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ENVISION LAKE FOREST

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LAKE FOREST’S GENERAL PLAN IDENTIFIES THE COMMUNITY’S VISION FOR THE FUTURE.

This Issues and Challenges Report summarizes key existing conditions in Lake Forest and explores major issues and challenges facing the City as it plans for the next 20 years. It is important to understand where the City’s at today so we can carefully plan for its future. Content in this report is based on information described in the Existing Conditions Report prepared for the General Plan Update. For additional background information on the topics included here, please review this companion document.

In early 2018, the City of Lake Forest embarked on an effort to update its General Plan, a long-term policy document which identifies the community’s vision for the future and provides a framework to guide decisions on growth, development, and conservation of open space and resources in a manner consistent with the quality of life desire by residents and businesses. The City of Lake Forest’s General Plan Update is a multi-year process that will include a comprehensive update of the General Plan, which sets a vision for the future of the city, and an Environmental Impact Report (EIR), which investigates the possible impacts of the General Plan Update policy changes to the surrounding physical environment.
To prepare a meaningful General Plan, existing conditions must be understood and documented and issues and challenges identified and explored. This Issues and Challenges Report summarizes key development patterns, natural resources, socioeconomic conditions, and environmental constraints in the city that must be considered when charting the course for Lake Forest’s future. The Issues and Challenges Report also presents key issues and challenges facing the City as it undertakes its General Plan Update. This report will be a resource for the community to refer to during and after the General Plan Update process in order to understand where Lake Forest has been and the challenges confronting the City as it strives to achieve its Vision and implement the General Plan. For more detailed information on the topics covered in the Issues and Challenges Report, we encourage you to review the comprehensive Existing Conditions Report available at City Hall and on the project’s website.

Over time, the city’s population and the physical environment in which its residents live and work changes. In order for the General Plan to be a useful document, it must be monitored and periodically revised to respond to and reflect changing conditions and needs. As such, a general plan should be comprehensively updated periodically to reflect current conditions and emerging trends in order to respond to changes as they occur. This effort is the first comprehensive update to the City’s General Plan since 1994, when the City’s first General Plan was adopted following the City’s incorporation. This General Plan provides the framework for long-term decision making in Lake Forest for the next 20 years. We appreciate the community’s participation in this project and look forward to a bright future for our City.

The City’s new General Plan will provide the framework for long-term decision making in Lake Forest for the next 20 years.

For more information, please visit: https://LakeForest.generalplan.org/

At the project website, you can access project newsletters and status reports, the Existing Conditions Report and other key deliverables, frequently asked questions, and updates on how to get and stay involved.
THE HISTORY OF LAKE FOREST

The history of human settlements in the Lake Forest area dates back as far as 8,500 years ago, when the area was inhabited by the Tongva (Gabrielino) and Acjachemen (Juaneño) tribes. Aliso Creek was recorded as the boundary between the Gabrielino to the northeast and the Juaneño to the southwest. At the time of Spanish contact, their territory encompassed a vast area stretching from Topanga Canyon in the northwest, to the base of Mount Wilson in the north, to San Bernardino in the east, Aliso Creek in the southeast and the four Southern Channel Islands, in all an area of more than 2,500 square miles.

Throughout the 1700s and early 1800s, the Spanish colonized California and established missions, presidios, and pueblos (including Mission San Juan Capistrano to the south). Juan Cabrillo was the first European to sail along the coast of California in 1542 and was followed in 1602 by Sebastian Vizcaino. The Spanish colonization of what was then known as Alta California began with the 1769 overland expedition led by Gaspar de Portolá with a crew of 63 men in order to explore the land between San Diego and Monterey. Portola and his expedition crossed the area north of Lake Forest in July 1769, naming the perennial creek that empties from the Santa Ana Mountains “aliso”, the Spanish work alder; an error on the Spanish identifier, since they were in fact, referring to the sycamore tree, which still grow along the creek. It should be noted that the Juaneño term for the creek was Seeveenga, meaning ‘at the sycamores’. However, historically, alder and sycamore trees were much more prominent, particularly in the riparian and floodplain areas where an oak-woodland habitat existed. During the Mission period, many of the trees along the creek, including alder, oak, sycamore, and other species were cut down for the construction of ships and structures, charcoal production, and other uses.

Following the Portolá Expedition, vast tracts of land were granted to the Missions. In 1821 Mexico won its independence from Spain and worked to lessen the wealth and power held by the missions. The Secularization Act was passed in 1833, appropriating the vast mission lands to the Mexican governor who then redistributed the former mission lands, in the form of land grants, to private owners.

One these Mexican soldiers was José António Fernando Serrano. Serrano was granted the 10,688 acre Rancho Canada De Los Alisos, or “glen of the alders” by that governor in 1842. The grant was enlarged in 1846 by a second grant. The two combined grants that made the rancho closely mirror the shape of present day City of Lake Forest. The boundaries of the land grant were El Camino Real to the west, Aliso Creek and Rancho Trabuco to the south, Santiago Road and the Santa Ana Foothills to the east, and Rancho San Juaquin and Lomas Santiago to the north.

Rancho Canada de Los Alisos, was centered on cattle husbandry which dominated and transformed the landscape. The area was long known as “El Toro” after the steers who roamed Canada de Los Alisos, whose loud, bellowing sounds could be heard from great distances.

Following the cession of California to the United States after the Mexican-American War, a claim for the Rancho was filed with the Public Land Commission in 1852 as required by the Land Act of 1851. The grant was eventually patented to Serrano in 1871 after much litigation.

A series of droughts affected the area from 1863 until 1883 causing the death of Serrano’s herds as well as the herds of the surrounding Ranchos. Serrano borrowed money at outrageous interest rates, using his land as collateral. Serrano eventually went bankrupt and was forced to mortgage and ultimately foreclose the ranch to J.S. Slauson, a Los Angeles banker.

Slauson subdivided the land into parcels and leased a portion of the rancho. When the drought subsided, more families settled into the Saddleback Valley. When Dwight Whiting purchased 10,000 acres of the former Rancho de Los Alisos in 1884, the area was already a stagecoach stop that connected San Diego and Los Angeles. Whiting intended to establish a new town inhabited by English gentlemen farmers, founding the town of Aliso City in 1887.

The young Aliso City was laid out just north of the railroad tracks, and some of those original streets remain on the map today. Front, Second, and Third Streets run parallel to the railroad tracks, while Orange, Olive, and Cherry Street run parallel to El Toro Road. The railroad “boom” never attached the hordes of people to Aliso.
City that its founders had hoped for and the name Aliso City was too similar to a nearby place, so the local residents of the area held a meeting in a freight room of the railroad depot and voted to permanently rename their small town to El Toro.

Another lasting contribution to the area was Whiting’s investment in the Eucalyptus craze. Whiting established a 400 acre of dense Eucalyptus tree forest located between present day Ridge Route, Jeronimo, Lake Forest and Serrano Roads. However, when it was discovered that the grain twisted and cracked as it dried, rendering it worthless for construction and furnishings the hopeful cash crop busted. While the failed project was later referred to as “Whiting’s Folly”, the Eucalyptus is now a ubiquitous characteristic of the present day Lake Forest, the city’s name originating from Whiting’s man-made forest.

In 1942, El Toro Marine Corps Air Station was established and was designated as a Master Jet Station and after World War II all United States Presidents landed in Air Force One at this base. After World War II the agricultural land was developed into residential, commercial, and industrial areas. In 1999 the Marine Corps Air Station El Toro was decommissioned.

In 1958, Whiting sold the Rancho to V.P. Baker and associates. In 1969, the Bakers sold a portion of the property to the Deane Bros. who later incorporated into the Occidental Petroleum, Land Development Division. The Dean Bros. started the residential development of the area known as Lake I and Lake II, developing what eventually became the Lake Forest Planned Community. During the 1960s, a steady supply of water brought in by aqueducts from Northern California, as well as from the Colorado River, facilitated the transformation of the Saddleback Valley from and agricultural community to the multi-city, suburban sprawl it is known as today. The City of Lake Forest was incorporated in 1991 and is named for the two man-made lakes within the city as well as the man-made Eucalyptus forest.
PROJECT BACKGROUND

A general plan is a “constitution” or “blueprint” for the future physical and economic development of a county or city. All future planning decisions and project approvals must be consistent with the general plan, including, but not limited to: Area Plans, Master Plans, subdivisions, public works projects, public services, and zoning decisions. A general plan has four defining features, as described below.

General
As the name implies, a general plan provides general guidance for future land use, transportation, infrastructure, environmental, and resource decisions.

Comprehensive
A general plan covers a wide range of social, economic, infrastructure, and natural resource issues. There are seven State mandated topics that general plans must cover including: land use, circulation, housing, conservation, open space, safety, and noise. Cities can also address topics of local significance in their General Plans, including economic development, community design, and health and wellness.

Long-Range
A general plan provides guidance on achieving a long-range vision of the future for a city or county. To reach this envisioned future, the general plan includes goals, policies, and implementation programs that address both near-term and long-term needs. The City of Lake Forest General Plan Update will look ahead approximately 20 years. At the same time, the General Plan will provide policy direction that allows for flexibility to respond to changes in the marketplace and in technology; positioning the City for long-term success.

Integrated and Coherent
The goals, policies, and implementation programs in a general plan must present a comprehensive, unified program for development and resource conservation. A general plan uses a consistent set of assumptions and projections to assess future demands for housing, employment, public services, and infrastructure. It has a coherent set of policies and implementation programs that enables residents, landowners, businesses, and industry to be more certain about how future planning decisions will be made and implemented.

PURPOSE OF THE ISSUES AND CHALLENGES REPORT

The Issues and Challenges Report provides a means of focusing the community’s attention on topics that have major policy implications as Lake Forest plans for its future. This includes considering how and where to grow while balancing the city’s economic development, sustainability, cultural and community identity, and natural resource needs. The Issues and Challenges Report summarizes and proactively utilizes information derived from the community surveying, Existing Conditions Report, and City staff observations.

The City anticipates that the Issues and Challenges Report will stimulate discussion and lead to confirmation and selection of courses of action to be reflected in the Policy Document, which will be prepared in collaboration with the General Plan Advisory Committee. All of the issues and challenges described in this report meet the following criteria: they can be influenced by the General Plan; they are subject to the legal authority of the City; the General Plan is an appropriate forum for addressing the issue; and they can be addressed as a policy issue.

The General Plan Update will address an extensive set of issues and challenges. Many of these topics are defined by State law, while others reflect local concerns and desires. This Report purposely does not reach conclusions or suggest the manner in which the City should proceed in the development of the General Plan. Rather, it provides a forum to facilitate discussion on important issues.

This Report discusses issues and challenges for eight key topic areas which match the Existing Conditions Report. Each topic area begins with a brief description of background information and a summary of the issues documented in the Existing Conditions Report. Following the background information, a series of Issues and Challenges are identified and described, along with a list of questions that frame the key policy considerations and choices. The key policy questions will be used to develop and evaluate General Plan alternatives and General Plan goals, policies, and action programs.
This section provides a broad overview of key socio-economic, market, and fiscal trends relevant to the Lake Forest General Plan Update. The primary purpose of economic analysis in the context of the Plan Update is to ensure that the goals, policies and land use alternatives are realistic and achievable over the long term. Specifically, the economic analysis will inform the following inter-related General Plan issues:

» Economic Development: What economic sectors have the strongest growth potential in the City? How can the General Plan help promote growth in these sectors, assuming the City is interested in this outcome?

» Land Use (Re-) Development Feasibility: What are the market prospects for various real estate development and investment projects at locations or districts in the City being considered for growth and/or change?

» Economic Impacts of Land Use Policy: What are the economic and market implications of various policies or land use regulations being considered as part of the General Plan Update?

» Fiscal Sustainability: How will various General Plan land use policies affect the long-term fiscal health of the City and its ability to effectively maintain city facilities and provide adequate public services and infrastructure?

Key socio-economic, market, and fiscal trends for the City of Lake Forest are analyzed and compared to its regional neighbors—or trade area. The Trade Area represents the immediate geography in which Lake Forest broadly competes for retail shoppers, home renters and buyers, commercial tenants, and office and manufacturing employers. This Trade Area includes the cities of Aliso Viejo, Costa Mesa, Irvine, Laguna Hills,
LAGUNA NIGUEL, MISSION VIEJO, RANCHO SANTA MARGARITA, SAN JUAN CAPISTRANO, AND TUSTIN. ALL ECONOMIC ACTIVITY RELEVANT TO LAKE FOREST IS NOT CONTAINED WITHIN THE TRADE AREA, HOWEVER, AS DESTINATIONS FOR EMPLOYMENT, SPECIALTY RETAIL, AND ENTERTAINMENT OUTSIDE THE BOUNDARIES ALSO PLAY A SIGNIFICANT ROLE IN REGIONAL ECONOMICS.

**DEMOGRAPHICS**

**POPULATION AND HOUSEHOLD GROWTH**

Lake Forest has experienced significant growth over the last 15 plus years due primarily to the annexation of Foothill Ranch/Portola Hills in the year 2000. The City grew by 37 percent between 2000 and 2016, far outpacing both the County (10 percent) and the Trade Area (24 percent). A majority of this growth was due to the annexation of Foothill Ranch/Portola Hills, while a portion of growth (since 2013) has been due to the development of areas previously under the flight path of former MCAS El Toro. According to the Southern California Association of Governments (SCAG) projections, going forward Lake Forest growth will more closely mirror that of the broader Trade Area. Specifically, SCAG projects that the Lake Forest population will grow by 16 percent between 2012 and 2040, from 78,500 to 90,700 people. Likewise, employment growth in Lake Forest is forecast to keep pace with that of the Trade Area and County, at roughly 25 percent over the 28-year period.

It is important to note that the SCAG projections are suggestive rather than determinative. It is likely that through a combination of market changes, catalytic projects, updated land use direction in the General Plan, and other factors, Lake Forest could capture either more or less of expected regional growth than forecasted by SCAG.

