Angeles County only) under the new federal AAQS. Nonattainment refers to the fact that the region exceeds the federal and State AAQS. (SCAQMD, 2007) An air quality analysis was performed for the 2012 Modified Project and the results are discussed in Section 5.3, *Air Quality*, of this DSSEIR.

California is the second largest emitter of GHG in the United States, only surpassed by Texas, and the tenth largest GHG emitter in the world (CEC 2005). However, because of more stringent air emission regulations, in 2001 California ranked fourth lowest in carbon emissions per capita and fifth lowest among states in CO₂ emissions from fossil fuel consumption per unit of Gross State Product (total economic output of goods and services) (CEC 2006). In 2004, California produced 492 million metric tons ("MMTons") of CO₂-equivalent ("CO₂e") GHG emissions, of which 81 percent were CO₂ from the combustion of fossil fuels, 2.8 percent were from other sources of CO₂, 5.7 percent were from methane, and 6.8 percent were from N₂O (CEC 2006). The remaining 2.9 percent of GHG emissions were from

4. Environmental Setting

High Global Warming Potential gases, which include hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride (CEC 2006).

CO₂ emissions from human activities make up 84 percent of the total GHG emissions (CEC 2006). California's transportation sector is the single largest generator of GHG emissions, producing 40.7 percent of the state's total emissions (CEC 2006). Electricity consumption is the second largest source, comprising 22.2 percent. While out-of-state electricity generation comprises 22 to 32 percent of California's total electricity supply, it contributes 39 to 57 percent of the GHG emissions associated with electricity consumption in the state (CEC 2006). Industrial activities are California's third largest source of GHG emissions, comprising 20.5 percent of state's total emission (CEC 2006). Other major sources of GHG emissions include mineral production, waste combustion and land use, and forestry changes. Agriculture, forestry, commercial, and residential activities comprise the balance of California's greenhouse gas emissions (CEC 2006).

A description of the 2012 Modified Project's air quality and greenhouse gas impacts as compared to the 2011 Approved Project is included in Section 5.3, *Air Quality*, and Section 5.4, *Greenhouse Gas Emissions*, of this DSSEIR.

Biological Resources

The 2011 Certified EIR described the biological resources that exist within Existing PAs 30 and 51, including a 995-acre parcel of land in the easternmost portion of Existing PA 51 retained in federal ownership and designated as both a "habitat reserve" and a part of the Orange County Central-Coastal Sub-region NCCP/HCP. The areas outside the habitat reserve were described in the 2011 Certified EIR as: 1) providing minimal native or undisturbed habitat, and, 2) consisting of agricultural, ornamental, and domestic landscapes.

The 2011 Certified EIR identified nine vegetative communities within the Approved Project Site, including Venturan-Diegan sage scrub, southern cactus scrub, chaparral, woodland, riparian scrub, grassland, open water, agriculture, and predominately disturbed or developed areas. Several sensitive plant species and a large number of mature trees were also identified as potentially occurring within the Approved Project Site. The sensitive plant species potentially occurring in Existing PAs 30 and 51 include the southern tarplant, Palmer's grapplinghook, many-stemmed dudleya, Coulter's Matilija poppy, Catalina mariposa lily, and intermediate mariposa lily. The 2011 Certified EIR also noted the Coulter's saltbush, Laguna Beach dudleya, San Fernando Valley spineflower, and the Lewis's evening-primrose as having a moderate potential for occurrence. Species with a low potential for occurrence include the Los Angeles sunflower, south coast saltscale, Santa Monica Mountains dudleya, heart-leafed pitcher sage, coast wooly-heads, slender-horned spineflower, Santa Barbara morning glory, tecate cypress, and salt spring checkerbloom.

Since certification of the 2003 OCGP EIR, the Project Applicant has received a Section 401 Water Quality Certification from the California Regional Water Quality Control Board – Santa Ana Region, a Section 404 Permit from the Army Corps of Engineers (ACOE), and a 1602 Streambed Alteration Agreement from the California Department of Fish and Game (CDFG). In addition, the Final Habitat Mitigation and Monitoring Plan (HMMP) was approved by CDFG in December 2011 and ACOE in February 2012.

4. Environmental Setting

Chapter 8, *Impacts Found Not To Be Significant*, of this DSSEIR discusses why it was concluded that Biological Resources impacts of the 2012 Modified Project did not need to be analyzed in detail in this DSSEIR.

Cultural and Paleontological Resources

This discussion of cultural resources includes archaeological and historical resources. The 2011 Certified EIR reported the presence of ten prehistoric archaeological sites and eight isolated prehistoric artifacts that have been recorded in the northeastern habitat preserve portions of Existing PA 51. These sites are located generally on the ridges between Borrego Canyon Channel and the Agua Chinon Wash.

The former MCAS El Toro was surveyed to determine whether any of the structures would be eligible for the National Register. Generally, a structure that has achieved significance in the past 50 years is not considered eligible for the National Register unless it is of exceptional importance. The evaluation was expanded to include eligibility under the Legacy Cold War Project (Public Law No. 101-511, Section 8120). Portions of Existing PAs 30 and 51 (the former MCAS El Toro) were established during WWII, and no structure earlier than this period is located at the former MCAS El Toro. Therefore, the historical significance of any structures at the former military base would be as part of the Cold War Legacy. Surveys conducted by the US Army Corps of Engineers and the DON in conjunction with the base's closure concluded there were no structures eligible for designation as Cold War Legacy or for inclusion in the National Register of Historic Places.

