This Chapter addresses utilities and community services within the City of Lake Forest. Utility services include the provision of water services, wastewater (sewer) services, stormwater and drainage, solid waste disposal, electricity, and natural gas. Community services include fire protection, law enforcement, parks and recreation, schools, libraries, and other public facilities.

A technical memorandum provided by West Yost Associates serves as the primary source for the information provided within Section 7.1 (Water), Section 7.2 (Wastewater), and Section 7.3 (Stormwater and flood control); the California Department of Resources Recycling and Recovery (CalRecycle) was the main source for the information for Section 7.4 (Solid Waste); and Southern California Edison (SCE) and Southern California Gas Company (SoCal Gas) were the main sources of information within Section 7.5 (Electricity and Natural Gas).

The majority of the City of Lake Forest’s residents are provided water, wastewater collection, and wastewater treatment services by the Irvine Ranch Water District (IRWD), whose boundaries cover 8,300 acres in the City, or approximately 83 percent of the total area of the City. However, residents located along the southwest edge of the City are provided these utility services by El Toro Water District (ETWD). ETWD serves approximately 1,421 acres or 13 percent of the total area of the City. Finally, a small portion of residents in

This Chapter includes the following topics:

7.1 Water
7.2 Wastewater
7.3 Stormwater
7.4 Solid Waste
7.5 Electricity and Natural Gas
7.6 Parks and Recreation
7.7 Fire Protection
7.8 Police Services
7.9 Community Facilities

Figures are located at the end of the Chapter.
the northeastern section of the City are serviced by Trabuco Canyon Water District (TCWD). Figure 7-1 provides the utility district boundaries overlaid with the City’s boundary.

West Yost Associates reviewed the most recent versions of the three utility districts’ Master Plans to evaluate how the water and wastewater utility services are provided within the City. IRWD’s latest update to its Sewer Collection System Master Plan occurred in 2016, with its Water Resources Master Plan updated in 2017; ETWD’s Water and Sewer Master Plan was most recently updated in 2004; and TCWD’s latest Water, Wastewater and Reclaimed Water Master Plan was most recently updated in 1999. West Yost Associates also reviewed the most recent versions of ETWD’s and IRWD’s Urban Water Management Plan (UWMP) and Sewer System Management Plan (SSMP) to more accurately determine projected water demands and supply and projected sewer flows and treatment capacity of each utility district. Flood control facilities and maintenance information were provided to West Yost Associates by the City of Lake Forest.

7.1 WATER
The City of Lake Forest does not directly provide water service to its residents. Rather, three separate, independent utility districts provide this service to residents within the City. Figure 7-1 provides the utility district boundaries overlaid with the City’s boundary.

**State Regulatory Framework**

*California Department of Health Services*

The Department of Health Services, Division of Drinking Water and Environmental Management, oversees the Drinking Water Program. The Drinking Water Program regulates public water systems and certifies drinking water treatment and distribution operators. It provides support for small water systems and for improving their technical, managerial, and financial capacity. It provides subsidized funding for water system improvements under the State Revolving Fund (“SRF”) and Proposition 50 programs. The Drinking Water Program also oversees water recycling projects, permits water treatment devices, supports and promotes water system security, and oversees the Drinking Water Treatment and Research Fund for MTBE and other oxygenates.

**Consumer Confidence Report Requirements**

California Code of Regulations (CCR) Title 22, Chapter 15, Article 20 requires all public water systems to prepare a Consumer Confidence Report for distribution to its customers and to the Department of Health Services. The Consumer Confidence Report provides information regarding the quality of potable water provided by the water system. It includes information on the sources of the water, any detected contaminants in the water, the maximum contaminant levels set by regulation, violations and actions taken to correct them, and opportunities for public participation in decisions that may affect the quality of the water provided.

**Urban Water Management Planning Act**

The Urban Water Management Planning Act has as its objectives the management of urban water demands and the efficient use of urban water. Under its provisions, every urban water supplier is required to prepare and adopt an urban water management plan. An “urban water supplier” is a public or private water supplier that provides water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. The plan must identify and quantify the existing and planned sources of water available to the supplier, quantify the projected water use for a period of 20 years, and describe the supplier’s water demand management measures. The urban water supplier should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry years. The Department of Water Resources (DWR) must receive a copy of an adopted urban water management plan.