**AGE AND INCOME**

Since 2000, the age composition of Lake Forest, the Trade Area, and the County have shown a slight aging trend with the relative share of the under-19 cohort declining while the over-64 cohort has increased. Lake Forest residents in the over-64 cohort account for about 12 percent of the population while those under 19 years old made up 25 percent (similar to both the County and Trade Area). This compares to 2000 when the over 64 cohort accounted for about 9 percent of the population while those under 19 years old accounted for about 30 percent. This trend appears to reflect

Lake Forest, Age Distribution, 2016

<table>
<thead>
<tr>
<th>Age</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age 65 or Older</td>
<td>12%</td>
</tr>
<tr>
<td>Age 19 or Younger</td>
<td>25%</td>
</tr>
<tr>
<td>Age 20-34</td>
<td>44%</td>
</tr>
<tr>
<td>Age 35-64</td>
<td>20%</td>
</tr>
</tbody>
</table>

Source: US Census, ACS, Economic & Planning Systems

Lake Forest, Trade Area, Orange County, Housing Stock Distribution, 2016

<table>
<thead>
<tr>
<th>Housing Type</th>
<th>Lake Forest</th>
<th>Trade Area*</th>
<th>Orange County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single-Family Detached</td>
<td>Yellow</td>
<td>Yellow</td>
<td>Yellow</td>
</tr>
<tr>
<td>Single-Family Attached</td>
<td>Pink</td>
<td>Pink</td>
<td>Pink</td>
</tr>
<tr>
<td>Multifamily</td>
<td>Green</td>
<td>Green</td>
<td>Green</td>
</tr>
<tr>
<td>Mobile Home</td>
<td>Blue</td>
<td>Blue</td>
<td>Blue</td>
</tr>
</tbody>
</table>

Percentage (%) by Housing Type


Map of the Lake Forest Trade Area

The Trade Area consists of the cities of: Aliso Viejo, Costa Mesa, Irvine, Laguna Hills, Laguna Niguel, Mission Viejo, Rancho Santa Margarita, San Juan Capistrano, and Tustin.
an increase in “empty nester” households with residents “aging in place” combined with limited housing opportunities for young families. It is worth noting that the share of residents in their earning years (20-64) has remained stable in both Lake Forest and the Trade Area and County. Meanwhile, Lake Forest has a slightly higher proportion of residents in the 35-64 cohort relative to the Trade Area and County, generally the highest earning years.

Median incomes in Lake Forest are slightly above those for the Trade Area and well above the County as a whole, a condition that seems to have improved over time. As of 2016, Lake Forest’s median household income of $98,054 (in 2018 dollars) was 2 percent above the Trade Area median and 18 percent above the County median. Since 2000, Lake Forest household median income has increased by 36 percent in nominal terms but actually fallen in real terms (i.e. adjusted for inflation) by 6 percent, albeit as slower rate than in either the Trade Area (9 percent) and the County (9 percent). This decrease in real income over this period is consistent with national trends that in Orange County are also exacerbated by steep increases in housing prices, a major contributor to inflation growth, as measured by the Consumer Price Index (CPI).

Age and income distribution can have important implications on the long-term planning goals and outcomes associated with a General Plan. In an aging population, demand for senior-age-appropriate housing and services may increase. To the extent that “aging in place” leads to a lack of turn-over in the housing stock, it can depress property taxes (due to State law related to property assessed value). In regard to income distribution, the relative affluence of City residents provides a strong source of demand for retail, recreation, and related entertainment activities, with corresponding economic and tax benefits to the City. However, with an aging population, this demand for recreation and entertainment activities diminishes significantly.

**HOUSING SUPPLY**

The growth in Lake Forest housing supply has mirrored population trends, with a 39 percent increase in inventory since 2000, primarily as a result of the annexation of the Foothill Ranch/Portola Hills area. The City’s housing supply is strongly oriented to single-family homes with 71 percent classified as either detached or attached single-family. Notably, Lake Forest’s share of multifamily homes (25 percent) is well below that of Trade Area (35 percent) and the County (33 percent), although the proportion of mobile homes is slightly above average.

The rate of homeownership in Lake Forest is also relatively high with owner-occupied homes making up 55 percent of the total in 2016, compared with 47 percent in the Trade Area and 52 percent in the County. However, since 2000, the share of owner-occupied homes has decreased by 4 percentage points in Lake Forest.

Home values in the Trade Area and the County (based on recorded trans-
actions) have recovered from the 2008 recession to attain highs last reached in 2006 and 2007. Since 2000, the home value rankings of Trade Area cities remained essentially unchanged, indicating established regional tiers of home value with Lake Forest falling roughly in the middle of the set. Median home values in Lake Forest increased 149 percent between 2000 and 2016 (from $286,708 to $713,200).

In light of increasing housing costs across the region, emerging professionals and young families often seek ownership opportunities in condominiums rather than single-family detached homes that are most prevalent in Lake Forest, as discussed above. While Lake Forest already has slightly higher proportion of condos relative to total housing than the average for the Trade Area or County, a smaller proportion are actually available for sale on the market. Specifically, in the recent past, a consistent share between 6 and 8 percent of condominiums on the market in the Trade Area were located in Lake Forest, even though the City accounts for roughly 12 percent of the total condo supply. While Lake Forest has lower-cost condominiums compared to the Trade Area, sales prices are increasing at a faster rate, by 58 percent between 2013 and 2018 from a median sales price of $216,900 to $420,000 compared to 49 percent in the Trade Area from $306,300 to $539,500.

Unlike residential sale prices, median multifamily rents in Lake Forest, consistently fall well below those in the Trade Area, and trend closer to the County as a whole. Lake Forest’s median multifamily monthly rent of $2,248 is about 90 percent the Trade Area average, suggesting that the City is a less established multifamily rental market with a smaller inventory of modern and amenitized products. A majority of multifamily residential units were built prior to 1991, indicating an aging apartment housing stock. The Lake Forest housing mix, coupled with the very high median values, suggests that a diversification of housing options with lower priced condos and/or high-quality rental options would likely help the City retain or attract younger residents.

ECONOMIC COMPOSITION

With about 38,600 jobs, Lake Forest has the fourth largest economy within the 10 City Trade Area, accounting for about 7 percent of the total employment. Irvine is by far the largest employer in the Trade Area with almost half of the total jobs. The Trade Area overall accounts for about a 34 percent of the jobs in Orange County.

Lake Forest’s largest employment segments by share (in declining order) are manufacturing, professional services, administrative and support services, and health care. The most recent Economic Development Action Plan describes the City’s key industry clusters as “high-tech manufacturing, software development, apparel, professional services, healthcare, and medical manufacturing.” Of these, manufacturing and administrative and support services are larger than Trade Area and County average shares. Manufacturing contributes 15 percent of total City employment, which is a higher share than in either the Trade Area (9 percent) or County (10 percent). The generally lower pay scales among manufacturing relative to professional and technical services likely contribute to the City’s commute patterns (e.g., many of workers cannot afford to live in the City).

Between 2002 and 2015, Lake Forest added jobs at a faster rate (43 percent) than either the Trade Area (18 percent) or the County (12 percent). Much of the City’s recent job growth can be attributed to the emergence of sectors and employers that were not well represented only ten years ago. Specifically, the recent growth is largely attributed to gains in professional services (109 percent growth and 2,491 jobs, compared to 57 percent and 37 percent for the Trade Area and County), health care (158 percent and 2,319 jobs, compared to 93 percent and 66 percent for the Trade Area and County), and finance and insurance (118 percent and 1,499 jobs, compared to 27 percent and 9 percent for the Trade Area and County). With the exception of Panasonic, the City’s largest employer, all of the City’s top-10 employers have attained this position in the last ten years.

The appeal of Lake Forest to these sectors and employers appears to be attributable to a variety of factors, including convenient freeway access, modern business parks, and strong community amenities (e.g., trails, low crime, convenient retail amenities, upscale housing stock). In some cases, employers may be relocating in order to be closer to their workforce. Finally, the continued growth in nearby markets such as Irvine has provided spill-over benefits, attracting tenants seeking a lower cost and in some cases a more reclusive identity.
COMMUTE PATTERNS

Like many larger cities in Orange County, Lake Forest functions as both a bedroom community and employment hub with major commuting both into and out of the City for work. However, overall more of its employed residents commute to jobs out of the City than come in from elsewhere, resulting in a jobs housing balance and daytime population slightly lower than the Trade Area and County average. Specifically, the City has a jobs-to-household ratio of 1.40 compared to Trade Area and County ratios of 1.78 and 1.55 respectively. Due to the disproportionate out-commute pattern among employed residents, the Lake Forest “day-time population” declines to about 90 percent of the residential population, from 80,658 residents to a daytime population of 72,706 people. In other words, the number of people leaving Lake Forest during the day for work is greater than the number of people entering Lake Forest during the day for work, so the “day-time population” is slightly less than the total number of people living in Lake Forest.

Employed Lake Forest residents generally travel in a northwest direction towards employment nodes in Irvine and Los Angeles. Among these out-commuters, approximately 46 percent work within the Trade Area, within an approximate 30-minute drive. In-commuters come primarily from nearby cities like Santa Ana, Mission Viejo, and Irvine.
COMMERCIAL REAL ESTATE MARKET TRENDS

The commercial real estate sector represents a physical manifestation of the Lake Forest economy. Industrial buildings represent the most predominant commercial real estate product type in terms of square feet in Lake Forest, followed by retail, office, and so-called “flex” space.

Industrial and Flex Market
As noted, industrial and flex building space represents the most significant commercial real estate product in Lake Forest. Industrial buildings include those that accommodate users that assemble, process or manufacture products on-site as well as warehousing, distribution, and maintenance facilities. While flex space can include similar uses as industrial, it tends to be more adaptive, often accommodating office, medical, R&D, and even some sales.

Looking more closely at Lake Forest, steadily rising rents and falling vacancies since 2010 suggest a tightening market and potential demand for new additional space. Current trends suggest that this demand will likely favor more flex rather than traditional industrial formats.

Office Market
The Lake Forest office sector functions within a relatively mature and successful Trade Area market that is primarily anchored in Irvine. Within this context, Lake Forest has a relatively modest market share, with about 4 percent of the inventory. While rents in Lake Forest are below the Trade Area and County average due to its position outside the core node of activity, relatively low vacancy rates are indicative of a healthy market. In addition, both vacancy and lease rates have been steadily improving over the last five years.

Retail
Lake Forest maintains a sizable and relatively healthy retail sector that nonetheless functions within a mature and highly competitive Trade Area with some of the more successful shopping centers in Southern California. The retail Trade Area includes the full range of competitive formats, including major malls, “big box” and power centers, outlets, and more traditional community centers, many of which are relatively modern (e.g., built within the last 10 years). The retail inventory is distributed relatively evenly across the Trade Area with notable clusters along I-5. Moreover, there are two major centers, such as the Irvine Spectrum, just outside Lake Forest city boundaries. This competitive supply, both nearby and regionally, represents a significant market hurdle for any new retail development in Lake Forest.

The current low vacancies of 4.1 percent, 3.5 percent, and 3.7 percent for the City, Trade Area, and County respectively, coupled with three years of general rent stability, imply in general a market supply equilibrium. While low retail vacancies often signal an opportunity for new construction, a profound and ongoing structural shift in retail at the national level has partially undermined this traditional growth model. In particular, the growth of e-commerce presents a significant threat to “brick and mortar” retail expansion, particularly in categories such as consumer electronics, appliances, clothing and clothing accessories, and books and music.

Comparing the Lake Forest taxable sales by major product categories with the Trade Area and County can provide a useful benchmark for assessing relative strengths and weaknesses. The greatest Lake Forest sales “leakage” occurs in the categories of motor vehicles and parts, home furnishings, clothing, and general. The City’s only notably strong performance in the “Building Material, Garden Equipment and Sales” category is largely attributable to its two Home Depot stores. The overall retail leakage is primarily attributable to the existence of established retail nodes that already serve the Trade Area well.

Hotel
Lake Forest, and Orange County as a whole, continues to attract a large number of visitors, as indicated by the number and performance of hotels. The Orange County Visitors Association 2017 Annual Report concluded there were 49.5 million visitors who added $12.5 billion to the local economy, or 3.5 percent more dollars than in 2016. Tourist destinations such as Disneyland, Knott’s Berry Farm, the Anaheim Convention Center are all within a 30-minute drive of Lake Forest. As discussed in the following section, sales tax makes up 32 percent of City General Fund revenue and the transient occupancy tax makes up 8 percent of revenue.

Locally, hotels are a major contributor to the City’s economy and General Fund budget, boosting visitation, business travel and local taxes (e.g. hotel and sales tax).
There are currently ten hotels in Lake Forest, totalling about 1,121 room and 700,000 square feet. The largest hotel in the City is Staybridge Suites, which has approximately 188,900 square feet, three stories, and 128 rooms. Courtyard by Marriott, also over 100,000 square feet, has 4 stories and 156 rooms. Projects in the pipeline include a hotel at 23150 Lake Center Drive (proposed project), a Homewood Hampton hotel at 23021 Lake Center Drive, and a Springhill Suites by Marriott (under construction), all of which are near the cluster of hotels by the intersection of San Diego Freeway and Lake Forest Drive. Of the three hotels in the pipeline, two will be 67,000 square feet each and one will be 119,000 square feet.

As of 2018, the hotels in the Lake Forest pipeline represent 11.3 percent of the total inventory in the City. Meanwhile, the current Lake Forest hotel space accounts for 10.4 percent of the Trade Area inventory and 1.8 percent of the County inventory. The Trade Area has about 6.7 million square feet of hotel space and the County has 39.3 million square feet of hotel space.

The market occupancy among the selected hotels in Orange County was about 74.4 percent on average between 2010 to 2016. In the more recent years (2014 through 2016), the occupancy rate increased as tourism recovered after the Recession. The average daily rate over the seven-year period averaged $140 per night and the revenue per available room (REVPAR) was approximately $105. The average daily rate and REVPAR were the highest in 2016, at $165 and $127, respectively. Compared to Orange County in 2016, the average cost per room per night Lake Forest in 2018 is about $137, or $28 less than the County. The hotel in Lake Forest with the highest cost per room is the Hilton Garden Inn ($227), which is also the smallest hotel. Extended Stay America, which offers day rates as well as long-stay rates for week or month, has the lowest cost per room ($99) on a per-night basis.

FISCAL CONDITIONS

Understanding the fiscal implications of land use decisions, in terms of type, location, and amount can be an important part of a General Plan Update as these decisions affect the City’s fiscal sustainability. This section touches briefly on the City’s primary General Fund revenue and expenditures.

Trends in General Fund revenues and expenditures reflect the fiscal stability of the City’s core operations and services. General Fund revenues include all property, sales, and other taxes, as well as services fees and fines collected by the City on an annual basis. General Fund expenditures fund services such as public safety, public works, housing, economic development, administration, and other core City services.

Debt Free

By 2019, the City of Lake Forest will be completely debt free. It has scheduled to pay off its bond obligations in December 2018, and is one of the few cities in California that has zero unfunded pension liabilities.

General Fund Revenue Trends

The City’s General Fund revenues have increased steadily since 2010, reflecting improving economic conditions at both the local and national level. In nominal terms, total General Fund revenues have increased by 4.4 percent per year, or 35 percent since FY 2010/11, substantially above the average annual inflation rate of about 1.4 percent during this same period. In FY 2017/2018,
General Fund revenues totaled $46.8 million. Transient occupancy (or hotel) and sales tax showed particularly healthy growth during this period at nine and five percent annual growth respectively.

While these trends are encouraging, their implications for the City’s long-term fiscal sustainability are more ambiguous. Growth in real (e.g., adjusted for inflation) per capita General Fund revenues provide a better indication of the extent to improvements are attributable to normal inflation and population trends versus fundamental changes in the fiscal environment. In the case of Lake Forest, real per capita revenues increased by a more modest 2 percent per year (or 15 percent over the six-year period). This level of growth is more in line with the generalized economic recovery that occurred during this same time frame and as such may not be sustainable over the long-term. Consequently, substantial improvements to existing City service levels may be difficult, particularly if these services rely on budget factors that increase faster than inflation.