The 2011 Certified EIR reported that a majority of Existing PAs 30 and 51 is located on the Tustin Plain, a coastal alluvial plain. Alluvium from the Late Pleistocene to Holocene Epochs (approximately 2 million to 11,000 years ago) immediately underlies the majority of the area surrounding the Proposed Project Site, including the part occupying the coastal plain and washes in the eastern portion of Existing PA 51. The Pleistocene Alluvium formation is widespread and believed to extend to depths of 1,000 feet under Existing PA 30. A deposit of Pleistocene terrestrial vertebrates was recovered during excavation of a flood control basin four miles from Existing PA 30; thus, it is possible that similar beds underlie Existing PA 30 (see 2003 OCGP FEIR p. 5.10-2), though no significant impacts were found in the 2011 Certified EIR.

The eastern portion of Existing PA 51 is located in the western foothills of the northern Santa Ana Mountains. The hills and ridges in the eastern part of Existing PA 51 are composed of older, underlying marine and nonmarine rock units of early Oligocene to late Pleistocene (23 million to 2 million years ago). In order of decreasing geologic age, these latter rock units include the undifferentiated Sespe and Vaqueros Formations, Topanga and Monterey Formations, Oso Member of the Capistrano Formation, Niguel Formation, and Nonmarine Terrace Deposits. Nonmarine Terrace Deposits also underlie the terraces at the south corner of Existing PA 51. The northwestern corner of Existing PA 51 contains a small portion of the Santa Ana Mountains foothills, which were separated from the main formation by erosion. This small portion is composed of undifferentiated late Cretaceous (135 million years ago) Marine Williams Formation. The rock units underlying portions of Existing PA 51 have previously yielded important fossil remains at recorded fossil sites on and near the site. There are three recorded fossil sites in Existing PA 51. These sites occur in undifferentiated Sespe and Vaqueros Formations and in the Topanga Formation. Fossil types include marine invertebrates and vertebrates, continental vertebrates, land plants, and land mammals. The three recorded fossil sites lie within the proposed habitat preserve portion of Existing PA 51 (2003 OCGP FEIR p. 5.10-1 and Table 5.10-1).

4. Environmental Setting

Chapter 8, *Impacts Found Not To Be Significant* of this DSSEIR discusses why it was concluded that Cultural and Paleontological Resources impacts of the 2012 Modified Project did not need to be analyzed in detail in this DSSEIR.

Geology and Soils

The 2011 Certified EIR describes the topography of the Proposed Project Site as nearly flat and gently sloping down to the west to southwest, with elevations ranging from 450 feet above mean sea level (msl) to 200 feet above msl. Existing PA 30 is located at the southeast margin of the Tustin plain, with elevations ranging from about 260 to 300 feet above msl. Existing PA 51 includes some slopes of the Santa Ana foothills, which reach elevations of about 750 feet above msl. Alluvial soils of six major soil associations consisting predominantly of varying sands, silts, and clayey silty sands are present within Existing PA 51. Soils underlying Existing PA 30 contain clayey loam alluvial material, terrace deposits, and old and unconsolidated recent alluvium of the Myford and Sorrento series.

The 2011 Certified EIR identified the primary potential seismic hazard in the area of the 2011 Approved Project as ground motion. Seismic Response Area (“SRA”) designations are used by the City to assess the geologic and seismic risk associated with potential development. All of Existing PA 30 and a majority of Existing PA 51 are within SRA-2 (denser soils/deeper groundwater) and are considered suitable for development. The planned development area of Existing PA 51 situated north of Irvine Boulevard is designated SRA-3 (alluvium/shallow bedrock) and also susceptible to ground motion.

No known active faults crossing or projecting into the Proposed Project Site were identified in the 2011 Certified EIR; however, the Proposed Project Site is located within the seismically active Southern California region and there are two active faults—Whittier-Elsinore Fault and Newport-Inglewood Fault—located within 14 miles of the site.

Chapter 8, *Impacts Found Not To Be Significant*, of this DSSEIR discusses why it was concluded that Geology and Soils impacts of the 2012 Modified Project did not need to be analyzed in detail in this DSSEIR.

Hazards and Hazardous Materials

The operation of many facilities located in Existing PA 51 historically involved the use, storage, transfer, and disposal of hazardous materials. Section 5.5, *Hazards and Hazardous Materials*, of this DSSEIR summarizes information from the Base Realignment and Closure Business Plan for MCAS El Toro, dated May 2002, and other sources that informed the 2011 Certified EIR, as well as other relevant sources including the Final Finding of Suitability for Transfer (“FOST”) 1 through FOST 6 documents. As described in Section 5.5, *Hazards and Hazardous Materials*, of this DSSEIR, those six FOSTs document that all necessary remediation to protect human health and the environment has been completed on 3329.7 acres of the former MCAS El Toro. By contrast, at the time the 2003 OCGP EIR was certified, none of the property comprising the Proposed Project Site had been determined to have all necessary remediation complete. Information concerning remediation is subject to periodic change as additional information is generated from cleanup programs and activities that are being planned for, or are in progress. This information may be found at the MCAS El Toro Information Repository Collection located both at the Heritage Park Regional Library in Irvine, California, and at the former MCAS El Toro library.