**Senate Bill (SB) 610 and Assembly Bill (AB) 901**

The State Legislature passed SB 610 and AB 901 in 2001. Both measures modified the 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.

**Senate Bill (SB) 221**

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.

**Local Regulatory Framework**

**Irvine Ranch Water District (IRWD)**

IRWD is a California Special District formed in 1961 and incorporated under the California Water Code. 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.

**IRWD 2015 Urban Water Management Plan**

IRWD’s Urban Water Management Plan (UWMP) looks at IRWD’s historic and current water use projections and compares water supplies with demands over the next 20 years. The UWMP serves as a long-range planning document for water supply and demand and provides an overview of IRWD’s water supply and usage, recycled water and conservation programs.

The UWMP identifies the imported and local water supplies that will meet future demands including groundwater recovery and water recycling, as well as IRWD’s current and planned conservation measures. This helps to ensure that IRWD can provide our service area with a reliable supply of high-quality water and meet current and future demand. The plan is updated every five years and submitted to the California Department of Water Resources. At its June 27, 2016, meeting IRWD’s Board of Directors conducted a public hearing and approved the 2015 UWMP.

**El Toro Water District (ETWD)**

ETWD is California Special District formed in 1960 and receives its water from two main sources: recycled water, and imported water from the Municipal Water District of Orange County (MWDOC). The district serves over 50,000 people in southern Orange County. ETWD maintains a 275-million-gallon water storage facility. ETWD serves approximately 13 percent of the total area of the City of Lake Forest.

**ETWD 2015 Urban Water Management Plan**

ETWD’s UWMP provides a detailed summary of ETWD’s present and future water resources and demands and assess the ETWD’s water resource needs. The UWMP provides water supply planning for a 25-year planning period in five-year increments and identifies water supplies needed to meet existing and future demands. The demand analysis identifies supply reliability under three hydrologic conditions: a normal year, a single-dry year, and multiple-dry years.

**Trabuco Canyon Water District (TCWD)**

TCWD is California Special District incorporated under the California Water Code. TCWD provides water service to customers and properties located within its boundaries. The district’s primary facilities include a water treatment plant located in the City of Lake Forest, a wastewater treatment plant, and the Trabuco Creek Wells facility located in Trabuco Canyon. A small number of residents in the northeastern section of the City are served by TCWD.
City of Lake Forest General Plan
The existing Lake Forest General Plan includes goals and policies related to water services and supplies. For a full list of the City's goals and policies, please see the City's Current General Plan.

Water Distribution System
The water systems and water services provided by each utility district within Lake Forest are summarized below. The water utility infrastructure that serves the City is provided in Figure 7-2.

Water System Description by Utility District

Irvine Ranch Water District
The majority of the City is provided water service by IRWD. Prior to 2001, water service was provided by Los Alisos Water District (LAWD). In 2001, IRWD annexed LAWD's service area inside the City's boundaries. IRWD is one of the largest water districts in Orange County, serving the entire City of Irvine and portions of Tustin, Santa Ana, Costa Mesa, Newport Beach, and Lake Forest; an area of approximately 132 square miles. IRWD is a member agency of the Municipal Water District of Orange County (MWDOC), which is a wholesale importer and member agency of the Metropolitan Water District (MWD). As such, MWDOC is entitled to receive water from the available sources of MWD. IRWD receives its imported water supplies through MWDOC.

A small portion of the City, the Portola Hills community, is located within the TCWD service area boundary, yet is provided water by IRWD. For this area, TCWD reads the meters and bills the residents, then IRWD bills TCWD for the total amount of water consumed by residents within the TCWD boundary.

Water Infrastructure
IRWD's potable water supply inside the borders of the City consists of almost 250 miles of potable water lines. Due to the major elevation changes within the district, IRWD uses 15 pressure zones to deliver water to customers within a reasonable pressure. Five (5) of these pressure zones fall within the borders of the City; Lake Forest Zones 4, 5, and 6, Foothill Ranch Zone, and Portola Hills Zone.