In terms of the composition of General Fund revenue, property taxes, which includes traditional property taxes as well as motor vehicle in-lieu backfill and property tax lighting district fees, represent the single largest contributor as roughly 37 percent of revenue followed by sales tax at 32 percent. Together, property tax, sales tax and TOT represent about 77 percent of the FY 2017/18 General Fund revenues. Key factors affecting potential growth in these three sources is described below.

**Property Tax** (including traditional property tax, motor vehicle in-lieu backfill, and property tax lighting district fees): Lake Forest receives an average of about 4 percent of total property tax revenue collected within the City limits, a relatively modest allocation by California standards. While the General Plan Update can consider opportunities to grow the City’s assessed value, its faces strong limitations in changing the property tax rate or tax allocation factor which is regulated by State law. Growth in property assessed value is limited to 2 percent per year absent a market transaction or physical alteration. Consequently, annual growth in property tax above 2 percent generally requires new development or investment property and/or turn-over from market transactions. While the General Plan can have a direct impact on the former, it’s influence on the latter is more nuanced.

**Sales Tax:** As noted in the prior section, while Lake Forest has a relatively healthy retail sector, substantial Trade Area competition and national changes in consumer behavior stemming from e-commerce and other factors, will affect long-term growth. Nevertheless, the General Plan can provide a variety of incentives, tools, and policies that can help this sector strategically adapt to these external forces.

**Transient Occupancy Tax:** As noted, the City’s TOT has shown marked improvement of the last six plus years. While Lake Forest is not a major tourist destination, it does receive significant visitors associated with Saddleback Church. Going forward, additional growth in hotel stays will require improved visitation (from both tourism and business travel) combined with appropriate investments in the accommodation sector. The General Plan can play an important role in both through land use policy, initiatives that expand the local economy, and the provision and support of attractive in community amenities.

As recorded in the City’s budget, the Property Tax category also includes Motor Vehicle In-Lieu Backfill, which is determined by the State of California and tied to vehicle license fees. The City has little ability to influence the revenue collected through motor vehicles fees, but it can continue to rely upon this revenue stream for future budget years.
ISSUES AND CHALLENGES

After decades of relatively strong growth as a traditional suburban community, Lake Forest appears to be experiencing increased market opportunity and pressure for more attainable, infill development, including the reuse and repositioning of vacant and/or under-performing properties. Lake Forest has experienced significant growth over the last 15 plus years due to the development of areas previously under the flight path of former MCAS El Toro. Like many maturing cities, as Lake Forest approaches the buildout of developable land, new growth will need to be accommodated primarily at smaller infill sites, including through reuse and/or intensification. Strong regional growth trends, combined with the City’s desirable community attributes (as described further herein), suggest that if built (and assuming the City is interested in this outcome), these infill opportunities are likely be well received in the market (i.e. there appears to be strong consumer demand for a variety of real estate product types).

Aging Demographic

Lake Forest’s relatively affluent and slightly older demographic has important implications for General Plan goals and outcomes, particularly in terms of the type and level of public services and facilities that can or should be provided. Lake Forest has experienced a gradual aging trend over the last 15 years, paralleling County-wide trends, with the over-64 age cohort growing and the under-19 cohort declining as a proportion of the total population. This trend appears to reflect an increase in “empty nester” households with residents “aging in place” combined with limited housing opportunities for young families and older adults looking to downsize. Meanwhile, the City median household income of about $98,000 (in 2018-dollars) was 2 percent above the Trade Area and 18 percent above the County. These trends may have implications for the City’s long-term planning, with increased demand for senior-age-appropriate housing and services (the City is currently constructing a dedicated Senior Center). Relatively affluent households may represent a strong source of demand for retail, recreation, and related entertainment activities, with corresponding economic and tax benefits to the City. To the extent that “aging in place” predominates, a lack of turnover in the housing stock can depress property taxes (due to State law related to property assessed value).

Policy Questions:

» Is it important for the City to attract new younger residents?
» What types of housing options best serve young adults looking to make Lake Forest their home?
» What types of housing options are desired by the City’s aging population?
» Are there any new services or programs that the City should consider to better serve the needs of youth or seniors?
» Can an older Lake Forest resident looking to downsize into a smaller home with less maintenance and responsibility find housing options in the community?
**Housing Costs**

Strong community attributes and home values suggest that variety of housing types would likely be well received in the marketplace, including opportunities for upscale, higher-density products that could help retain and attract younger residents, “empty-nesters”, and seniors. While Lake Forest median home values fall below the Trade Area (but above the County), they have fully recovered from the Recession and continue on an upward trajectory. Meanwhile, relatively low rents for multifamily units reflect a less established market for this product type and an opportunity for newer and better inventory. The City’s low share of multifamily units (22 percent compared to 36 percent in the Trade Area) make it difficult to accommodate new residents who desire high quality housing but who may not be able to afford the high cost of single-family, for-sale units. But the City’s strong community attributes, such as low crime, goods schools and strong recreation facilities make it a highly attractive residential market for a variety of housing types.

**Policy Questions:**

» Should young people who grow up in Lake Forest be able to find attainable housing options in the community?

» Does Lake Forest’s high housing costs negatively impact the City’s ability to attract and retain businesses?

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**Jobs**

Lake Forest has grown significantly as a jobs center within the Trade Area with the entry of a number of large corporate entities over the last 15 years. Between 2002 and 2015, Lake Forest added jobs at a faster rate than either the Trade Area or the County. Most of this growth came in manufacturing and in white-collar jobs for professional services, finance and insurance, professional management, and healthcare. Recent corporate arrivals such as Panasonic and loanDepot, each with over 1,000 employees, were drawn to Lake Forest by its convenient freeway access, suburban business parks with slightly lower costs than neighboring cities, attractive residential lifestyle, and appealing physical setting. The City seems to have several emerging economic niches related to scientific and medical instruments, recreation and entertainment, and home improvement/hardware that could be further cultivated.

**Policy Questions:**

» What key industries does Lake Forest wish to attract over the next 10 to 20 years?

» What programs should Lake Forest prioritize to attract new businesses?

» What policies are appropriate in the General Plan to support an environment that is conducive to economic vitality and business growth?
**Commercial Real Estate**

Lake Forest contributes a relatively small share of the Trade Area’s inventory of commercial real estate, but new development on the I-5 south of the I-405 indicates the growing attraction of Lake Forest and its environs for new work space. Since 1977, the Trade Area underwent a great amount of large business center development mostly centered in Irvine near the intersection of the I-405 and I-5 freeways and around the Irvine train station. Lake Forest has served as a smaller and more peripheral market with higher proportion of industrial rather than office uses. However, in recent years, the direction of growth has extended south, generally in keeping with population expansion. Most of this more recent growth is at a smaller scale, reflecting the availability of smaller parcels. As Lake Forest continues to prove itself an attractive location for corporate entities, this southward vector of office development should further benefit the City.

**Policy Questions:**

» Are there vacant or underdeveloped lands in the City suitable for attracting the mix of businesses that Lake Forest desires?

» Are adequate sites designated to accommodate a variety of new businesses, particularly if a business has specific siting needs?

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**Retail Market**

Strategic and proactive efforts will be required to preserve and expand the Lake Forest retail sector given a variety of challenges facing traditional “brick and mortar” outlets and significant concentrations of highly competitive shopping venues in the Trade Area, including several just outside the City boundaries. While the Lake Forest retail inventory has expanded at a faster rate than the Trade Area over all since 2006, the City still performs below the norm in terms of per capita sales, square feet, and occupancy. The biggest sources of sales leakage are likely the Irvine Spectrum and auto centers in Irvine, Tustin, and Mission Viejo. However, as the need for retail has declined in the face of e-commerce, smaller-scale growth may be available in differentiated environments that provide shoppers with a unique sense of place and retail programming. In addition, many brand retailers still seek to maintain a physical presence in larger and affluent communities due to the cross-marketing benefits with on-line shopping (aka the “click and mortar” approach).

Going forward, Lake Forest, like many other non-destination-oriented communities, will need to continue pursue a variety of strategies to maintain, let alone grow, its retail sector. One approach to combating on-line retail sales erosion is for developers and retail operators to create services and environments that cannot be replicated online. This can be accomplished by retail environments with a strong sense of place, special programming to encourage repeat visits, and other forms of in-person experience. Walkable environments can offer such differentiation and may grow even more attractive as a greater share of professional, retail, and social activity otherwise takes place virtually. This strategy would also likely support the “Shop and Dine Lake Forest” program promoted in the City’s Economic Development Action Plan.

**Policy Questions:**

» What types of shopping experiences should be introduced or expanded in Lake Forest?

» What types of retail should Lake Forest offer in order to compete in the regional economy against local major retail centers?

» What types of new shopping and dining experiences are desired by Lake Forest residents?
**Fiscal Sustainability**

While the City’s General fund experienced strong revenue growth over the last six years, corresponding to improvements in the regional and national economy, a significant expansion in City services and facilities will likely require strategic fiscal management. The City’s General Fund revenues increased by 4.4 percent per year in nominal dollars, or 35 percent since FY 2010/11, substantially above the average annual inflation rate of about 1.4 percent and population growth of 0.9 percent, during this same period. While encouraging, the growth in real per capita General Fund revenues of about 2 percent per year is more in line with the generalized economic recovery that occurred during this same time frame and as such may not be sustainable over the long-term. Consequently, substantial improvements to existing City service levels may be difficult absent structural changes, particularly if these services rely on budget factors that increase faster than inflation.

**Policy Questions:**

» Are there new policies or actions that the City should include in the General Plan to ensure that both new and existing development receive adequate services?

» Should the City focus on any specific types of development or locations for development in order to generate increased revenues?

» How will various General Plan land use alternatives or policies affect the long-term fiscal health of the City and its ability to effectively provide adequate public services and infrastructure?
Lake Forest features a variety of housing opportunities, quality schools, conveniently located neighborhood parks, shopping centers, and transportation facilities which come together to create a special sense of place and quality of life Lake Forest residents cherish. The City provides a variety of recreational opportunities, including sports leagues and activities, youth programming, and senior activities and services which add to the City’s sense of community.

Lake Forest is located in southern Orange County, nestled between the Santa Ana Mountains to the northeast and Interstate 5 to the southwest. The Foothill Transportation Corridor (State Route 241) runs through the northern part of Lake Forest just south of Foothill Ranch and Portola Hills. Regional mobility is important because Lake Forest’s location affords residents, visitors and employers convenient access to all parts of Orange County and its vast array of amenities and activities.

The community enjoys extensive hillside views of the foothills which provide Lake Forest with a scenic backdrop and visual reference points. Major employers include Panasonic Avionics, Loan Depot, and Oakley Inc. Lake Forest is a desirable place to do business and is well-recognized as an ideal location for small and large organizations to locate in southern California.
EXISTING LAND USE

When discussing land use, it is important to distinguish between existing land uses that reflect on-the-ground development and planned land uses. The Southern California Association of Governments (SCAG) maintains a database of existing “on-the-ground” land uses on individual parcels for cities and counties within its jurisdiction, including for the City of Lake Forest. For the purposes of the City’s General Plan Update, the SCAG on-the-ground land use data is used as a starting point for establishing baseline conditions. As reflected in the map to the right, the City of Lake Forest is primarily composed of single family residential development and open space and recreation opportunities.

Vacant land identified on the map and in the pie chart below includes residential neighborhoods currently under development within the City. The City has very little vacant land that is not already approved for development. Upon preparation of the General Plan Update Environmental Impact Report, all baseline conditions will be updated to accurately reflect on-the-ground development at the time environmental impacts are analyzed.
Existing Land Uses

- **Baker Ranch**
- **Foothill Ranch**
- **Portola Hills**

- **Single Family Residential**
- **Multi-Family Residential**
- **Mobile Homes and Trailer Parks**
- **Parks**
- **Mixed Residential**
- **General Office**
- **Commercial and Services Facilities**
- **Education**
- **Industrial**
- **Transportation, Communications, and Utilities**
- **Mixed Commercial and Industrial**
- **Open Space and Recreation**
- **Agriculture**
- **Vacant**
- **Water**

Sources: SCAG; City of Lake Forest; Caltrans.
Map date: August 23, 2018.
CURRENT LAND USE

The City of Lake Forest General Plan Land Use Map designates land uses within the City. Residential land uses are described based on allowable density and nonresidential land uses are described based on allowable intensity. The term “density” refers to the population and development capacity of residential land. Density is described in terms of dwelling units per net acre of land (du/net acre). Development “intensity,” refers to the extent of development on a parcel of land or lot: the total building square footage, building height, the floor area ratio, and/or the percent of lot coverage. Intensity is often used to describe nonresidential development levels; but in a broader sense, intensity is used to express overall levels of both residential and nonresidential development types.

The Current General Plan land use designations include a reference to maximum density and intensity, depending on the use. For various reasons, many parcels in the community have not been developed to their maximum density or intensity and, in the future, maximum development as described in the General Plan can be expected to occur only on a limited number of parcels.
Current General Plan Land Uses

Legend
- Low Density Residential
- Low-Medium Density Residential
- Medium Density Residential
- High Density Residential
- Commercial
- Professional Office
- Mixed-Use
- Business Park
- Light Industrial
- Public Facility
- Community Park/Open Space
- Regional Park/Open Space
- Open Space
- Lake
- Transportation Corridor

Sources: City of Lake Forest; Caltrans. Map date: August 23, 2018.
The City boundary on the aerial photos above represents the City of Lake Forest’s current City boundary in order to create a consistent point of reference. Please note that the City’s boundary was expanded in the early 2000s as a result of the annexation and incorporation of the Foothill Ranch and Portola Hills communities located north of the Foothill Transportation Corridor.
COMMUNITY CHARACTER

The community character of Lake Forest is defined by its special natural environment, family-friendly residential atmosphere, and gathering places like the Sports Park and new Civic Center. People are attached to their communities through the look and feel of a place; some things which are tangible while other qualities are intangible. The City’s General Plan will consider the character of Lake Forest and identify goals and policies to maintain the City’s high quality of life while looking towards the needs of future generations. Some key considerations related to the formation of Lake Forest’s community character include its elevation/topography, the history and quality of its residential neighborhoods (including its Planned Communities), and its visual resources.

Elevation

The elevation in Lake Forest traverses almost 1,500 feet, starting from a low point along I-5 of 260 feet above sea level and rising to 1,752 feet towards Saddleback Mountain. The elevation change is more gradual between I-5 and 241, changing just 500 feet over this large area, while the greatest elevation change occurs north of 241 where elevations rise quickly. This environment creates beautiful views to the mountains and ocean throughout the community. However, the City’s unique and undulating topography can pose challenges for nonmotorized circulation and when planning for safety in land use development. Careful attention must be paid to preserving and protecting the City’s natural environment and recognizing the opportunities that come with changing elevations and slopes. These qualities can also make walking and biking along certain steep routes difficult, a topic which is discussed in greater detail in Chapter 4. Figure 2-4 illustrates the City’s topography, Figure 2-5 highlights its elevation, and Figure 2-6 illustrates areas of significant slope percentages.