4. Environmental Setting

The military mission at the former MCAS El Toro commenced towards the end of World War II and concluded with the closure of the air station in 1999. During the approximate 55 years of military operation, the air station activities, including the operation and maintenance of military aircraft and automotive vehicles, required the use of a large variety of hazardous materials. These hazardous materials consisted of petroleum-based products such as aviation and vehicular fuels, engine and lubricating oils, solvents, cleaners, paints, thinners, pesticides and herbicides; chlorinated/halogenated compounds, including trichloroethylene (“TCE”) and polychlorinated biphenyls (“PCB”), some radioactive materials; ordnance munitions; and propellants. Use of these materials typically generates hazardous byproducts and waste. A risk of explosion is associated with some of these materials. Oil-water separators (“OWSs”) were located throughout the former air station at various facility locations. Wastewater from aircraft wash areas and vehicle wash racks passed through OWSs to the sanitary sewer and storm drainage systems. Materials recovered from the OWSs were handled as hazardous wastes. Fuel storage areas also generated hazardous wastes when fuel storage tanks were cleaned and sludge was pumped out, or when fueling/defueling or loading/unloading operations resulted in spills. Permitted hazardous waste storage areas were located throughout the former air station and held hazardous, flammable, and unused chemical material and wastes. Ordnance munitions were used, handled, stored, and disposed of in Existing PA 51. Pesticides and herbicides historically were used at the former air station to control rodents, vectors, and weeds, as well as on agricultural parcels leased to farming operations. PCB transformers were in use throughout the former air station. (2011 SEIR, Section 5.4)

Although a total of 1,114 buildings have been surveyed, abated, and demolished since the 2003 OCGP EIR was certified, there are 180 buildings (both residential and non-residential) remaining at the former MCAS El Toro. Many of these remaining buildings and facilities may contain hazardous building materials such as asbestos-containing building materials (“ACM”) and lead-based paint (“LBP”). ACM is associated with respiratory ailments, including cancers, which are caused by inhaling asbestos fibers, as well as with gastro-intestinal disease associated with ingestion of ACM. Friable (brittle or readily crumbled) ACM is more readily released into the air than non-friable ACM. Lead is known to have adverse effects on the human body, particularly in children. Exposure usually occurs through ingestion and inhalation. Both ACM and LBP were in common use prior to 1980 when many of the structures in Existing PA 51 were built. Prior to demolition of any of the remaining buildings, all asbestos-containing materials (>1% asbestos), all assumed ACM (AACM), and all asbestos-containing construction materials (“ACCM”; >0.1% to 1% asbestos) will be abated. (2011 SEIR, Section 5.4)

Many of the existing public streets in the vicinity of the Proposed Project Site were probably used by vehicles transporting hazardous materials and wastes to and from Existing PA 51 and the region, which would have resulted in the potential for hazardous spills. Rail cars on the railroad tracks that traverse the Proposed Project Site may also have transported hazardous materials. Hazardous materials (jet fuel and natural gas) were also transported onto the former MCAS El Toro site by pipeline. There is an existing fuel pipeline in the railroad right-of-way along the southern boundary of the Proposed Project Site. (2011 SEIR, Section 5.4)

A description of the 2012 Modified Project’s impacts related to hazards and hazardous materials as compared to the 2011 Approved Project is included in Section 5.5, *Hazards and Hazardous Materials*, of this DSSEIR.

4. Environmental Setting

Hydrology and Water Quality

The 2011 Certified EIR described the Approved Project Site, within which is the Proposed Project Site, as being located within the San Diego Creek watershed, which includes the San Diego Creek, Peters Canyon Channel, and the tributaries to these water courses. The major drainage channels that traverse Existing PA 51 are the Marshburn Channel, Bee Canyon Channel, Agua Chinon Channel, and Borrego Canyon Channel. Serrano Creek and Upper San Diego Creek Channel traverse Existing PA 30 in the southern tip of the Proposed Project Site located south of the existing SCRRA rail tracks.

San Diego Creek and Upper Newport Bay are listed as impaired water bodies under Section 303(d) of the federal Clean Water Act. Accordingly, Total Maximum Daily Loads (“TMDLs”) are being established for the pollutants that have impaired these water bodies, and a list was included in the 2011 Certified EIR (see 2011 SEIR Table 5.7-2).

The 2011 Certified EIR also noted that the County of Orange and the City hold a National Pollution Discharge Elimination System (“NPDES”) permit for the storm drain systems, and that the State has issued a NPDES general permit relating to construction activities on sites of one or more acres in the area. Lastly, the flood control improvements associated with the SR-133 toll road were noted in the 2011 Certified EIR as having reduced the 100-year flood zone north and west of the Approved Project Site.

A further description of the 2011 Approved Project's approved hydrology and water quality plans and an analysis of the 2012 Modified Project's impacts on water quality and hydrology as compared to the 2011 Approved Project are included in Section 5.6, *Hydrology and Water Quality*, of this DSSEIR.

Mineral Resources

According to the 2011 Certified EIR, there are no known mineral resources on the Proposed Project Site. Most of the Proposed Project Site is mapped as Mineral Resource Zone 1 (MRZ-1) by the California Geological Survey, designating areas where available geologic information indicates there is little likelihood that significant mineral resources are present. The central and eastern parts of District 7 are mapped as MRZ-3, designating areas containing known or inferred mineral resources of unknown significance (CDGM 1994). No impacts to mineral resources were identified in the 2011 Certified EIR.

Chapter 8, *Impacts Found Not To Be Significant*, of this DSSEIR discusses why it was concluded that Mineral Resources impacts of the 2012 Modified Project did not need to be analyzed in detail in this DSSEIR.

Noise

As described in Section 5.8, *Noise*, of this DSSEIR, community noise levels are measured in terms of the A-weighted decibel (dBA). A-weighting is a frequency correction that correlates overall sound pressure levels with the frequency response of the human ear. The noise rating scale normally used in California (including Irvine) for land use compatibility assessment is the Community Noise Equivalent Level (“CNEL”). The CNEL is a time-weighted, 24-hour average noise level based on the A-weighted decibel.