Potable Water Supply
According to the most recent IRWD Water Master Plan update, groundwater makes up about 53 percent of the total water supply, recycled water makes up 24 percent, imported (treated and untreated) makes up 20 percent, and native surface water makes up around 3 percent. In the FY 2014/2015, about 20 percent of IRWD's potable water needs were met through water purchased and supplied by MWD through MWDOC. The majority of IRWD's potable water is a blend of Colorado River water and State Water Project water that is treated at the MWD Diemer Filtration Plant (DFP) located north of Yorba Linda. Two (2) major transmission lines deliver water from the DFP to IRWD, the Allen McColloch Pipeline (AMP) and East Orange County Feeder No. 2 (EOCF#2). IRWD owns 64.7 cubic feet per second (cfs) capacity in the AMP and 41.4 cfs capacity in the EOCF#2.

Groundwater currently makes up about 78 percent of the potable water supply in the district, and approximately 53 percent of all water supplies including non-potable. Water is pumped from the Orange County Groundwater Basin through seven potable production wells. The Orange County Groundwater Basin is managed by Orange County Water District (OCWD) who has the authority to impose replenishment assessments and basin equity assessments on production. The primary mechanism used by OCWD to manage pumping from the basin is the Basin Production Percentage (BPP). The BPP is the percentage of each producer's water supply that is allowed from groundwater pumped from the basin without incurring a financial penalty. The BPP is set on an annual basis and is uniform for all producers within the groundwater basin's watershed. Groundwater pumping above the BPP is assessed an additional charge that creates a disincentive for over-producing. Currently, and for the foreseeable future, the BPP will be limited to 75 percent. The 2014 IRWD Water Resources Master Plan Update states IRWD is looking to expand groundwater production in the future to max out their groundwater production to the max BPP of 75 percent.

Non-potable Water Supply
Non-potable water meets a large portion of the landscape irrigation demands within IRWD's service area. The non-potable supply consists primarily of recycled water that has been treated at IRWD's Michelson Water Recycling Plan (MWRP) and Los Alisos Water Recycling Plan (LAWRP). Untreated water supplements the recycled water supply through native runoff and the untreated imported water purchased and delivered to Irvine Lake.

Only the section of the City northeast of Trabuco Road and southwest of Highway 241 are currently served with non-potable water. The area of City south of Trabuco Road and the area north of Highway 241 are currently being provided a potable water supply for demands that could be served by non-potable water.
El Toro Water District

ETWD provides service to residents in the southeast corner of the City. The district area is almost entirely built out with residential communities and serves the entire City of Laguna Woods as well as portions of Aliso Viejo, Laguna Hills, Laguna Woods, Lake Forest, and Mission Viejo. The Lake Forest and Mission Viejo sections of ETWD, which are the only sections east of U.S Interstate 5 (the I-5 highway), contain the highest elevations in the district and require pump stations to deliver water.

Like IRWD, ETWD is a member agency of the MWDOC. ETWD receives all its imported water supply through MWDOC.

Water Infrastructure

ETWD supplies water through approximately 50 miles of potable water lines within the City boundary. ETWD has a total of 13 pressure zones, however only four of these zones serve the City: Shenandoah Zone, Cherry Zone, R-6 Zone, and Gravity Zone. The Shenandoah, Cherry, and R-6 Zones exclusively serve the City and are referred to by ETWD as the “Panhandle”. These zones are the highest zones in elevation in the district and require pump stations to serve them directly. Gravity Zone is ETWD’s largest pressure zone by area, serving parts of Lake Forest, Mission Viejo, Laguna Hills, Laguna Woods, and Aliso Viejo.

Potable Water Supply

ETWD relies completely on imported treated water from MWDOC to meet 100 percent of potable water demands. In general, imported water from MWDOC fills the District’s 275 million gallon El Toro Reservoir (R-6), located just outside of ETWD in Mission Viejo, or directly feeds the distribution system. The majority of imported water is delivered to ETWD through the MWDOC owned Allen-McColloch Pipeline (AMP) where ETWD owns the right to 26.3cfs of capacity.

ETWD also owns 2.0 cfs (1.29 million gallons per day, or mgd) capacity in the Joint Regional Water Supply System (JRWSS), which transports MWD treated water as well. The JRWSS is a take-off from MWD’s EOCF#2. The JRWSS is managed, operated and maintained by the South Coast Water District (SCWD). Both the AMP and EOCF#2 originate at MWD’s DFP located in Yorba Linda.