Residential Areas and Planned Communities

As described earlier in this Chapter, the City of Lake Forest is primarily a residential community with well-established neighborhoods. Lake Forest is home to a number of Planned Communities which significantly shape the City’s existing land use pattern and built environment through their own individual community design, monumentation, architecture, and amenities. Early in the area’s development, residential neighborhoods first appeared in the El Toro area near I-5. While many residential areas in Lake Forest have homeowners associations (HOAs), many of the community’s oldest neighborhoods do not. Residential areas in Lake Forest with and without HOAs are illustrated in Figure 2-8. Some residential areas without HOAs may be multi-family for-rent developments that have their own private maintenance organization.

Age of Structures

Most of the City’s housing stock located south of Trabuco Road was developed in the 1950s-1970s, with the oldest homes being located primarily around Muirlands Boulevard and El Toro Road. North of Trabuco Road, including the areas of Foothill Ranch and Portola Hills annexed by the City in the early 2000s, were built later as residential development moved up and away from I-5 and easier access to these new planned communities was provided by the Foothill Transportation Corridor. Older housing units are more likely to be in need of repair and focused maintenance and neighborhood enhancement goals, policies, and implementation strategies.
ISSUES AND CHALLENGES

The City of Lake Forest faces a diverse set of issues and challenges as it plans for future growth and development. Many issues related to land use planning are deeply connected to the regional context. Key land use topics which will inform the City's General Plan Update are explored in this section.

Regional Population Growth

As reported in the 2017-2018 Orange County Workforce Indicators Report, commissioned by the Orange County Business Council and Orange County Development Board, Orange County’s population is projected to increase by 400,000 people between now and 2060. That increase is roughly equal to the current populations of the cities of Irvine, Laguna Niguel, and Mission Viejo—combined. As the City updates its General Plan, it must ask itself, what role it can and should play in the future growth of Orange County.

Policy Questions:

» What strategies can the City take to meet its mandated role in housing the region’s expected population growth?

Homeownership and Rental Costs

The County’s population is also getting older and housing prices in the County, and in the City of Lake Forest, continue to rise. In 2016, the median home value in Lake Forest was $713,000; based on standard bank borrowing requirements, a household would need to earn approximately $166,000 per year to afford the City’s median home price. For the same time period, the median multi-family monthly rent in Lake Forest was $2,248/month. This monthly rent would require an annual household income of approximately $82,000 per year. Strong home values are certainly an asset to the City of Lake Forest. However, Lake Forest must also be aware that limited workforce housing options could impact the City’s ability to attract and retain employers who are increasingly looking to local in places with young talent pools.

Policy Questions:

» Is the housing stock in Lake Forest diverse enough to allow people who work in the City to live in Lake Forest?

» What competitive advantage does Lake Forest’s housing stock have over its neighbors?

» What role does the City’s housing supply plan in attracting the types of businesses and employers desired by the community?

Housing Site Identification (RHNA)

California General Plan law requires each city and county to have land zoned to accommodate a fair share of the regional housing need. The share is known as the Regional Housing Needs Allocation (RHNA) and is based on a Regional Housing Needs Plan (RHNP) developed by councils of government. The Southern California Association of Governments (SCAG) is the lead agency for developing the RHNP for the area that includes Orange County and the City of Lake Forest. As part of the region’s planning efforts, SCAG must allocate housing units within the region consistent with the development pattern included in the 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS or Plan).

The City’s Housing Element, adopted in January 2014, provides for the accommodation of the 2014-2021 RHNA that has been assigned to Lake Forest. The total housing growth need for the City of Lake Forest identified for the 2014-2021 planning period is 2,727 units. The City of Lake Forest is not required to ensure that actual development to accommodate the RHNA occurs; however, the City must facilitate housing production by ensuring that land has the appropriate General Plan and zoning designations and that unnecessary development constraints have been removed.

Housing element law requires that cities update their Housing Elements on a specific schedule based on certification status; given that the City has a currently certified Housing Element, updates to the Housing Element are not included in the City’s comprehensive General Plan Update. However, the General Plan must remain internally consistent, meaning that the direction provided in the City’s Housing Element regarding how the City plans to accommodate future housing needs must be considered and reflected in the other elements of the General Plan.

Policy Questions:

» What types of new housing should be developed in Lake Forest to meet the needs of the City’s current and future residents?

» Where should new housing be located?

» Are the areas of the City suitable for mixed-use development where new housing is built near existing or new commercial development and transportation options allowing for a walkable environment?
Regional Consistency in Lane Use Planning/Sustainable Communities and Climate Protection Act (California Senate Bill No. 375)
The Sustainable Communities and Climate Protection Act (SB 375) of 2008, also known as the California Anti-Sprawl Bill, was signed into law on September 30, 2008. The SB 375 regulation provides incentives for cities and developers to bring housing and jobs closer together and to improve public transit. The goal behind SB 375 is to reduce automobile commuting trips and thus help meet the statewide targets for reducing greenhouse gas emissions set by AB 32. The legislation required Metropolitan Planning Organizations (MPOs) to look at the interface between land use and transportation; it also requires MPOs to develop strategies to reduce vehicle miles of travel (VMT), which is a precursor to greenhouse gas emissions (GHG). The Southern California Association of Governments adopted its Regional Transportation Plan/Sustainable Communities Strategies (RTP/SCS) in 2014 and has kicked-off the public outreach campaign for its 2018 update. As a member of SCAG, Lake Forest must update its General Plan to create consistency between the policy direction included in the RTP/SCS and the General Plan.

Policy Questions:
- What changes can the City make to its land use plan or General Plan goals and policies to best implement SB 375?
- How can the City create opportunities for its residents to drive fewer miles?
- Do there need to be improvements to regional circulation systems (OCTA, Caltrans, etc.) in order for the City to implement SB 375?

Enhancing Community Character
“Community character” has multiple meanings. Community character refers to the physical appearance of a city. Community character also refers to the design of the community. Designing neighborhoods and commercial corridors to encourage social interaction, through walking and bicycling opportunities, public gathering areas, as well as focal areas (i.e., parks and neighborhood commercials districts), supports social interaction and encourages a sense of community. The economic, social, and cultural aspects of a community, which is the active participation of its citizens and businesses in community affairs and activities, is another important part of community character.

Communities that provide a sense of place through recurring design elements, celebration of historic resources, and recognition of cultural amenities. These features that protect and promote community character also attract visitors and may generate tourism. For the General Plan Update to ensure that Lake Forest remains unique and retains its appeal, those characteristics that distinguish Lake Forest from other communities must be identified and, where appropriate, retained or incorporated into new development.

The General Plan can enhance the sense of community in Lake Forest by connecting neighborhoods and commercial areas to the community’s key focal points, including the new Civic Center, parks, recreation, open space, trails, schools, and other destinations. Community design policies and decisions related to the circulation network can support improved connectivity and community, as can encouraging buildings that are oriented and scaled to the pedestrian.

Policy Questions:
- Are there special roadways or intersections that should be enhanced to improve the City’s identity?
- What special places or buildings should be identified and celebrated in the City?
- Are there specific features or design elements that need to be incorporated into new and existing development or into a specific type of building?
Focus Area Identification
Lake Forest is generally built-out, meaning that any new development will mostly occur in infill locations and through the redevelopment of underutilized sites. This implies that either A) land uses and development densities within the City intensify in order to accommodate new growth, and/or B) new growth will replace existing underdeveloped sites through redevelopment and reinvestment.

Determining the location and amount of growth, and prioritizing infill and targeting new growth on the limited vacant lands within the City boundaries, will be necessary to ensure orderly and sustainable land use change. However, the location and amount and intensity/density of future growth is an important consideration to ensure that any potential changes to Lake Forest’s land use pattern happens in an orderly way that reflects the community’s preferences while also providing for a range of development types that support the local economy while mitigating impacts.

Based on the feedback received from the public as part of the Vision and Values Outreach Program, five focus areas which require special land use attention have been identified. These areas include:
• Foothill Ranch Towne Centre
• Rail Corridor
• El Toro Road Corridor
• Lake Forest Drive Corridor
• Lake Forest Civic Center Area

Policy Questions:
» What types of uses are envisioned for each of the five focus areas described on the following pages?
» Are there other areas of the City where land use change is possible or desired?

Foothill Ranch Towne Centre
The major themes that were expressed regarding the Foothill Ranch Towne Centre include:
» Better utilize the parking lots.
» Add Mixed-Use development.
» Walkability is important.
» There is interest in night time entertainment uses.
» Higher Density Residential development may be appropriate in some areas.
» This should be an area where residents can work, shop, and live all in close proximity.

The top 5 land-uses that participants saw as being most appropriate for this area include: Retail, Entertainment and Hospitality, Mixed-Use Development, Public Facilities, and Office uses.
El Toro Road Corridor
The major themes that were expressed regarding the El Toro Road Corridor include:

» It should remain primarily retail focused;
» Desire for more restaurants;
» Desire for more entertainment uses;
» Strong potential for higher density residential and mixed-use;
» Circulation is a challenge, possibly add a pedestrian bridge.

The top 5 land-uses that participants saw as being most appropriate for this area include: Retail, Entertainment and Hospitality, Mixed-Use (high density mixed-use and low density mixed-use), and Residential uses.

Lake Forest Drive Corridor
The major themes that were expressed regarding the Lake Forest Drive Corridor include:

» It should remain primarily office and retail focused;
» Desire for shopping centers to be renovated;
» Potential area for entertainment uses;
» Potential for some higher density residential and mixed-use;

The top 5 land-uses that participants saw as being most appropriate for this area include: Retail, Entertainment and Hospitality, Office, Mixed-Use (both high and low density), and Residential uses.
Lake Forest Civic Center Area
The major themes that were expressed regarding the Lake Forest Civic Center Area include:

» The area should remain a business park with the potential for mixed-use.
» The inclusion of some retail could reduce vehicle trips
» There is an interest in adding public facilities (Library & Post Office)
» This area could serve to connect Serrano Creek and additional Parks/Open Space
» Some residential may be complimentary to employment hubs

The top 5 land-uses that participants saw as being most appropriate for this area include: Public Facilities, Office, Retail, Mixed-Use (including a residential component, and Light/Clean Industrial uses.

Rail Corridor
The major themes that were expressed regarding the Rail Corridor include:

» Clean up industrial uses but remain an employment area with Retail uses;
» Potential for residential uses;
» Connection to Heroes Park:
» Potential train stop mentioned.

The top 5 land-uses that participants saw as being most appropriate for this area include: Retail, Light/Clean Industrial, Office, Public Facilities, Mixed-Use, and Residential.
The Current General Plan includes focused direction on how the City can provide and ensure coordinated land use and transportation planning in the region, while still promoting a balanced and functional circulation system that satisfies the needs of all users including bicyclists, pedestrians, transit users and persons with disabilities. Like many cities in southern California, the residents of Lake Forest primarily rely on their automobile to get around.

According to data obtained from the 2012 California Household Travel Survey, in Lake Forest, 92 percent of all resident trips for all trip purposes were by motor vehicle, 2 percent by transit, 0 percent by bike, and 6 percent by walking. For school trips, a significantly higher proportion of trips (24 percent) are accomplished by walking compared to the average for all trip types.

Currently, only 2 percent of trips in Lake Forest are made using transit. However, over 48% of Lake Forest survey respondents rated improving public transit as either important or very important. This shows broad support for improving non-vehicular access within the City. When survey participants were asked to list the three most important issues the city should address, 42% of respondents listed walking paths/trails, 11% listed bike lanes, and 11% listed transit. Improving the transit network and access to transit could have a huge impact on the traffic levels and congestion of local streets. In a separate question, survey participants were asked to rank important issues. Improving traffic flow and reducing vehicle congestion around the city was seen as the second most important issue for the City to address- with over 250 respondents ranking it as either their first, second, or third choice. Leveraging public transit, bicycle, and pedestrians mobility options could help do just that.
VEHICULAR CIRCULATION

Like so many cities throughout southern California, most Lake Forest residents have access to a vehicle and rely on driving to accomplish most daily tasks, including commuting to and from work and purchasing goods and services. In general, safe and efficient vehicular circulation is a priority for City residents and increased congestion is often cited as a primary concern.

Operations on 75 roadway segments in the City were determined on a daily traffic volume basis. Operations were assessed and assigned a level of service (LOS) letter grade ranging from LOS A to LOS F (from better to worse congestion), with LOS A signifying free-flow traffic and LOS F signifying operations that are over roadway capacity.

All roadway segments operate at an acceptable LOS with the exception of a small segment on Lake Forest adjacent to the 5 freeway.

PEDESTRIAN AMENITIES

Pedestrian facilities include sidewalks, crosswalks, pedestrian signal infrastructure, curb ramps, and streetscape amenities. Sidewalks are generally provided on both sides of arterial and local streets across the City. A small number of sidewalk coverage gaps exist, including at the Lake Forest Drive overpass at I-5, Ridge Route Drive railroad underpass, Trabuco Road bridge at Aliso Creek, and El Toro Road north of Trabuco Road. Sidewalks in the City are in good condition, free of cracks or uplifts. Marked crosswalks are consistently provided at intersections across the City. Shading is provided across the City in the form of abundant tree landscaping along arterials and local residential streets. While there is a gradual elevation increase in the City heading northeast, the City is generally flat without steep grade changes at the pedestrian level. Locations with noticeable grade increases include the Bake Parkway and El Toro Road railroad overpasses, the Lake Forest Drive bridge at I-5, and Glenn Ranch Road.

In addition to on-street facilities, Lake Forest residents enjoy several off-road hiking-only and multiuse trails. These include the Serrano Creek Trail and other trails in the Foothill area. In addition, pedestrians using these trails are supported by several bicycle/pedestrian bridges and underpasses across the City.
BICYCLE FACILITIES

Bicycle circulation in Lake Forest is supported by an existing network of multi-use paths, and access to regional open space. The City’s existing bicycle facilities include:

» A Class I facility running along Aliso Creek between Santiago Canyon Road and Laguna Niguel.
» Class II bicycle lanes on the City’s arterial roadways including Portola Parkway, Alton Parkway, Bake Parkway, Ridge Route Drive, Trabuco Road, Jeronimo Road, Muirlands Boulevard, Los Alisos Boulevard, and Rancho Parkway.
» Class II bicycle lanes on portions of the City’s arterial roadways including Lake Forest Drive (Muirlands Boulevard to Portola Parkway), Toledo Way (Bake Parkway to Lake Forest Drive), and Rockfield Boulevard (Ridge Route Drive to Cavanaugh Road and El Toro Road to Los Alisos Boulevard.
» The Serrano Creek Trail, an unpaved multiuse trail running from Bake Parkway to El Toro Road.
» Several unpaved multiuse trails in the Foothill area northeast of SR-241.
» Non-motorized bridges and underpasses along the Aliso Creek bikeway, Serrano Creek Trail, and other paths and trails.