Noise levels in the area of the Proposed Project Site are influenced primarily by motor vehicle traffic, which has the greatest impact on residential areas in Irvine. The 2011 Certified EIR described mobile noise sources from nearby freeways, roadways, rail facilities, and vehicle use at adjacent commercial

4. Environmental Setting

businesses, light industrial facilities, and agricultural lands as the dominant noise sources in the area of the Proposed Project Site. Stationary sources of noise included temporary and intermittent noise from construction activities and agricultural operations, noise associated with the industrial/business parks to the east and the business park and entertainment uses to the south.

A discussion of existing noise conditions in the vicinity of the Proposed Project Site and an analysis of the 2012 Modified Project's impacts on noise in the local environment as compared to the 2011 Approved Project are included in Section 5.8, *Noise* of this DSSEIR.

Population and Housing

There are no residents currently living on the Proposed Project Site. At the time of preparation of the 2003 OCGP EIR, there were 4,380 vacant group quarters and 1,209 vacant single-family residential units on the Proposed Project Site from the site's previous use as a Marine Corps base. However, as described in the 2011 SEIR, the majority of the units have been demolished and the remaining units are not fit for human habitation.

A description of the 2012 Modified Project's impacts related to population and housing as compared to the 2011 Approved Project is included in Section 5.9, *Population and Housing*, of this DSSEIR.

Public Services and Utilities

The Proposed Project Site is surrounded by existing urban development with existing public services and utilities. All public services are currently available to the Proposed Project Site. Law enforcement is provided by the Irvine Police Department. Fire and paramedic services are provided by the Orange County Fire Authority ("OCFA"). Schools are operated by the Irvine Unified School District ("IUSD") and Saddleback Valley Unified School District ("SVUSD"). Water and sewer service is provided by the Irvine Ranch Water District ("IRWD"). The 2012 Modified Project's impacts on the provision of public services and utilities as compared to the 2011 Approved Project are analyzed in Section 5.10, *Public Services*, and Section 5.13, *Utilities and Service Systems*, respectively, of this DSSEIR.

Transportation and Traffic

Major roadways bordering the Proposed Project Site are Sand Canyon Avenue to the northwest, Portola Parkway and Irvine Boulevard to the north, and Bake Parkway to the northeast. The Irvine Station is located adjacent to the SCRRA rail tracks, which traverse the Proposed Project Site and separate Existing PAs 30 and 51. The regional circulation system performance criteria applied in this area of Irvine are based on the criteria approved in the 2003 North Irvine Transportation Model ("NITM") Program Nexus Study. The criteria include components for arterial roadways, intersections, freeway/tollway ramps, and freeway/tollway mainline segments.

A description of the existing traffic conditions and the 2012 Modified Project's impacts on the traffic and circulation system as compared to the 2011 Approved Project is set forth in Section 5.12, *Transportation and Traffic*, of this DSSEIR.

4. Environmental Setting

Land Use and Planning

City of Irvine General Plan

Future development of all land within Irvine is guided by the City of Irvine General Plan, which underwent a comprehensive amendment on March 9, 1999. The City also amended its Housing Element in 2012. The most recent General Plan supplement, Supplement No. 7, reflecting subsequent amendments was issued in March 2009. Supplement No. 8 is expected to be adopted by the Irvine City Council in July 2012. The General Plan consists of a series of State-mandated and optional “elements” that direct the City’s physical, social, and economic growth: Land Use, Circulation, Housing, Noise, Public Facilities, Waste Management, Energy, Safety, Parks and Recreation, Conservation and Open Space, Seismic, Cultural Resources, and Growth Management. A full discussion of the 2012 Modified Project’s relationship to and consistency with the applicable policies and programs of the City’s General Plan is contained in Section 5.7, *Land Use and Planning*, of this DSSEIR.

Land Use Element: Per the City’s General Plan Land Use Element and as shown on General Plan Figure A-3, the entire Proposed Project Site consists of one land use designation, Orange County Great Park. General Plan Figure A-3 is shown in Figure 4-1, *General Plan Land Use Designation*, of this DSSEIR. The Orange County Great Park land use category ensures the development of the Great Park and other cultural and institutional uses at the former MCAS El Toro site along with a mixed-use community. This land use category includes habitat preservation, conservation and open space, parks and recreation, education, institutional, and other public-oriented land uses, as well as opportunities for the private development of agriculture, research and development, commercial, transit-oriented, and residential development.

Circulation Element: This element describes the nature and extent of the existing circulation network, and identifies trends, issues, and public policies relating to the development of a balanced, multimodal circulation system for Irvine. Four different types of systems compose Irvine’s circulation system: air, road, public transit, and trails. The Circulation Element is designed to:

- Create a hierarchy of roadways.
- Reinforce boundaries of planning areas.
- Respond to conservation, noise, air pollution, and wildlife preservation policies.
- Satisfy City General Plan and Strategic Business Plan objectives.

Housing Element: The Housing Element sets forth the City’s five-year strategy to preserve and enhance the community’s character, expand housing opportunities for all economic segments, and provide guidance for local government decision-making in all matters related to housing. The Housing Element consists of the following major components:

- ***Housing Needs Assessment.*** An analysis of the demographic, household, and housing market characteristics and trends
- ***Special Housing Needs.*** A discussion of persons with special circumstances, such as persons with disabilities, senior households, large households, single-parent households, the homeless, and farm workers.

4. Environmental Setting

- **Market and Governmental Constraints.** A review of potential market, governmental, and other constraints to meeting the identified housing needs.
- **Financial and Administrative Housing Resources.** An evaluation of the land, financial, and other resources available to address housing needs.
- **Housing, Goals Policies, and Programs.** A set of objectives and policies to address the housing needs.