ETWD has an emergency supply source available to them through the Aufdenkamp Connection Transmission Main (ATCM), which is owned and operated by the Santa Margarita Water District (SMWD). ETWD does not own any capacity in the ATCM but may receive permission from SMWD to take water from the pipeline in an emergency situation.

Non-potable Water Supply

At the time the ETWD master plan was completed, the District was recycling approximately 10 percent of the wastewater treated at the ETWD Water Recycling Plant, which amounts to approximately 0.5 mgd. The recycled water is primarily used for irrigation of the Leisure World Golf Course, which is located in the City of Laguna Woods. None of the recycled water is used in the City of Lake Forest.

Trabuco Canyon Water District

A portion of the City of Lake Forest’s Portola Hills community is the only area that lies within TCWD boundaries. However, under terms of an agreement with IRWD, IRWD supplies water to the 532 connections. TCWD reads the meters and bills the customers for water service then IRWD bills TCWD for the water supplied to these customers. The evaluation of water demands indicates these customers have an average demand of 0.24 mgd and a maximum day demand of 0.48 mgd.

Projected Potable Water Demands and Supply

Irvine Ranch Water District

The 2015 IRWD UWMP developed future water demand projections and future water supply projections for the entire utility district. These projections were used to analyze if IRWD had enough supply to meet the projected water demand. The projections can be found in Table 7-1. As shown in Table 7-1, IRWD is projected to have significantly more supply than demand in 2035.

El Toro Water District

Since ETWD is mostly built out, increases in future water demand would be through redevelopment of existing land uses. The 2004 ETWD Master Plan identifies a range of potential development scenarios that may create new water demands, however, given its age these projects will be reassessed and updated based on the results of the General Plan Update process. For reference, it is estimated that these projects will increase the average day domestic water demand by 239 gpm, or 0.344 mgd, or 0.532 cfs.

The 2004 ETWD Master Plan states that the District’s capacity in the AMP is equivalent to the maximum day demand, therefore the current supply is deemed adequate. Estimated future demands increase only slightly, therefore additional turnout capacity is not anticipated. Projected potable water demand and supply values from the 2015 ETWD UMWP are presented in Table 7-1. Since ETWD relys completely on imported water from MWDOC, the available supply presented is equal to the demand.
Trabuco Canyon Water District
As previously stated, customers within the Portola Hills community are served potable water by IRWD. The community has an average day demand of 0.24 mgd and a maximum day demand of 0.48 mgd. The community is already built out and no redevelopment has been planned. Therefore, future flows are expected to remain the same. These demand values are included in the projected demand for IRWD in Table 7-1.

Table 7-1 Projected Potable Water Demand vs. Supply (acre-feet)

<table>
<thead>
<tr>
<th>Utility District</th>
<th>Projected 2035 Demand</th>
<th>Projected 2035 Supply</th>
</tr>
</thead>
<tbody>
<tr>
<td>IRWD</td>
<td>81,996</td>
<td>111,277</td>
</tr>
<tr>
<td>ETWD</td>
<td>7,315</td>
<td>7,315</td>
</tr>
</tbody>
</table>

Source: West Yost Associates, 2018

Note: Water demands generated by the Portola Hills Community are included in the IRWD demands. IRWD demands and supply based on 2015 IRWD UMWP. ETWD demands and supply based on 2015 ETWD UMWP.

Water System Issues and Opportunities

Irvine Ranch Water District
The latest IRWD potable and non-potable water system analysis was developed and run for the 1999 IRWD Master Plan. Most of the Lake Forest service area belonged to LAWD at the time and was not included in the analysis. The only parts of the City that were included in the potable system analysis were the Foothill Ranch community and the Portola Hills community, northeast of Freeway 241. No section of Lake Forest was included in the non-potable system analysis.

IRWD relies on Sub-Area Master Plans (SAMPs) to determine infrastructure needs throughout its service area. A SAMP provides a focused evaluation of infrastructure requirements in a specific area of the IRWD service area, based upon the general evaluations performed for the master plan. It is likely that a SAMP would be developed in response to land use changes proposed by the City of Lake Forest General Plan Update.

El Toro Water District
For the 2004 ETWD Master Plan, a hydraulic model of the ETWD Water Distribution System was developed to identify any deficiencies in the system. The system was analyzed under the maximum day extended period simulation scenario for existing and anticipated future flows to identify deficiencies in the system like areas that exceed either the high or low-pressure criteria, areas that cannot provide fire flows, or pipes with velocities that exceed the criteria.