TRANSIT SERVICE

OCTA provides bus service and shared-ride paratransit service within Lake Forest and throughout Orange County. It connects Lake Forest with several nearby cities (including Santa Ana, Mission Viejo, Irvine, and Laguna Hills) and several regional destinations such as John Wayne Airport and Irvine Station. OCTA also provides paratransit service through its ACCESS Service.

In addition, transit riders can access Metrolink and Amtrak commuter rail services in nearby Irvine and Mission Viejo. There are also a number of park and ride lots in and adjacent to Lake Forest, most of which provide access to OCTA bus routes.

COLLISIONS

Collisions primarily occurred on Lake Forest’s arterial roadways, with fewer collisions occurring on local residential streets. Three fatalities occurred in close proximity to each other on Santiago Canyon Road along the City’s northeastern boundary, with another three fatalities on Lake Forest Drive. Other fatalities occurred on El Toro Road, Bake Parkway, Trabuco Road, Muirlands Boulevard, and Rockfield Boulevard. A noticeable concentration of collisions occurred on El Toro Road approaching I-5.

Bicycle and pedestrian collisions are primarily clustered in the City’s southern portion, with several occurring along Lake Forest Drive, El Toro Road, Jeronimo Road, and Muirlands Boulevard.

The most common collision types were broadside collisions (29 percent), rear end collisions (27 percent), side-swap collisions (16 percent), and collisions with fixed objects (16 percent). Collisions that result in a fatality or severe injury made up a significant portion of vehicle-pedestrian collisions (26 percent), overturned vehicle collisions (24 percent), broadside collisions (10 percent) and head-on collisions (10 percent).

The top five primary contributing factors to these collisions included unsafe speed (20 percent), improper turning (17 percent), drive/bicycling under the influence of drugs or alcohol (14 percent), traffic signals and signs (13 percent), and automobile right of way (12 percent). Driving on the wrong side of the road and pedestrian violations were two other primary contributing factors for fewer collisions, but these collisions had a larger portion of severe injury and fatal crashes.

PARKING

Parking is viewed as a significant problem throughout much of Lake Forest, which has led the City of Lake Forest to establish the Traffic and Parking Commission. The Traffic and Parking Commission advises the City Council on issues relating to parking and the safe and efficient movement of traffic.
ISSUES AND CHALLENGES

There are a number of issues and challenges relating to mobility in Lake Forest.

**Complete Streets**

California’s Complete Streets Act (Assembly Bill 1358) took effect in 2011 and requires local jurisdictions to plan for land use transportation policies that reflect a “complete streets” approach to mobility. “Complete streets” comprises a suite of policies and street design guidelines which provide for the needs of all road users, including pedestrians, bicyclists, transit operators and riders, children, the elderly, and the disabled. From 2011 onward, any local jurisdiction—county or city—that undertakes a substantive update of the circulation element of its general plan must consider “complete streets” and incorporate corresponding policies and programs. In 2010, OPR released guidelines for compliance with this legislation which provide direction on how circulation elements can best plan for a variety of travel modes such as transit, walking, bicycling, and freight.

Complete streets, also known as multimodal networks, provide a range of safety, health, and environmental benefits. Multimodal transportation networks can lead to safer travel for all roadway users as travel routes are considered that reduce the occurrence and severity of vehicular collisions with pedestrians and bicyclists. Complete streets also allow people to walk or bike as a viable transportation option which promotes an active lifestyle by increasing physical activity rates. Reducing the amount that people drive by increasing the opportunity for walking, bicycling, and transit also reduces vehicle emissions and improves air quality.

**Policy Questions:**

» Do opportunities exist for increased regional collaboration with entities such as OCTA, Caltrans, etc. to fund bicycle and pedestrian improvements in Lake Forest?

» Should the City emphasize local leadership in pedestrian and bicycle facility planning, or prioritize regional collaboration on these issues?

» Should the City dedicate staff resources to lead City efforts to secure additional funding for improvements?
Shift from LOS to VMT Thresholds

The passage of SB 743 changes transportation impact analysis as part of CEQA compliance including the elimination of auto delay, level of service (LOS), and other similar measures of vehicular capacity or traffic congestion as a basis for determining significant impacts. The Governor’s Office of Planning and Research (OPR) has issued draft guidance for this update to the CEQA guidelines, and recommends use of Vehicle Miles Traveled, or VMT, as the preferred CEQA transportation metric. As such, the City will need to set new thresholds for transportation impacts based on VMT.

Intersection LOS has several benefits:

» It has been used for over 30 years and therefore has allowed the transportation impacts for all projects in Campbell to be evaluated on a consistent basis
» The City has been able to obtain funding for roadway improvements from sponsors of projects that have significant intersection impacts

Intersection LOS also has some limitations:

» It only evaluates roadway performance from the drivers’ perspective; it does not capture potential impacts on transit, bicycle, and pedestrian modes
» Mitigation measures to improve LOS typically include widening intersections which has negative effects on other modes and can induce more vehicle travel causing even greater level of congestion
» It discourages infill development

VMT is typically calculated using travel demand models, which estimate the total number and length of vehicle trips for a given area. OCTA will be preparing baseline VMT estimates to help cities in Orange County to develop VMT thresholds. The VMT calculation method for individual projects has yet to be determined.

Policy Questions:

» Should the General Plan include goals and policies regarding intersection and roadway LOS? Is the City interested in still maintaining LOS standards for informational (non-CEQA) purposes or solely adopting the OPR recommendations?

Congestion Management

Traffic volumes and congestion on Lake Forest streets have been increasing in the last several years in direct response to employment and population increases within the region. Since Lake Forest is surrounded by communities that make independent land use decisions, it will continue to experience growth in traffic, even if it does not add new jobs, residents, or retail space.

Lake Forest should continue to support improvements to freeways (specifically I-5 and the Foothill Transportation Corridor) which are designed to carry regional traffic. Mobility within Lake Forest can be enhanced through improved pedestrian connections, an expanded bicycle network, more-efficient transit service, use of emerging technologies, and changing travel behavior. New pedestrian and bicycle facilities are being planned as part of the City’s General Plan update and other City and OCTA-sponsored studies. New transportation services, including Transportation Network Companies (TNCs) like Uber and Lyft, can supplement traditional bus service, often at lower costs to the operator, however future pricing and costs associated with TNCs are unknown, therefore current pricing may not be representative of future costs. These technologies, and others, are discussed in the next section.

Policy Questions:

» Should traffic throughput be prioritized over local access and land use needs on major arterials in Lake Forest?
» How should the City prioritize circulation needs around schools?
» Does the community have a higher tolerance level for congestion in certain areas of the City versus others?
**Heavy Vehicles**

Accommodating freight and goods movement is an important part of Lake Forest's circulation network. Heavy vehicles put more wear and tear on the street network than passenger vehicles, so truck routes must be properly planned and communicated.

The Surface Transportation Assistance Act (STAA) of 1982 defines a network of state facilities as truck routes which accommodate large trucks. STAA-designated truck routes in Lake Forest consist of I-5 and SR-241. Other STAA-designated truck routes in proximity to Lake Forest include Interstate 405 (I-405), SR-133/Laguna Canyon Road, and SR-73.

**Policy Questions:**
- Are there any existing roadways where truck travel currently interferes with the safe and secure operation of the roadway facility?
- If a change in land use is desired for certain focus areas of the City, will new truck routes need to be designated to facilitate the movement of goods to these locations?

**Parking Considerations**

Like most cities, Lake Forest has more parking spaces than vehicles. Driveway and garage spaces in residential neighborhoods, parking spaces provided at stores, office buildings, and community buildings, all contribute to Lake Forest's total parking supply. Providing parking spaces is expensive when land and construction costs are considered, especially since many are empty for large portions of each day. The number of spaces provided at each building is based on City code requirements, which are based on parking demand rates that incorporate historic vehicle ownership levels, land use patterns, and parking characteristics.

As autonomous vehicles become more prevalent from 2020 through 2050, vehicle ownership rates will likely decrease, as autonomous vehicles owned by Transportation Network Companies (TNCs) become an affordable and convenient alternative to vehicle ownership. Autonomous vehicles owned by TNCs will be operated almost continuously, picking up, conveying, and dropping off passengers, rather than sitting idle in a parking space. Moreover, privately-owned autonomous vehicles will be able to drop off their users and park themselves, which will reduce the need to provide parking next to every destination and allow parking supply to be shared at the neighborhood level. Therefore, City parking policy needs to accommodate these changes in vehicle ownership rates and changes in parking characteristics.

**Policy Questions:**
- Are there areas of the City with specific parking concerns, and if so, what strategies could the City employ?

**Transportation Demand Management**

One type of solution to roadway congestion is to reduce the amount of traffic traveling on roadways, especially during peak commute hours. Transportation Demand Management (TDM) is the name used to describe various measures and strategies to reduce traffic, primarily by converting drive-alone or single-occupancy vehicle (SOV) trips to walking, biking, rideshare, or transit trips. TDM plans are becoming more prevalent and TDM strategies and measures are constantly changing with new technologies such as ridesharing, smart phone applications, bike share, car share, and TNCs.

Some Transportation Demand Management strategies may include such things as:
- Providing high-occupancy vehicle (HOV) lanes;
- Collaborating with employers to offer employee benefits for hosting vanpools, carpooling, and taking transit;
- Eliminating or reducing free parking;
- Collaborating with employers to allow more flexible work schedules and/or telecommuting;
- Improving public transportation;
- Offering accurate real-time arrival information for transit options;
- Offering free or reduced transit passes; and
- Educating people about their transit options

**Policy Questions:**
- Are there strategies that the City of Lake Forest could promote to encourage people to use alternative modes of transportation?
- Are there sufficient vanpool/carpool opportunities in Lake Forest?
- What role, if any, can the City’s major employers play in transportation demand management?
New Technologies
Transportation and mobility services are constantly evolving, with emerging technologies having the potential to significantly change travel behavior and the transportation system. While some new technologies are already being implemented and cities are beginning to understand their effects and implications, others are still in the future and thus require regular monitoring and studying. The following are the major recent and upcoming changes to the transportation system:

» Bicycle and Scooter Sharing Programs. Bike sharing services provide short-term bicycle rentals and are typically associated with bicycle travel in busy areas (such as downtowns and business districts) and improve access to transit stations. These services are becoming increasingly popular in Southern California; examples of local agencies with bike sharing services include LA Metro, City of Santa Monica, and City of West Hollywood. In Orange County, UC Irvine initiated its ZotWheels bike share program for students and faculty in 2009. In addition, scooter sharing programs have recently been implemented in various locations in Los Angeles County, such as the introduction of the Bird system in Venice and West Los Angeles.

» Transportation Network Companies (TNCs). TNCs, such as Uber and Lyft, provide easy door-to-door transportation services through the use of smartphone apps. While data on TNC use (especially for commute trips) is still limited, these services are becoming a significant part of the transportation system; some jurisdictions and agencies have begun incorporating TNCs into their transportation systems, such as including ample pick-up and drop-off areas at transit stations and mobility hubs. Lake Forest is currently within areas serviced by Uber and Lyft. In addition, OCTA has begun partnering with Lyft to provide rideshare subsidies to fill gaps in fixed-route service in locations such as South Orange County.

» Car Sharing Programs. These programs allow users to borrow a car for short periods of time (for example, to buy groceries for an hour) and provide increased mobility and flexibility for people who may not want to or cannot pay for vehicle ownership. Car sharing services are already successfully in place in several California cities.
Microtransit. Microtransit services are privately-operated transit services that can often overlap with public transit routes. A relatively new form of transit, microtransit benefits from high flexibility in determining routes, fares, and making other service changes. Examples of microtransit services in cities include Leap in San Francisco, and Bridj in Boston and Washington, D.C.

Autonomous Vehicles (AVs). AVs, or self-driving vehicles, are projected to be available on the consumer market in the next five to ten years. AVs will initially represent a small percentage of vehicles on the road due to normal fleet turnover rates, but are expected to represent 50 percent of the vehicle market within 25 years. Once driverless vehicles represent the majority of vehicles on the road, operational roadway efficiency is expected to improve since AVs are able to communicate with one another. This is likely to lead to improved LOS and higher VMT (anywhere from five percent to 35 percent depending on demographic trends, economic factors, and other technologies). AVs have the potential to improve roadway safety for vehicle passengers, bicyclists, pedestrians, and other users. AVs can also change land use patterns since parking needs may decrease. However, during the transition period when AVs are mixed with the standard vehicle fleet, jurisdictions need to carefully plan and design facilities to reduce conflicts and allow for flexibility in zoning designations.

Policy Questions:

- Are bikesharing programs and/or electric scooters desirable small vehicles in Lake Forest?
- The General Plan Update is an opportunity to integrate new and upcoming technologies into the City’s Mobility Element. These include bicycle sharing programs, transportation network companies (TNCs) such as Uber and Lyft, and autonomous vehicles (AVs).
- Is the City interested in establishing goals and policies to encourage or limit these transportation services?

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The city’s air quality has a tremendous impact on overall quality of life in Lake Forest. In an effort to identify and understand how these issues impact the city, this section addresses air quality, greenhouse gases, and climate change.

AIR QUALITY

Lake Forest is located within the South Coast Air Basin (SCAB), which is comprised of a single air district, the SCAQMD, and consists of Orange County, the western portion of Los Angeles County, the southwestern portion of San Bernardino County, and the western portion of Riverside County. It is the nation’s second largest urban area and California’s largest metropolitan region. Air quality in this area is determined by such natural factors as topography, meteorology, and climate, in addition to the presence of existing air pollution sources and ambient conditions. The combination of topography, low mixing height, abundant sunshine, and emissions from the second-largest urban area in the United States give the Basin the worst air pollution problem in the nation. Air quality for all pollutants in the Basin continues to improve, with recent years registering the lowest levels since measurements began over six decades ago. During the 1960s, maximum 1-hour concentrations were well above levels considered safe for public health — more than four times the current health standard. However, in recent times, the maximum measured concentrations are less than one-third of those peak concentrations. Moreover, long-term ozone air quality trends continue to show an overall improvement. The number of days above both the one and eight-hour standards has also declined dramatically.
CLIMATE CHANGE AND RESILIENCY

Over the next century, increasing atmospheric greenhouse gas (GHG) concentrations are expected to cause a variety of changes to local climate conditions, including sea level rise (SLR) and storm surge, increased riverine flooding, and higher temperatures more frequently (leading to extreme heat events and wildfires), particularly inland. These climate variables (and associated threats) are projected to impact critical assets throughout the region, including regionally significant highways, water and wastewater treatment plants, electricity substations, technology campuses and other employment centers, agriculture, homes, vulnerable populations, and ecosystems. Because local governments largely determine the shape of development through land-use plans, regulations, and implementing decisions, they play an important role in developing climate change strategies including resiliency planning and adaptation. Guidance about the steps involved in an adaptation planning process and adaptation tools are available to local governments by recent documents such as the California Adaptation Planning Guide. Potential impacts are described below.

Over the next century, increases in GHG concentrations are expected to cause a variety of changes to local climate conditions.