Seismic and Safety Elements: These elements identify seismic and safety hazards and discuss strategies for reducing disasters. Due to the close relationship between the Seismic and Safety Elements, they are considered together in identifying the location and type of development permitted in the City, in developing building standards, and in providing services to Irvine residents, such as community safety programs that reduce the potential for loss of life, injuries, and property damage associated with natural and man-induced hazards. These hazards include fire, floods, geologic hazards, and aircraft operations.

Cultural Resources Element: This element recognizes the importance of historical, archaeological, and paleontological resources in Irvine and establishes a process for their early identification, consideration, and where appropriate, preservation.

Noise Element: Noise, as defined in this element, is generally unwanted sound which is considered unpleasant and bothersome. Unwanted noise can affect people both physically and psychologically. People are usually more sensitive to noise during the evening and nighttime because of reduced activities, fewer noise-emitting sources, and the need for rest. Land uses in which people are especially sensitive to noise include residential, convalescent and rest homes, hospitals, libraries, churches, and schools. This element provides guidelines for minimizing noise impacts from various sources.

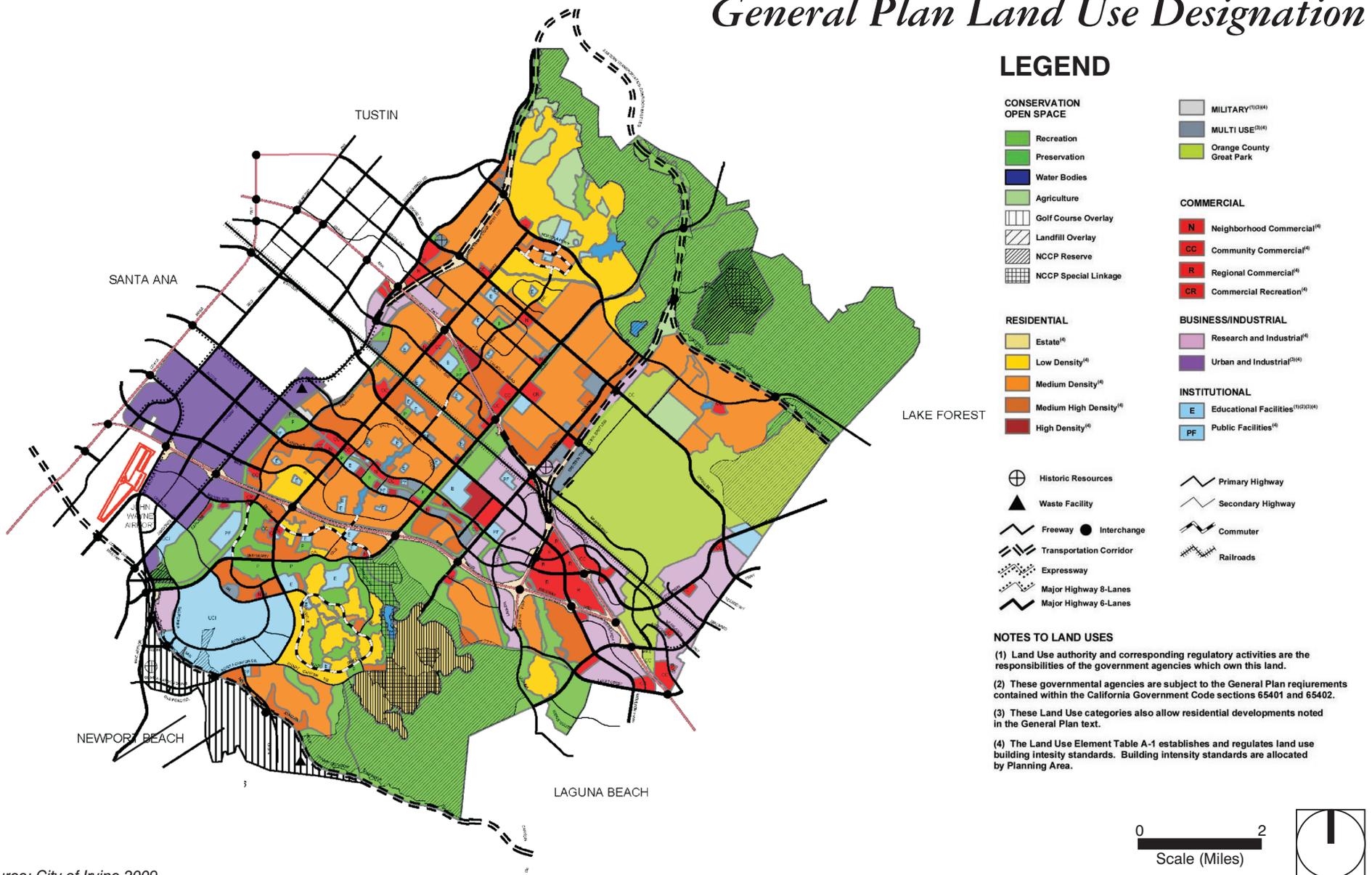
Public Services and Facilities Element: Public facilities are institutional responses to basic needs, such as health, education, safety, recreation, and worship. Examples of typical public facilities include churches, hospitals, and police stations. This element provides policies and criteria for the development of various types of community facilities, their relationships to one another, and their location to serve the needs and desires of the community.