The only deficiencies identified by the model within the Lake Forest City boundary involved several areas in the R-6 Zone that could not provide adequate fire flows of 1,500 gpm at 20 psi. These areas are located near the intersection of Brookhaven and Alderwood or on Fallbrook (just across Trabuco). However, the model was used to verify that in an emergency situation, the nearby pressure reducing valve PR-20, which provides back-up supply from the Cherry Zone to the R-6 Zone, will open to assist in meeting fire flow demands.

Trabuco Canyon Water District
As discussed previously, IRWD provides water to residents in the Lake Forest Portola Hills community who are within the TCWD boundaries. Hydraulic analysis of the Portola Hills community was included in the IRWD hydraulic Analysis. There are no discrepancies in the Portola Hills community.

7.2 WASTEWATER

The City of Lake Forest does not directly provide wastewater collection or wastewater treatment to its residents. Rather, three separate, independent utility districts provide these services to residents within the City. As previously provided, Figure 7-1 shows the utility district boundaries overlaid with the City’s boundary.

State Regulatory Framework
State Water Resources Control Board/Regional Water Quality Control Board

In California, all wastewater treatment and disposal systems fall under the overall regulatory authority of the State Water Resources Control Board (SWRCB) and the nine California Regional Water Quality Control Boards (RWQCBs), who are charged with the responsibility of protecting beneficial uses of State waters (ground and surface) from a variety of waste discharges, including wastewater from individual and municipal systems. The City of Lake Forest falls within the jurisdiction of two Regional Water Quality Control Boards (RWQCBs): the Santa Ana RWQCB and the San Diego RWQCB.

The RWQCB's regulatory role often involves the formation and implementation of basic water protection policies. These are reflected in the individual RWQCB's Basin Plan, generally in the form of guidelines, criteria and/or prohibitions related to the siting, design, construction, and maintenance of on-site sewage disposal systems. The SWRCB's role has historically been one of providing overall direction, organizational and technical assistance, and a communications link to the State legislature.

The RWQCBs may waive or delegate regulatory authority for on-site sewage disposal systems to counties, cities or special districts. Although not mandatory, it is commonly done and has proven to be administratively efficient. In some cases, this is accomplished through a Memorandum of Understanding (MOU), whereby the local agency commits to enforcing the Basin Plan requirements or other specified standards that may be more restrictive. The RWQCBs generally elect to retain permitting authority over large and/or commercial or industrial on-site sewage disposal systems, depending on the volume and character of the wastewater.

Local Regulatory Framework

Irvine Ranch Water District (IRWD)

IRWD is a California Special District formed in 1961 and incorporated under the California Water Code. 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. 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.

El Toro Water District (ETWD)

ETWD is California Special District formed in 1960 and incorporated under the California Water Code. ETWD maintains 34 miles of sewer mains within the City of Lake Forest. The majority of the flow in the area within Lake Forest served by ETWD is conveyed by gravity and eventually flows across the I-5 highway via an 18-inch main southwest into Laguna Woods where the ETWD Water Recycling Plant is located.

Trabuco Canyon Water District (TCWD)

TCWD is California Special District incorporated under the California Water Code. TCWD’s wastewater collection system consists of three zones that are served by gravity sewers and lift stations, Robinson Ranch Zone, Dove Canyon Zone, and El Toro Road Zone. The portion of Lake Forest served by TCWD for sewer service is located within the El Toro Road Zone and consists of approximately 8 miles of sewer mains.
City of Lake Forest General Plan
The existing Lake Forest General Plan includes goals and policies related to wastewater. For a full list of the City’s goals and policies, please see the City’s Current General Plan.

Sewer Collection System and Wastewater Treatment
Sewer collection and wastewater treatment for the City of Lake Forest are described below. The wastewater infrastructure that serves the City is laid out in Figure 7-2.

Wastewater System Description by Utility District
As with the water system, the City’s sewer services are divided up by three utility districts, IRWD, ETWD, and TCWD. Among the three agencies, there are approximately 215 miles of sewer main within the borders of Lake Forest.

Irvine Ranch Water District
IRWD wastewater collection and treatment facilities are discussed below.