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**Sea-Level Rise (SLR):**
Rising sea levels will directly impact coastal development, infrastructure, and habitats. Local impacts of SLR include temporary flooding (especially in combination with storm surge). Sea level rise will have the greatest impact on coastal communities, however, impacts of SLR on Los Angeles County would impact the whole region. Sea level rise is expected to impact the size of the City’s floodplains, the frequency of flooding along major and minor waterways, and the ability of the drainage system to function well.

**Wildfires:**
Wildfires are a result of conditions affected by interactions between primary variables (precipitation, temperature) and other factors. Wildfires are unplanned, natural occurring fires and pose a great threat to life and property, particularly when they move from forest or range and into developed areas. Climate change is projected to increase the frequency of wildfire events, the extent of burn areas, and the length of wildfire seasons. Fire risk increase rates are highly localized, and the city may experience local impacts from increased wildfires in hillside areas and other impacts from surrounding area wildfires including impacts to local air quality.

**Extreme Heat:**
Temperature is directly affected by changes in global atmospheric and oceanic temperatures. The region is expected to experience longer, more frequent, and more severe heat waves in the future, but like annual changes, these changes are somewhat variable across the region. Daytime and night-time temperature is projected to increase during extreme heat events in both summer and winter. The frequency of extreme heat days is predicted to increase dramatically by mid-century, increases are projected to occur in winter with more frequent and stronger storms. Additionally, in low-lying areas increases in flood frequencies and flood extent within Lake Forest are expected. The City of Lake Forest may be less prone to flood occurrences when compared to many surrounding areas due to local drainage patterns combined with its topography and elevation.

**Riverine Flooding:**
Riverine flooding—a secondary climate variable—occurs when heavy rainfall causes rivers or creeks to overtop their banks and inundate surrounding areas. While overall annual rainfall is not projected to change by mid-century, increases are projected to occur in winter with more frequent and stronger storms. Additionally, in low-lying areas increases in flood frequencies and flood extent within Lake Forest are expected. The City of Lake Forest may be less prone to flood occurrences when compared to many surrounding areas due to local drainage patterns combined with its topography and elevation.

**Drought:**
A drought is a period of abnormally dry weather which persists long enough to produce a serious hydrologic imbalance. The severity of the drought depends on the degree of moisture deficiency, the duration of the dry spell, and the size of the affected area. Periods of drought are projected to increase with climate change and may increase subsidence risk due to reduced groundwater recharge, and extraction causing aquifer depletion, and may impact water availability.
Regional Collaborations
In Southern California, there are a number of regional collaboratives, agencies, academic institutions, and local governments engaged in climate change mitigation, adaptation, and research. The Alliance of Regional Collaboratives for Climate Adaptation (ARCCA), a network of regional collaboratives across the state, includes two in Southern California: the Los Angeles Regional Collaborative for Climate Action and Sustainability (LARC) and the San Diego Regional Climate Collaborative. Additionally, the state and regional water boards have been working to coordinate climate action planning. The Los Angeles Regional Water Quality Control Board’s document, Los Angeles Region Framework for Climate Change Adaptation and Mitigation, notes that the regional board has been engaging in a dialogue with state and federal colleagues to develop a framework for adaptation within their programs. The Los Angeles County Department of Public Health (DPH) also has a focus on inter-departmental collaboration, which has led to the development of a “Five-Point Plan to Reduce the Health Impacts of Climate Change.”

ISSUES AND CHALLENGES
There are a number of issues and challenges facing Lake Forest as it works to improve air quality and prepare for climate change.

California Global Warming Solutions Act of 2006 (California Assembly Bill No. 32 and California Senate Bill No. 32)
California Assembly Bill No. 32 (AB 32), the California Global Warming Solutions Act of 2006, sets a statewide goal to reduce greenhouse gas emissions (GHG) to 1990 levels by 2020 (a 15% reduction from a “business-as-usual” scenario). In May 2014, the California Air Resources Board (ARB) approved its first update to the Climate Change Scoping Plan, which defines primary strategies to achieve the most technologically feasible and cost-effective GHG emission reductions. Based on the State Attorney General’s interpretation of AB 32, local GHG reduction targets and strategies must be addressed by the General Plan.

Senate Bill 32, which passed into law in 2016, sets the target of reducing greenhouse gas emissions to 40 percent below the 1990 level by the year 2030. SB 32 extends the original set of greenhouse gas targets provided by the passage of AB 32. This new target sets an aggressive goalpost, helping the State along its pathway to achieve its longer term goal of an 80 percent reduction in greenhouse gas emissions by the year 2050.

The issue of setting a GHG threshold is complex and dynamic, especially in light of the California Supreme Court decision in Center for Biological Diversity v. California Department of Fish and Wildlife (referred to as the Newhall Ranch decision hereafter). The Supreme Court ruling highlighted the need for the threshold being tailored to the specific project, its location, and the surrounding setting. Following the Newhall decision in 2016, CEQA documents for development projects in locations where the lead agency has not adopted a Climate Action Plan, or established GHG reduction strategies in a general plan (which are then analyzed in a general plan EIR), are particularly susceptible to legal challenges.

The General Plan must be updated and a new General Plan EIR prepared in order to adequately address the requirements of AB 32 and SB 32, and to provide certainty and consistency in how future development projects are reviewed and analyzed in terms of their potential GHG impacts.

Policy Questions:
» In what ways can the City collaborate with regional agencies and local jurisdictions to improve the air quality in south Orange County and the region?

Climate Change and Resiliency (California Senate Bill No. 379)
Senate Bill No. 379 Land Use: General Plan: Safety Element (SB 379) was approved in October of 2015. According to the California Senate discussion of SB 379, the bill requires cities and counties to include climate adaptation and resiliency strategies in the safety elements of their general plans upon the next revision of their housing elements beginning January 1, 2017. The bill would require the climate adaptation update to include a set of goals, policies, and objectives for their
communities based on the most current information available regarding climate change adaptation and resiliency. It also requires them to include a set of goals, policies and objectives and specified feasible implementation measures based on this information. SB 379 further provides that if a city or county has already adopted a climate change plan separate from the general plan that contains the information required by this bill, it can be attached by reference.

The City of Lake Forest does not have a climate change plan that could be used to satisfy this requirement, so the City is responsible for addressing the topics within the context of its General Plan. The General Plan must be updated to respond to the legislative requirements of SB 379. Examples of potential goals and policies that may be incorporated into the General Plan include:

» Promote and incentivize solar installations for new and existing homes, commercial buildings, carports and parking areas.
» Require energy efficiency retrofits for a defined portion of existing commercial buildings projects.
» Reduce the use of gas-powered landscaping equipment.
» Promote the use of wastewater and gray water to be used for agricultural, industrial, and irrigation purposes.
» Encourage the protection of existing land conservation areas.
» Promote strategies for water efficiency, retrofits, and education.
» Develop incentives and neighborhood-level initiatives for recycling and composting.

Policy Questions:

» Should the City seek funding to expand its role in local climate action planning?
» How should climate action planning be addressed and coordinated with the General Plan?
Environmental Justice is a movement and process focused on improving inequalities within communities that are directly related to the environment. Community health and wellness is related to a number of environmental categories and topics. To fully understand this topic as it relates to Lake Forest, be sure to review the other sections of this summary report for details on related topics including circulation, parks and open space, and air quality.

Environmental Justice is a movement and process focused on improving inequalities within communities that are directly related to the environment. Environmental Justice practices across the United States have worked to improve the status of numerous disadvantaged communities through strategic planning and policy. Appropriate and effective urban and regional planning is a critical component of achieving environmental justice goals and policies.

**Environmental Degredation**

The negative effects of environmental degradation and pollution are well-documented and include severe impacts to human health and longevity, depending on the level of exposure. Within the United States, certain communities have historically been disproportionately disadvantaged by environmental threats and the negative health impacts of environmental degradation. These disproportionately disadvantaged communities include, but are not limited to: communities of color, low-income communities, members of tribal nations, and immigrant communities within the country. Increased exposure to environmental pollutants, unsafe drinking water, and contaminated facilities/structures have contributed to poorer health outcomes for these identified communities. Local and regional policies, intersectional structural inequalities, land-use planning, enforcement deficiencies, and lack of community agency are all critical facets of the dis-
proportionate layout of negative environmental externalities. The field of environmental justice is focused on addressing these disproportionate impacts and improving the wellness of all communities by bolstering community agency and promoting the fair treatment of all people regardless of their race, color, national origin, or income.

**Disadvantaged Communities**
Recently, the state of California has urged cities to focus on environmental justice when making planning and policy decisions with a new state legislation, known as Senate Bill 1000. SB 1000 is a state legislation that requires California cities to incorporate and prioritize environmental justice policies within their General Plans. The goal of the bill is to improve the health of California cities and address pertinent issues of environmental justice related to community wellness. Through this bill, environmental justice is a mandated consideration in all city’s local land-use planning. As part of this new legal requirement, the State has provided stakeholders with the CalEnviroScreen 3.0 map to identify ‘Disadvantaged Communities’ or communities that are disproportionately disadvantaged by environmental hazards. The term ‘Disadvantaged Community includes any community that lacks appropriate resources or is confronted with any exceptional economic, health, or environmental burden. Cities are responsible for working to improve the conditions of any identified Disadvantaged Community within their jurisdiction. Where there are no Disadvantaged Communities identified within an area, cities are encouraged to incorporate policies that prioritize environmental equity and consider environmental justice implications.

**Community Wellness**
Community health and wellness are directly connected to issues of environmental justice. The places where

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### Key Community Health and Wellness Indicators

<table>
<thead>
<tr>
<th></th>
<th>Lake Forest Residents</th>
<th>California Residents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children (ages 5-11) active every day for at least 1 hour</td>
<td>18.0%</td>
<td>20.7%</td>
</tr>
<tr>
<td>Adults that were active (walked) for at least 1 hour</td>
<td>30.4%</td>
<td>33.0%</td>
</tr>
<tr>
<td>Adult body mass index 30+</td>
<td>17.7%</td>
<td>25.8%</td>
</tr>
<tr>
<td>Ever diagnosed with asthma (Age 1-17)</td>
<td>14.4%</td>
<td>14.6%</td>
</tr>
<tr>
<td>Delayed prescriptions/medical services (18+)</td>
<td>24.8%</td>
<td>21.2%</td>
</tr>
<tr>
<td>Residents ever diagnosed with diabetes (18+)</td>
<td>6.3%</td>
<td>8.8%</td>
</tr>
<tr>
<td>Children that received the flu vaccine (6m-11)</td>
<td>55.7%</td>
<td>55.4%</td>
</tr>
<tr>
<td>Residents ever diagnosed with heart disease</td>
<td>5.2%</td>
<td>5.9%</td>
</tr>
<tr>
<td>Adults who smoke tobacco</td>
<td>11.3%</td>
<td>12.6%</td>
</tr>
<tr>
<td>Have 1+ sugary drink a day (18+)</td>
<td>11.9%</td>
<td>17.4%</td>
</tr>
<tr>
<td>Have health insurance (18+)</td>
<td>84.1%</td>
<td>80.7%</td>
</tr>
<tr>
<td>No significant psychological distress during the past year</td>
<td>92.4%</td>
<td>91.9%</td>
</tr>
</tbody>
</table>

*Source: UCLA Center for Health Policy Research 2014 California Health Interview Survey.*
people live, work, and play profoundly shape the health of a community. Transportation options, accessible parks, crosswalks, the availability of grocery stores, and the prevalence of fast food restaurants, and real or perceived levels of crime and safety are a few examples of physical indicators that provide a framework for a community, sculpt the daily routines of residents, impact lifestyle choices, and ultimately affect public health and longevity. Collaborative work between city planners and public health professionals can help strategically develop spaces and systems for safe and healthy human activity.

A growing body of evidence supports the idea that the built environment (urban form, design, and street configurations) has a strong impact on the public’s health. Increasing rates of chronic health conditions in the US have paralleled higher levels of physical inactivity, auto-dependence, and consumption of foods high in calories and low in nutrients. There is a movement to better understand our decisions about the way we structure our community. Walkable urban form, more compact development, mix of land uses, transportation choices, and access to recreation spaces all increase physical activity, which can improve health outcomes.

Land use and planning decisions play a role in determining community members’ behavioral and lifestyle choices that ultimately impact their physical health and mental well-being. The quality, safety, location, and convenience of the pedestrian or bicycle environment, such as sidewalks, bicycle lanes, signals, and crosswalks, may impact a resident’s decision to use them, which in turn influences physical activity levels. Similarly, neighborhood parks and open space provide an avenue for increased physical activity. Infrastructure and zoning to support local food processing and distribution enables local food to be used in the community where it was grown. Access to full-service grocery stores and farmers’ markets is also correlated with increased consumption of fruits and vegetables.

Furthermore, urban design and maintenance can contribute to or decrease levels of crime and perceptions of pedestrian comfort and safety. Poor mental health is associated, in part, with a number of factors related to planning, including long commute times, exposure to crime, lack of transportation choice, driving related stress, lack of access to public spaces, and lack of opportunities for recreation and physical activity. Emissions from transportation sources are strongly linked with respiratory diseases, and various toxic air contaminants are known or suspected to cause asthma and cancer.

Addressing public health and wellness in the Lake Forest General Plan Update acknowledges the profound effects of the built environment on travel choices, access to food, levels of physical activity, and exposure to risk from accidents or pollution. Each of these has a health impact, and the General Plan provides an opportunity to prevent further disease and injury and sustain healthy lifestyle choices for Lake Forest residents. Though the creation of a healthy general plan, Lake Forest can focus on opportunities to affect changes in the overall health
and well-being of the community. There are a range of factors to consider when evaluating community health and wellness; key indicators highlighted on this page provide just a snapshot.

**ISSUES AND CHALLENGES**

Using the standard practice for identifying local disadvantaged communities outlined in SB 1000—the CalEnviroScreen 3.0 map tool—it is apparent that the City of Lake Forest does not contain any disadvantaged communities (DAC). This indicates that there are no communities within the boundaries of Lake Forest that the City is legally required to address in regard to environmental justice issues. Although the City of Lake Forest does not have any DACs, the City continues to value the role of planning for environmental justice and community health in its General Plan for all community members.

**Housing Costs**

One aspect of equitable wellness that is of critical concern for all California cities is housing affordability. Across the United States, the fraction of low-income households spending more than 50 percent of their income on housing is on the rise. Housing affordability is an important determinant of community well-being. Residents of low-income households with high housing costs may suffer adverse health impacts. This issue is especially pertinent for communities in California, where the cost of living is typically higher than states across the country. As such, the City of Lake Forest should remain attentive to community housing needs for its residents. Continuing to prioritize housing affordability as well as broad public wellness within the City will work to bolster the health and vitality of all residents regardless of race, ethnicity, or income level.

**Policy Questions:**

» Does the City’s existing housing stock allow for people of all ages and backgrounds to rent or own a home in Lake Forest?

» Does the City’s existing housing costs prevent people from finding adequate housing near their jobs in the community?