Integrated Waste Management Element: This element serves to “encourage solid waste reduction and provide for the efficient recycling and disposal of refuse and solid waste material without deteriorating the environment.” The collection and disposal components of waste management are further described as follows:

- **Solid, Nonhazardous Waste.** Solid waste collection is usually accomplished by picking up refuse at the sources via collection vehicles, separating out recyclable materials at transfer stations, and then transporting the residual material. Solid wastes can be disposed of in several ways, such as sanitary landfill, recycling, waste-to-energy, and composting.
- **Liquid, Nonhazardous.** Liquid, nonhazardous wastes are usually collected through a sewer system and treated at a wastewater treatment facility, with the liquid waste being disposed of in the ocean or treated for reuse as reclaimed water. The resulting sludge can be disposed of in a sanitary landfill, sludge farm, or eliminated through incineration.

4. Environmental Setting

General Plan Land Use Designation



Source: City of Irvine 2009

Heritage Fields Project 2012 GPA/ZC SSEIR

0 2
Scale (Miles)



4. Environmental Setting

- **Hazardous Waste.** Hazardous wastes are required by State law to be recycled, treated onsite, or treated at a designated waste treatment facility whereby hazardous materials are neutralized prior to final disposal. Liquid hazardous wastes are either treated at the waste source to neutralize hazardous components and then placed in the sewer system, or are not treated and are collected in specifically designed collection vehicles for ultimate disposal.

Energy Element: This element provides a basis for long-range 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.

Parks and Recreation Element: A park is defined as any public or private land set aside for aesthetic, educational, recreational, or cultural use. The amount of parkland required for dedication is established at the time of subdivision approval through the implementation of the Irvine Subdivision Ordinance (Irvine Municipal Code Section 5-5-101 *et seq.*). Irvine's public park system is divided into two categories: community parks and neighborhood parks. Neighborhood parks are further divided into public or private parks. This element establishes guidelines for the orderly development of Irvine's park and recreation facilities.

Conservation and Open Space Element: This element provides long-term guidance for the preservation of significant natural resources and open space areas. The value of this element is threefold. First, it provides mechanisms for ensuring balance between the urban and natural environments in Irvine. Second, it recognizes natural and man-made hazards that could potentially affect the community if development were to occur. Finally, it provides specific policies and a program for preserving, managing, and using natural and man-made resources.

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 0.5 cent for a 20-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 County program and ensure that growth and development is based on the City's ability to provide an 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 in a single General Plan element.

City of Irvine Zoning Classifications

The City of Irvine Zoning Ordinance ("Zoning Ordinance") establishes zone-specific development regulations, including height limits, setback requirements, parking ratios, and other development standards. It is through the implementation of the Zoning Ordinance that long-term goals and objectives of the City's General Plan are implemented. The City establishes zoning regulations according to zoning designations as well as special development requirements for each Planning Area. The Proposed Project Site is located in Existing PAs 30 and 51.

As shown in previous Figure 3-5, *Existing Zoning*, Existing PA 51 consists of six zoning designations, which include: 1.1 Exclusive Agriculture, 1.4 Preservation, 1.9 Orange County Great Park, 3.2 Transit Oriented Development, 6.1 Institutional, and 8.1 Trails and Transit Oriented Development. Existing PA 30

4. Environmental Setting

consists of five zoning designations: 1.1 Exclusive Agriculture, 1.4 Preservation, 3.2 Transit Oriented Development, 4.3 Vehicle-Related Commercial, and 5.4B General Industrial.

- **1.1 Exclusive Agriculture.** This land use category applies to land designated as agriculture in the City's General Plan. Only agriculture and accessory uses are permitted in this category.
- **1.4 Preservation.** This land use category provides for the protection and maintenance of natural resources. These lands have been judged viable for permanent preservation in a natural state with little or no modification. Visually significant ridgelines, biotic communities of high significance, geological constraints and cultural resources are typical of lands in this category.
- **1.9 Orange County Great Park.** This land use category identifies lands suitable for active and passive recreational opportunities and activities for public use and enjoyment. The Orange County Great Park is a multi-destination facility that will include a variety of educational and recreational activities, including sports fields, museums, gardens, trails, wildlife habitat and many other public-oriented land uses.
- **3.2 Transit Oriented Development.** This land use category is consistent with the transit oriented development area within the Orange County Great Park land use category as defined in the General Plan. Transit oriented development encourages a diverse mix of higher-intensity commercial, office, residential and institutional uses in areas with high potential for enhanced transit and pedestrian activity. The category is intended to reduce reliance on the automobile by encouraging a compact mix of uses within the same site, including the integration of complementary uses within the same building. Transit oriented development must be designed to create a safe and pleasant pedestrian environment by providing amenities that support the use of transit, bicycles, and pedestrian facilities, and by providing for a safe, pleasant, and convenient walking experience.
- **4.3 Vehicle-Related Commercial.** This land use category applies to commercial areas which are designed primarily to provide for the sale and servicing of, and parts for, automobiles and recreational vehicles.
- **5.4B General Industrial.** This land use category reserves an area for uses such as manufacturing, warehousing and service industries.
- **8.1 Trails and Transit Oriented Development.** The Trails and Transit Oriented Development category allows for a mix of residential, commercial, recreational and education uses that support a multi-use environment, and which is complementary to the 3.2 Transit Oriented Development district located in Existing PAs 30 and 51 and to the Orange County Great Park land use category as defined in the General Plan.

4. Environmental Setting

4.5 ASSUMPTIONS REGARDING CUMULATIVE IMPACTS

Section 15130 of the CEQA Guidelines states that cumulative impacts shall be discussed when a project's incremental effect is cumulatively considerable. 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 2012 Modified Project alone. Section 15355 of the CEQA 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 the 2012 Modified Project when added to effects of past projects, other current projects and probable future projects in the vicinity.

CEQA Guidelines Section 15130 (b)(1) states 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 impacts analyses contained in this DSSEIR use a combination of both methods A and B, with the General Plan projections approach utilized most often, based on adopted growth forecasts. The General Plan projections include buildout of the adjacent cities' general plans or adopted growth projections, in addition to the City's General Plan. However, the General Plan projections approach has been supplemented in this DSSEIR where recent general plan amendments have been approved since adoption of the most recent growth forecasts, as further discussed below. The cumulative impacts analyses contained in this DSSEIR are based on the "Full Buildout of the General Plan" scenario (which includes General Plan buildout projections and approved projects not yet built). Therefore, the "Full Buildout of the General Plan Plus the 2012 Modified Project" scenario assumes maximum development of Irvine and the 2012 Modified Project, if the 2012 Modified Project were approved and pursued to completion.

The Land Use Element ("LUE") of the City's General Plan designates the general distribution and location of land to be used for residential, business, industry, open space and other types of land use. The 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 are allowed in each land use category. To further regulate the spatial distribution of planned growth, land use intensities are allocated throughout the City's various Planning Areas, as shown in Figure 4-2, *City of Irvine Planning Areas*, of this DSSEIR. This geographic planning framework is used in both the General Plan and the Zoning Code. Planning Areas are also used for organizing the City's development monitoring database.

4. Environmental Setting

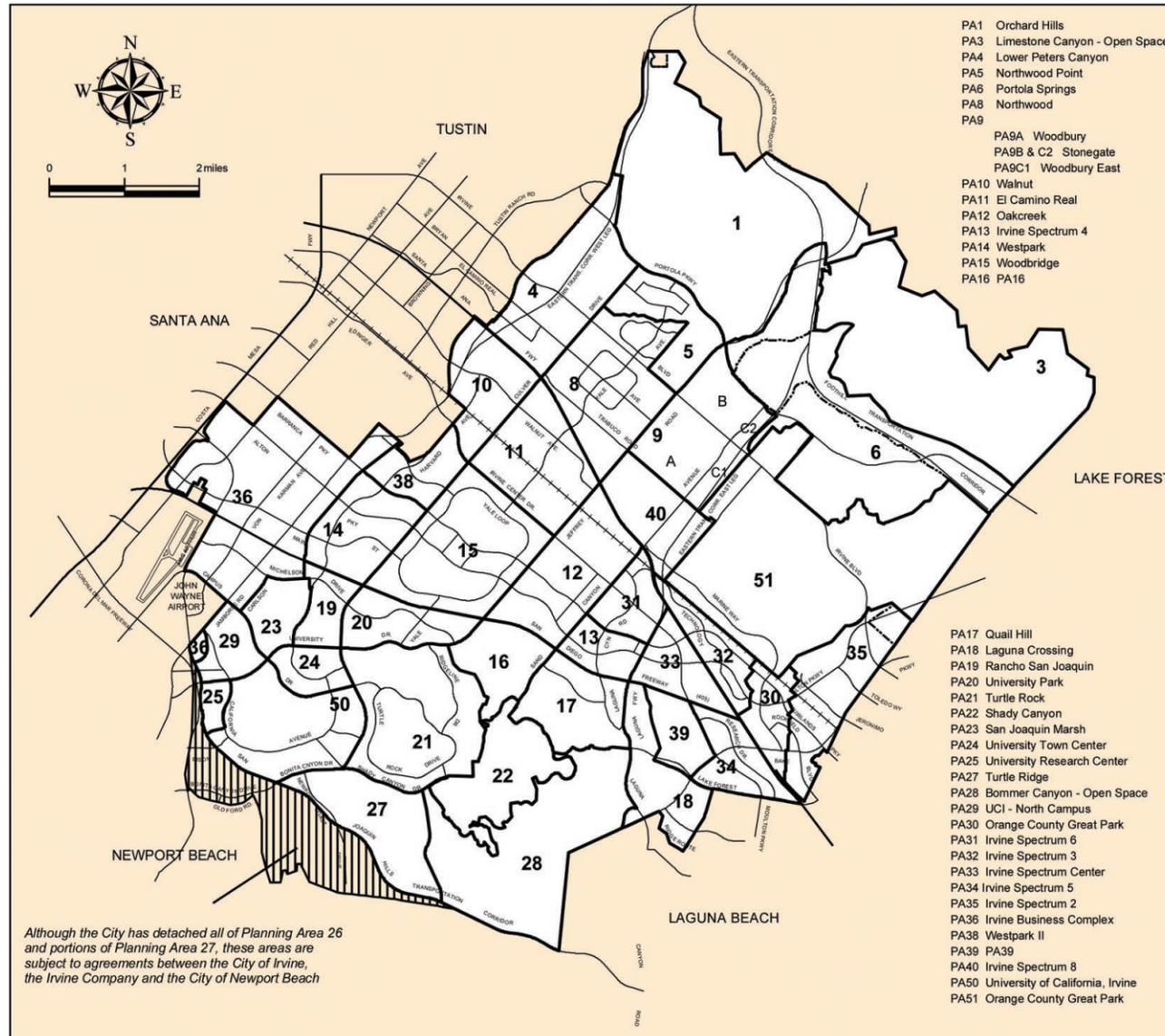
As shown in Table 4-1, *General Plan Land Use Summary by Planning Area*, of this DSSEIR, the adopted City of Irvine General Plan includes a total of 4,691,773 square feet designated Multi-Use, 95,775,944 square feet designated Industrial, 20,412,444 square feet designated Commercial, 19,043,066 square feet designated Institutional, and a total of 130,783 residential units, including 3,705 Density Bonus units allowed pursuant to State law. The City has adopted growth projections for planning horizon year post-2030 (representing full General Plan buildout), based upon the City's General Plan, and demographic forecasts adopted by the OCCOG in November 2006. The County of Orange, and 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. Orange County Projections (“OCP”)-2004 is the most current adopted growth projection that has been disaggregated into Traffic Analysis Zones (“TAZs”) for use in traffic studies in the City. 2006 and OCP-2010 data have been released since the adoption of OCP-2004; however, these projections have not been disaggregated into TAZs in the City's traffic model (ITAM).