**Equitable Engagement**

In order to sustain the precedent of equitable community wellness that exists within Lake Forest, planning techniques and public engagement strategies should be bolstered to ensure that all subcommunities within the City of Lake Forest continue to remain actively engaged in decision-making. In addition, City policies that work to reduce harmful pollution and promote environmental sustainability should be prioritized as a means to keep the communities in Lake Forest sufficiently healthy.

**Policy Questions:**

» How should the City of Lake Forest communicate with members of the public, especially those that traditionally don’t participate in the planning process?
The provision of adequate utilities and community services is vital to maintaining a high quality of life in Lake Forest. This section addresses the provision of utilities in the City, including water, wastewater (sewer), stormwater and drainage, solid waste, schools and libraries, and energy and natural gas.

**WATER**

The City of Lake Forest is served by three different water purveyors: Irvine Ranch Water District (IRWD), El Toro Water District (ETWD), and Trabuco Canyon Water District (TCWD). The Irvine Ranch Water District is the water purveyor for the vast majority of the area within the city.

IRWD offers potable water sales, sewer service and sale of reclaimed (or recycled) water, and has approximately 300,000 customers spanning over 180 square miles of service area in Orange County. IRWD serves approximately 83 percent of the total area of the City of Lake Forest.
The City of Lake Forest likewise relies on three separate utility districts to handle wastewater: Irvine Ranch Water District (IRWD), El Toro Water District (ETWD), and Trabuco Canyon Water District (TCWD). The Irvine Ranch Water District is the provider for the vast majority of the area within the city. IRWD offers sewer service and sale of reclaimed (or recycled) water, and serves approximately 83 percent of the total area of the City of Lake Forest. IRWD provides wastewater collection and wastewater treatment to the majority of residents in the City.

IRWD maintains approximately 175 miles of sewer mains within the City of Lake Forest. Wastewater flow originating within Lake Forest northeast of Highway 241 flows across the IRWD collection system to the MWRP. All other flow originating in Lake Forest is directed to the LAWRP. Recycled water is produced at both plants, and recycled water makes up about 20 percent of IRWD’s current water supply. Residents who live in part of the Portola Hills community in the northeast section of the City are serviced by Trabuco Canyon Water District. The southeast portion of the City is served by El Toro Water District.

The City’s stormwater control systems are currently owned and operated by the City of Lake Forest. Prior to incorporation in 1991, the Orange County Flood Control District owned and operated the stormwater control system. Upon incorporation, control of the stormwater system transferred to the City of Lake Forest. The City is currently in the process of tracking, mapping, and analyzing the facilities.

Lake Forest’s storm drain system was designed to prevent flooding by transporting excess rainwater from city streets. Storm water pollution occurs when untreated contaminated water (urban runoff) drains from city streets into the rivers and oceans. Pollutants are transported into the city’s storm drain system in conjunction with various sources such as rain, hoses and sprinklers, which drain from streets, parking lots, and lawns to enter various catch basins, that leads to rivers and oceans.

The City of Lake Forest is an active participating member of the Central and South Orange County Water Management Areas. At its essence, the Watershed Management Area is a collaborative framework for municipalities and special purpose agencies to work collaboratively and find synergies across water resource disciplines. Its purpose is to bring together a wide variety of water resource managers in order to achieve more comprehensive and cost-effective solutions to Orange County’s water resources needs.
The City of Lake Forest has a sole-source contract with CR&R Incorporated Environmental Services to collect solid waste, recycling, and green waste from the residential and commercial sectors. CR&R Incorporated Environmental Services serves more than 3 million people and over 25,000 businesses throughout Orange, Los Angeles, San Bernardino, Imperial and Riverside Counties. The CR&R vehicle fleet in Lake Forest uses natural gas vehicles and pick-up services usually occur weekly.

According to Calrecycle, the vast majority (90%) of landfill disposed from the City of Lake Forest in 2017 (the latest year of information available) went to Frank R. Bowerman Sanitary Landfill. The City of Lake Forest disposed of approximately 56,548 tons at this landfill. In 2017, the City of Lake Forest disposed of a total of approximately 172 tons of waste per day, with approximately 155 tons per day of this total disposed at Frank R. Bowerman Sanitary Landfill.

The City of Lake Forest has complied with State requirements to reduce the volume of solid waste through recycling and reuse of solid waste. Both the per capita waste generation rates and the total annual disposal tonnage in Lake Forest were at their lowest levels (during this period) in 2016.

Lake Forest is a proud community with strong support for public schools. The City of Lake Forest is served by the Saddleback Valley Unified School District as well as several parochial schools. It has nine public schools including one high school, one intermediate school, and seven elementary schools.

Lake Forest is part of the Orange County Public Library system. The Orange County Public Library has a network of 33 libraries of which two are in Lake Forest: Foothill Ranch Library, and the El Toro Library.
The City of Lake Forest’s Community Services Department provides planning and coordination for City-wide events, recreation activities for youth, teen, adults, and seniors, and programming for the Nature Park and Skatepark. The City’s Public Works Maintenance Division maintains the City’s lakes, creeks, forests, parks, and open space.

The City is the primary service provider for parks and recreation. The City has 32 parks and a total of approximately 295 park acres. In addition, the City borders a number of wilderness areas that are publicly accessible.

Lake Forest’s trail system includes pedestrian and bike trails within open space corridors and along regional trails. The County maintains a coordinated system of trails, including bikeways, equestrian trails and hiking trails within the City. There are a number of proposed improvements including: off-street bike trail connecting Aliso Creek Trail with Serrano Creek in the northern portion of the City and Foothill Transportation Corridor; a riding and hiking trail that would follow the Borrego Wash; a connection between the Aliso Creek Trail and the Serrano Creek Trail; and a realignment of portions of Aliso Creek Riding and Hiking Trail.

Southern California Edison (SCE) provides electrical service and Southern California Gas Company (SoCalGas) provides natural gas services to residences and businesses throughout the City of Lake Forest. SCE provides electricity service to 15 million people over an approximately 50,000 square mile area throughout southern California. SoCalGas provides natural gas service to approximately 21.6 million customers, spanning roughly 20,000 miles.

SCE generates electric power from many sources, including renewable, coal, hydroelectric powerhouses, natural gas, and nuclear sources. SCE also purchases power from independent power producers; generation sources from these producers can range from large fossil power plants to smaller renewable and cogeneration plants. After the power is produced or bought, it goes into SCE’s electric transmission and distribution systems to get to the homes and businesses of SCE’s customers. The electricity power mix for SCE in 2016 (for SCE as a whole, and for the portion sold to California customers) is shown in the following table. Approximately 25% of all electricity sold to California customers in 2016 were from eligible renewable energy resources.
ISSUES AND CHALLENGES

Energy and Natural Gas
The City of Lake Forest should incorporate goals and policies into the General Plan that work to prioritize the use of alternative energy sources and promote energy efficiency, to the extend feasible. Goals related to the support of alternative sources of energy in an effort to improve and adapt to the impacts of climate change should be incorporated into the updated General Plan.

Examples of polices related to Open Space, Stormwater and Wastewater, and Energy/Natural Gas that can be incorporated into the updated General Plan include:

» Promote and incentivize solar installations for new and existing homes, commercial buildings, carports and parking areas.
» Utilize City incentives to encourage the integration of energy efficiency measures and renewable energy devices during early project review.
» Develop City-wide sustainability goals related to water-usage and assess the City’s progress toward meeting its sustainability goals.
» Require energy efficiency retrofits for a defined portion of existing commercial buildings projects.
» Promote the use of wastewater and gray water to be used for agricultural, industrial, and irrigation purposes.
» Promote strategies for water efficiency, retrofits, and education.

Policy Questions:
» What sorts of alternative energy sources are most appropriate to promote for Lake Forest residents and businesses?
» How can the City support SoCal Gas and Southern California Energy with their conservation efforts?
» Does the City have sufficient plans and programs to facilitate solar installation for residential and commercial users?

Stormwater and Wastewater
The City should incorporate goals and policies related to Stormwater and Wastewater management that are targeted at promoting environmental sustainability and water conservation into the updated General Plan. Senate Bill 379 requires cities and counties to include climate adaptation and resiliency strategies in the safety elements of their general plans. As part of these required goals and strategies, the Lake Forest General
Plan can focus on improving stormwater infrastructure to inhibit pollution of nearby waterways and developing strategies to help reduce electricity consumption associated with water importation, as well as emissions from the designated wastewater treatment facilities.

**Policy Questions:**

» How should water and wastewater capacity influence growth and land use decisions?

» What stormwater and/or wastewater improvements will need to be implemented to support future development?

» What partnership opportunities are available with local and regional utility providers to improve the City’s stormwater and wastewater systems?

**Parks and Open Space**

The City of Lake Forest has adequate park space to meet the needs of the residents. The 295 park acres is sufficient enough to promote a balance between urban infrastructure and open space. However, the City should prioritize the improvement of pedestrian and bicycle connections between existing regional, community, and mini parks in order to promote open space accessibility and efficiency of park access. By expanding bike pathways between key community features, the City will further encourage community wellness and outdoor recreation.

**Policy Questions:**

» Are parks and recreational facilities adequately funded through existing sources?

» Are there specific recreational needs of the community that are not currently being met?

» What do you think is a reasonable walk to a neighborhood park or natural open space? (For example, ½ mile, ¾ mile, etc.)
HAZARDS, SAFETY, & NOISE

Issues and topics related to hazards, noise, and climate change within the city and region are discussed in this section. Some of these hazards may be naturally induced, such as wildfire hazards. Other health and safety hazards may be the result of natural hazards, which are exacerbated by human activity, such as development in areas prone to flooding. Additional hazards are entirely human-made, including exposure to hazardous materials, and noise.

HAZARDOUS MATERIALS AND WASTE

If improperly treated, stored, transported, or disposed of, hazardous material may either cause or significantly contribute to an increase in mortality or an increase in serious, irreversible, or incapacitating irreversible illness or pose a substantial present or potential hazard to human health and safety or the environment. Hazardous materials are mainly present because of industries involving chemical by-products from manufacturing, petrochemicals, and hazardous building materials. Hazardous waste is the subset of hazardous materials that has been abandoned, discarded, or recycled and is not properly contained, including contaminated soil or groundwater.

The Hazardous Waste and Substances Sites (Cortese) List is a planning document used by the State, local agencies, and developers to comply with the California Environmental Quality Act requirements in providing information about the location of hazardous materials release sites. There are no hazardous materials release sites located in the City of Lake Forest listed on the Cortese List.

There are 52 locations with a Lake Forest address that are listed in the GeoTracker database for Leaking Underground Storage Tanks (LUST). Based on this information, hazardous materials and waste does not pose a significant risk to the City of Lake Forest.

FLOODING

Flooding is a temporary increase in water flow that overtops the banks of a river, stream, or drainage channel to inundate adjacent areas not normally covered by water.
Much of Lake Forest has steep topography and a minimal risk of flooding. However, there are a few low-lying areas of the city where storm water can percolate into the ground. Nevertheless, the steep topography and large amounts of paved area reduce infiltration and increase surface runoff, which can increase the risk of localized flooding. Localized flooding may occur in low spots or where infrastructure is unable to accommodate peak flows during a storm event. In most cases, water dissipates quickly after heavy rain ceases. For additional information on stormwater and drainage infrastructure see the existing conditions report.

**NOISE**

Noise is typically defined as (airborne) sound that is loud, unpleasant, unexpected or undesired, and may therefore be classified as a more specific group of sounds. Perceptions of sound and noise are highly subjective from person to person. The effects of noise on people can be placed in three categories:

- Subjective effects of annoyance, nuisance, and dissatisfaction;
- Interference with activities such as speech, sleep, and learning; and
- Physiological effects such as hearing loss or sudden startling.

An important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so-called ambient noise level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it.

**SEISMIC AND GEOLOGIC HAZARDS**

Seismic hazards include both rupture (surface and subsurface) along active faults and ground shaking, which can occur over wider areas. Ground shaking, produced by various tectonic phenomena, is the principal source of seismic hazards in areas devoid of active faults. All areas of the state are subject to some level of seismic ground shaking. Potential hazards associated with seismic activity in Lake Forest include liquefaction, and lateral spreading.

Faults are distinguished as active (has had surface displacement within the last 11,000 years), potentially active (displacement between 1.6 million and 11,000 years ago), or inactive (no evidence of displacement within the past 1.6 million years).

The most significant active fault traces in the vicinity of the City of Lake Forest are along the Newport-Inglewood and Elsinore fault zones, which are considered active. There are numerous active faults located in the regional vicinity of Lake Forest including: Newport-Inglewood Fault, Palos Verdes Fault, San Andreas Fault, San Jacinto Fault, Santa Monica-Raymond Fault, Sierra Madre Fault, and the Whittier-Elsinore Fault.

**EMERGENCY RESPONSE PLANNING**

Lake Forest is exposed to many hazards, all of which have the potential to disrupt the community, cause damage, and create casualties. Possible natural hazards include earthquakes, floods, storms, and wildland fires. Other disaster situations could develop from hazardous materials releases, major transportation accidents, terrorism, and civil disorder. There is also the possibility of national security threats such as war.

The City of Lake Forest Emergency Plan is designed to provide the framework for responding to major emergencies or disasters. The goals of this plan are to outline a strategy to (1) prepare for, (2) respond to, and (3) recover from an emergency or disaster that affects the City. The Plan is intended to be a dynamic preparedness document and is expected to be reviewed annually. This Plan serves as the primary document for emergency response planning in Lake Forest.
ISSUES AND CHALLENGES

Fire Protection (California Senate Bill No. 1241)

Senate Bill No. 1241 Land Use: General Plan: Safety Element: Fire Hazard Impacts (SB 1241) was approved in 2012. SB 1241 requires that the Safety Element, upon the next revision of the housing element on or after January 1, 2014, to be reviewed and updated as necessary to address the risk of fire in state responsibility areas and very high fire hazard severity zones. The update must include:

» Consideration of guidance given in the Office of Planning and Research’s (OPR’s) Fire Hazard Planning document.

» Specific information regarding fire hazards, and

» A set of goals, policies, and objectives to protect the community from unreasonable wildfire risks and a set of feasible implementation measures to achieve these goals, policies, and objectives.

This bill also requires cities and counties to make certain findings regarding available fire protection and suppression services before approving a tentative map or parcel map.

Policy Questions:

» Does the City’s current General Plan provide sufficient direction regarding fire threats and response measures?

Fire Safety

California Government Code Section 65302.5 requires the State Board of Forestry and Fire Protection to provide recommendations to a local jurisdiction’s General Plan fire safety element at the time that the General Plan is amended. While not a direct and binding fire prevention requirement for individuals, General Plans that adopt the Board’s recommendations will include goals and policies that provide for contemporary fire prevention standards for the jurisdiction. California Government Code Section 51175 defines Very High Fire Hazard Severity Zones and designates lands considered by the State to be a very high fire hazard.

California Government Code Section 51189 directs the Office of the State Fire Marshall to create building standards for wildland fire resistance. The code includes measures that increase the likelihood of a structure withstanding intrusion by fire (such as building design and construction requirements that use fire-resistant building materials) and provides protection of structure projections (such as porches, decks, balconies and eaves), and structure openings (such as attics, eave vents, and windows).

The State’s Fire Safe Regulations are set forth in Public Resources Code §4290, which include the establishment of State Responsibility Areas (SRA). Public Resources Code §4291 sets forth defensible space requirements, which are applicable to anyone that owns, leases, controls, operates, or maintains a building or structure in, upon, or adjoining a mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or land that is covered with flammable material (§4291(a)).

Public Resources Code § 4292-4296 and 14 CCR 1256: Fire Prevention for Electrical Utilities address the vegetation clearance standards for electrical utilities. They include the standards for clearing around energy lines and conductors such as power-line hardware and power poles. These regulations are critical to wildland fire safety because of the substantial number of power lines in wildlands, the historic source of fire ignitions associated with power lines, and the extensive damage that results from power line caused wildfires in severe wind conditions.

Per AB 337, local fire prevention authorities and the California Department of Forestry and Fire Protection (CalFire) are required to identify “Very High Fire Hazard Severity Zones (VHFHSZ) in Local Responsibility Areas (LRA). Standards related to brush clearance and the use of fire resistant materials in fire hazard severity zones are also established.

Making sure that the Hazards, Safety, and Noise Element takes AB 337, Public Resources Code §4290, and the California Government Code into account will make sure that Lake Forest is incorporating best practices into its fire prevention efforts.

Policy Questions:

» How can the City best support the Orange County Fire Authority to ensure that the City is well-protected from urban fires and wildfires?

» How should the City regulate new and existing development in fire hazard areas to improve public safety?
Noise Levels and Impacts
Lake Forest has several major noise generators including: traffic, the railroad/trains, and fixed noise sources (parking lots, loading docks, parks, schools, and other commercial/retail uses). To understand their impact on the community, the City has undertaken a community noise survey, the results of which are documented in the General Plan Existing Conditions Report. The results of the community noise survey indicate that existing transportation (traffic) noise sources were the major contributor of noise observed during daytime hours, especially during vehicle pass-bys. Issues related to all noise generators will be addressed in the General Plan.

Policy Questions:
» What types of measures should the City implement to reduce noise exposure to sensitive receptors?
» What are the major sources of community noise in Lake Forest, and what types of policies might address these sources?
» Are some types of community noise nuisances acceptable (i.e. festivals, concerts, community events etc.)?
» Should the City consider natural noise abatement measures (i.e. site design strategies, vegetation, and natural treatments) rather than traditional sound walls where applicable?

Local Hazard Mitigation Planning
Because of the history of disasters throughout California, encouraging communities to adopt Local Hazard Mitigation Plans (LHMPs) is a priority. The Federal Disaster Mitigation Act of 2000 (DMA 2000) requires that states review LHMPs as part of their state hazard mitigation planning process. The intent is three-fold:

» To gather hazard, vulnerability, and mitigation information from the local level for use in state-level planning
» To ensure that state and local hazard mitigation planning is coordinated to the greatest extent practical
» To ensure that local jurisdictions are made aware of the hazards and vulnerabilities within their jurisdiction and to develop strategies to reduce those vulnerabilities

The City of Lake Forest will need to address local hazard mitigation planning in its General Plan, and the General Plan may include an implementation action directing the City to prepare an LHMP. An LHMP will let Lake Forest plan for future emergencies. Usually, after a disaster occurs, communities take steps to recover from the emergency and rebuild. A LHMP is a way for the City to become more prepared in advance of these disasters, so when they do occur, less damage occurs and recovery is easier. Besides protecting public health and safety, this approach can save money. Studies estimate that every dollar spent on mitigation saves an average of four dollars on response and recovery costs. An LHMP can also help to strengthen the mission of public safety officers, such as police and fire department staff, providing them with clear roles and responsibilities to build a safer community.

Policy Questions:
» How should the City address planning for hazards and disasters in its General Plan versus implementation documents like a LHMP?
» What hazards need special attention?
The city’s natural resources form an important part of its unique character and quality of life. In Lake Forest, these resources include the City’s biological resources, geology and soils, mineral and energy resources, hydrology and water quality, visual resources, and cultural resources. It is important to understand these resources so that these valuable pieces of the community can be preserved and protected for future generations.

### BIOLOGICAL RESOURCES

The City of Lake Forest is surrounded by the City of Irvine to the west; Whiting Ranch Wilderness Park and an unincorporated area of Orange County to the north; the City of Mission Viejo to the east and south; and the Cities of Laguna Hills and Laguna Woods to the south. Terrain in the City of Lake Forest ranges from the Saddleback Valley in the southern part of the city, to low hills in the north that lead up to the foothills of the Santa Ana Mountains further north of the city. Much of the City of Lake Forest has a gentle southwest slope, with elevations ranging from approximately 300 feet above mean sea level (amsl) at the southwestern corner of the city to approximately 1,500 feet amsl at the northern end of the city.

**Bioregions**

Lake Forest is located within the South Coast bioregion. Bounded on the north by the southern edge of Los Padres National Forest and the northern base of the San Gabriel and San Bernardino Mountains and bounded on the east by the western edge of the BLM California Desert Conservation Area and on south by Mexican border; landscapes in this bioregion range from flatlands to mountains; ecosystems range from ocean to desert. The regions also contains two of California’s largest cities (Los Angeles and San Diego) more than any other bioregion urbanization has caused intense effects of natural resources. Urbanization in the south coast bioregion has resulted in the loss of habitat, spread of nonnative species and the loss of native species.
California Wildlife Habitat Relationship System

The California Wildlife Habitat Relationship (CWHR) habitat classification scheme has been developed to support the CWHR System, a wildlife information system and predictive model for California’s regularly-occurring birds, mammals, reptiles and amphibians. When first published in 1988, the classification scheme had 53 habitats. At present, there are 59 wildlife habitats in the CWHR System: 27 tree, 12 shrub, 6 herbaceous, 4 aquatic, 8 agricultural, 1 developed, and 1 non-vegetated.

According to the California Wildlife Habitat Relationship System there are 12 cover types (wildlife habitat classifications) in the City of Lake Forest out of 59 found in the State. These include: Annual Grassland, Barren, Chamise-Redshank Chaparral, Coastal Oak Woodland, Coastal Scrub, Deciduous Orchard, Evergreen Orchard, Lacustrine, Mixed Chaparral, Pasture, Urban, and Valley Foothill Riparian.

GEOLOGY

The City of Lake Forest is near the coastal margin of the Los Angeles Basin, which includes Orange County, and is underlain by more than 15,000 feet of stratified sedimentary rocks of marine origin. The regional geologic framework of the Los Angeles Basin area can be understood through the theory of plate tectonics. Earth’s mantle is composed of several large plates that move relative to each other and are bounded by major fault zones. The San Andreas Fault zone, about 40 miles northeast of the City of Lake Forest, is the boundary between the Pacific Plate, on the west side of the zone, and the North American Plate on the east side. One of the results of the movement of these plates is the regional rock deformation that is expressed in the general northwest trend of valleys and ridges in the Los Angeles Basin. All of the geologic formations in the Los Angeles Basin are on the Pacific Plate.

The Santa Monica and San Gabriel Mountains, about 50 miles north of the City of Lake Forest, form the northern boundary of the Los Angeles Basin, and are part of the Transverse Ranges Geomorphic Province, which is characterized by east-west trending faults, folds, and mountain ranges. The Santa Ana Mountains and adjacent hills are located in the northeastern portion of the City and form the eastern boundary of the Los Angeles Basin. The Santa Ana Mountains are part of the Peninsular Ranges Geomorphic Province, which is characterized by northwest-southeast trending faults, folds, and mountain ranges. Both of these provinces, as well as the Los Angeles Basin, are considered to be highly active seismically.

CULTURAL AND HISTORIC RESOURCES

The City’s cultural and historic resources are defined as buildings, sites, structures, or objects that may have historical, architectural, archaeological, cultural, or scientific importance. Preservation of the city’s cultural heritage should be considered when planning for the future.

Eighty-three cultural resources have been identified within the project area, according to files maintained by the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS). Of these 83 resources, seven are prehistoric archaeological sites, one is a prehistoric archaeological isolate, two are multicomponent archaeological sites, one is a historic archaeological site, 69 are historic resource, and 2 are historic districts. Maps of all previously recorded cultural resources are located in the Cultural and Paleontological Assessment Report.
**ISSUES AND CHALLENGES**

**Wildlife Habit and Sightings**

The Federal Endangered Species Act, passed in 1973, defines an endangered species as any species or subspecies that is in danger of extinction throughout all or a significant portion of its range. A threatened species is defined as any species or subspecies that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. These special-status species are documented in the California Natural Diversity Database (CNDDB), the California Native Plant Survey (CNPS) Inventory of Rare and Endangered Plants, and the USFWS endangered and threatened species lists. There are 46 special status plants, and 65 special status animals within a 9-quad search area (approximately 10 miles) of Lake Forest. Of these 46 special status plant species within the 9 quad search area, seven species were documented within one mile of Lake Forest. Likewise, of the 65 special status animal species within the 9 quad search area, there were 3 amphibians, 26 birds, 6 fish, 15 mammals, 10 reptiles, and 5 invertebrates. Of the 65 special status animal species within the 9 quad search areas, 30 species are located within one mile of Lake Forest.

In addition to special status species, the City of Lake Forest may consider measures to address the increase in interactions between wildlife and people-- including recent sightings of mountain lions and coyotes.

**Policy Questions:**

» What buffer sizes are needed to adequately protect habitat areas from urban uses?

» Are additional policies or programs necessary to reduce potential urban/habitat conflicts?

**Green Infrastructure**

The use of green infrastructure includes the use of vegetation, soils, and other natural features to address issues related to stormwater runoff, a major cause of water pollution in urban areas like Lake Forest. When green infrastructure is introduced, stormwater runoff (from rooftops, roads, parking lots, and other paved areas and buildings) water can be treated or reused onsite. Grants are available to help the City and City residents utilize green infrastructure and the City has the ability to require new capital improvement projects and/or development to better utilize green infrastructure to help conservation and water collection efforts in the City.

**Policy Questions:**

» To what extent does the City want to promote or encourage the utilization of green infrastructure for public and private projects?

**Oak Woodlands Conservation**

In 2001, the California legislature passed Assembly Bill 242, known as the California Oak Woodland Conservation Act, as a result of widespread changes in land use patterns across the landscape that were fragmenting oak woodland character over extensive areas. Then in 2004, the California legislature enacted SB 1334, which added oak woodland conservation regulations to the Public Resources Code.

The legislation provides funding and incentives to ensure the future viability of California’s oak woodland resources by maintaining large scale land holdings or smaller multiple holdings that are not divided into fragmented, nonfunctioning biological units. The conservation of oak woodlands enhances the natural scenic beauty for residents and visitors, increases real property values, promotes ecological balance, provides habitat for over 300 wildlife species, moderates temperature extremes, reduces soil erosion, sustains water quality, and aids with nutrient cycling, all of which affect and improve the health, safety, and general welfare of the residents of the State.

**Policy Questions:**

» What additional steps can the City take to preserve and protect key natural and open space resources?
**Urban Water Management Planning Act**


SB 610 requires additional information in an urban water management plan if groundwater is identified as a source of water available to an urban water supplier. It also requires that the plan include a description of all water supply projects and programs that may be undertaken to meet total projected water use. SB 610 requires a city or county that determines a project is subject to CEQA to identify any public water system that may supply water to the project and to request identified public water systems to prepare a specified water supply assessment. The assessment must include, among other information, an identification of existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project, and water received in prior years pursuant to these entitlements, rights, and contracts.

AB 901 requires an urban water management plan to include information, to the extent practicable, relating to the quality of existing sources of water available to an urban water supplier over given time periods. AB 901 also requires information on the manner in which water quality affects water management strategies and supply reliability. The bill requires a plan to describe plans to supplement a water source that may not be available at a consistent level of use, to the extent practicable. Additional findings and declarations relating to water quality are required.

These legislative requirements impact the way the City should plan for urban water management in collaboration with regional agencies and utility providers. The City must think strategically about its local approach and work to develop a clear set of goals and policies which will be shared with regional agencies in order to represent Lake Forest’s interests and strategies.

**Policy Questions:**

» What land use patterns will provide the best watershed protection and prevent groundwater overdraft?

» How can the City better encourage the efficient use and re-use of water?

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**Water Availability for New Housing**

SB 221 adds Government Code Section 66455.3, requiring that the local water agency be sent a copy of any proposed residential subdivision of more than 500 dwelling units within five days of the subdivision application being accepted as complete for processing by the city or county. It also adds Government Code Section 66473.7, establishing detailed requirements for establishing whether a “sufficient water supply” exists to support any proposed residential subdivisions of more than 500 dwellings, including any such subdivision involving a development agreement. When approving a qualifying subdivision tentative map, the city or county must include a condition requiring availability of a sufficient water supply. The applicable public water system must provide proof of availability. If there is no public water system, the city or county must undertake the analysis described in Government Code Section 66473.7. The analysis must include consideration of effects on other users of water and groundwater. Any large new develops in the City of Lake Forest will need to adhere to these new standards.

**Policy Questions:**

» How should the City communicate land use planning and water provision policies and requirements in its General Plan?

» How can the City communicate development requirements to the public to improve transparency?

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Orange County Water District Groundwater Management Plan 2015 Update

The Orange County Water District’s (OCWD) first Groundwater Management Plan was published in 1989; the Groundwater Management Plan 2015 Update is the fifth update. In 2014, the California Sustainable Groundwater Management Act was passed. The new law provided authority for agencies to develop and implement Groundwater Sustainability Plans or alternative plans that demonstrate the basin has operated within its sustainable yield over a period of at least 10 years. This plan was developed to help the OCWD manage the Orange County Groundwater Basin.

Opportunities exist for Lake Forest to review, implement, and build upon those strategies developed at the County level.

Policy Questions:

» To what extent does the City wish to expand upon the direction provided in the Orange County Water District’s Groundwater Management Plan?

South Orange County (San Juan Hydrologic Unit) Water Quality Improvement Plan

The South County Water Quality Improvement Plan for the San Juan Hydrologic Unit was developed through a regulatory partnership comprising the cities of Aliso Viejo, Dana Point, Laguna Beach, Laguna Hills, Laguna Niguel, Laguna Woods, Lake Forest, Mission Viejo, Rancho Santa Margarita, San Clemente, San Juan Capistrano, the County of Orange and the Orange County Flood Control District, who operate an interconnected stormwater sewer system (MS4) which discharges stormwater and urban runoff. The partnership developed the Plan to address the adverse impacts to surface waters, often collectively referred to as “urban stream syndrome” that can arise from the imprint of urbanization on the landscape.

Policy Questions:

» Does the South Orange County Water Quality Improvement Plan accurately reflect the City’s goals and priorities related to water quality?

» Are there any additional steps or strategies the City wants to include in its General Plan to address water quality issues?