The City has developed a socioeconomic-based traffic model, known as the Irvine Transportation Analysis Model (“ITAM”), for purposes of forecasting future traffic volumes associated with cumulative growth projections within Irvine and regionally. Regional growth outside of Irvine has accounted for traffic, air quality, greenhouse gas, and noise impacts through use of ITAM. The growth projections adopted by the City and surrounding area for ITAM are used for the cumulative impact analyses in this DSSEIR. The TAZs used in ITAM for the traffic analysis of the 2012 Modified Project utilize OCP-2004 and the City's General Plan projections, and reflect the following modifications to the OCP-2004 projections that account for more recent data relevant to growth projections in and near Irvine:

- 1) The General Plan Amendment and Zone Change (“GPA/ZC”) for PAs 1 and 9, including the Orange County Master Plan of Arterial Highways (“MPAH”) Amendment to delete the extension of Culver Drive.
- 2) The GPA/ZC for PA 40/12.
- 3) The GPA/ZC for PA 13 (Spectrum 4) and PA 31 (Spectrum 6).
- 4) The GPA/ZC for PA 18/33(Lot 109)/34/39.
- 5) The 2011 GPA/ZC for Existing PA 30/51 (Heritage Fields).
- 6) Spectrum Center Housing and Pacifica Office Towers projects in Irvine Center.
- 7) The tract maps for PA 6A, PA 6B, PA 9A including Woodbury Village Retail Center changes, PA 9B, and PA 18.
- 8) The Master Subdivision Map and tentative maps for Existing PA 30/51.
- 9) The Orange County Great Park Master Plan.
- 10) City of Lake Forest Opportunities Study Program.

4. Environmental Setting

City of Irvine Planning Areas



Source: City of Irvine 2009

4. Environmental Setting

*Table 4-1
General Plan Land Use by Planning Area*

<i>Planning Area¹</i>	<i>Multi-Use (sq. ft.)</i>	<i>Industrial (sq. ft.)</i>	<i>Commercial (sq. ft.)</i>	<i>Institutional (sq. ft.)</i>	<i>Dwelling Units</i>
1	0	0	132,500	0	4,088
3	0	0	0	0	0
4	0	1,423,000	990,000	494,430	8,131
5	0	0	0	0	3,830
6	625,000	0	175,000	0	5,460
8	171,591	0	1,114,600	188,174	8,301
9	450,000	0	0	0	8,832
10	119,850	2,822,921	887,269	39,950	2,883
11	71,174	0	567,712	467,203	5,420
12	470,000	3,603,281	1,105,000	344,440	4,260
13 ³	0	3,558,010	0	1,585,263	0
14	0	0	798,707	318,635	5,285
15 ³	440,158	0	936,789	680,349	9,627
16	0	0	0	0	0
17	0	1,060,000	150,000	0	2,666
18	0	0	0	0	757
19	0	0	294,390	9,374	1,784
20	0	0	173,542	153,143	2,809
21	0	0	0	568,921	4,250
22	0	0	0	0	400
23	0	0	0	112,230	1,040
24	654,000	0	68,953	25,850	2,757
25 ³	0	1,436,170	0	0	0
27	0	0	0	210,740	2,155
28	0	0	0	0	0
29	0	0	0	761,000	435
30	0	1,600,000	102,000	53,500	0
31	0	6,888,383	147,359	350,370	0
32	0	4,355,127	1,398,947	0	0
33	0	0	7,955,092	0	3,150
34	0	4,763,300	963,930	0	0
35	0	12,815,738	1,252,654	62,101	0
36	0	48,787,662	0	0	17,038
38	0	0	0	0	3,413
39	0	0	0	0	3,700
40	1,540,000	1,662,352	205,000	100,000	3,918
50	0	0	0	9,810,293	9,500
51	150,000	1,000,000	933,000	2,707,100	4,894
Unallocated	0	0	60,000	0	0
Total	4,691,773	95,775,944	20,412,444	19,043,066	130,783²

Notes:

1. Only Planning Areas that 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.
2. Includes an additional 3,705 Density Bonus units which are allowed City-wide pursuant to State law, and are located within Planning Areas 4, 15, 17, 36 and 51.
3. An additional 1,461,824 square feet of non-residential uses are allowed within Planning Areas 13, 15, and 25.

4. Environmental Setting

- 11) The East Orange GPA and associated MPAH Amendments.
- 12) City of Newport Beach General Plan 2006 Update.
- 13) Tustin Legacy Specific Plan.
- 14) 2007 Long Range Development Plan for the University of California, Irvine.
- 15) PA 33 Lots 105, 107, and 108 GPA/ZC.

This approach of using adopted local growth projections along with recent updates that incorporate the major projects such as those listed above is appropriate for evaluating cumulative impacts related to the 2012 Modified Project because it accounts for more recent data. This is especially true given the size and long-term nature of the 2012 Modified Project, which is better considered within the context of adopted growth projections rather than by attempting to list all reasonably foreseeable individual development projects that may occur nearby over the next several years.