Sewer Collection System Infrastructure
IRWD provides wastewater collection and wastewater treatment to the majority of residents in the City of Lake Forest. 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.

The 2014 IRWD Master Plan Update identifies five sewer sheds for the City of Lake Forest including Alton-Bake, Bake, El Toro; Muirlands Cherry, Lake Forest, and Portola. The Alton-Bake shed, located northeast of Highway 241 flows to MWRP, while the Bake, El Toro; Muirlands Cherry, and Lake Forest sheds flow to LAWRP. The Portola shed flows into the sewer system owned by TCWD.

Wastewater Treatment Capacity
The MWRP is located on Riparian Way south of Michelson Drive, on the northwest side of the San Diego Creek in the City of Irvine. As of 2008, the MWRP had a plant capacity of 18 mgd but it was recently expanded to a capacity of 28 mgd.

The LAWRP is located on the corner of Muirlands Boulevard and Aspen Street in the City of Lake Forest. As of 2014, the LAWRP had a plant capacity of 7.5 mgd but only approximately 3.43 mgd was being conveyed to the LAWRP for treatment.

El Toro Water District
ETWD wastewater collection and treatment facilities are discussed below.

Sewer Collection System Infrastructure
The southeast portion of the City is served by El Toro Water District. ETWD’s most recent Water and Sewer Master Plan was published in 2004. ETWD maintains approximately 34 miles of sewer mains within the City of Lake Forest. The majority of the flow in the City’s ETWD area is conveyed by gravity and eventually flows across the I-5 highway via an 18-inch trunk main southwest into Laguna Woods where the ETWD Water Recycling Plant (WRP) is located.

Flow originating from the community located just south of Ralph A. Gates Elementary School flows across the I-5 highway and into Laguna Woods south of the 18-inch trunk main. The flow then is directed to the Aliso Viejo Pump Station where it is pumped to the ETWD WRP. Wastewater from a few small residential streets at the far south end of the City flows southeast into Mission Viejo to Freeway Lift Station where it joins flow from Mission Viejo and is pumped to the ETWD collection system west of the I-5 highway.
Wastewater Treatment Capacity
The current ETWD WRP has an average flow capacity of 5.4 mgd but has the ability to accommodate up to 6 mgd during max month conditions. The ETWD WRP recycles about 10 percent of the water it treats.

Trabuco Canyon Water District
TCWD wastewater collection and treatment facilities are discussed below.

Sewer Collection System Infrastructure
Residents who live in part of the Portola Hills community in the northeast section of the City are serviced by TCWD. TCWD’s most recent Master Plan was created in 1999. TCWD’s collection system consists of three zones that are served by gravity sewers and lift stations; Robinson Ranch Zone, Dove Canyon Zone, and El Toro Road Zone. The Portola Hills community falls within the El Toro Road Zone and consists of approximately eight miles of sewer mains. Flow from this community is directed into the El Toro Road Sewage Collection System, which is jointly-owned by TCWD, IRWD, and Santa Margarita Water District (SMWD). All flow from the El Toro Road Sewage Collection System is pumped into SMWD’s wastewater collection system and is eventually treated at the Chiquita Water Reclamation Plant then disposed of.

Wastewater Treatment Capacity
As discussed above, the only section of Lake Forest which TCWD provides wastewater services for is a portion of the Portola Hills community. The amount of flow capacity available to the Portola Hills Community is limited by the total capacity that TCWD owns in SMWD’s wastewater collection system and the Chiquita Water Reclamation Plant. The District owns 0.558 mgd of capacity in SMWD’s wastewater collection system and Chiquita Water Reclamation Plant. 0.428 mgd is reserved specifically for TCWD’s El Toro Road Zone. Of the 0.428 mgd reserved for the El Toro Road Zone, 0.158 mgd is reserved for its Portola Hills customers.

Projected Wastewater Flows
Projected wastewater flows for the three districts serving the City are discussed below.

Irvine Ranch Water District
The projected future wastewater flows for each wastewater treatment facility are presented in Table 7-2 along with the treatment capacity discussed above. It should be noted that IRWD is currently performing a treatment master plan to evaluate alternatives for supplying adequate treatment capacity for its service area in the future.

El Toro Water District
The ETWD 2004 Master Plan identified yearly average flow through the WRP for years 2001-2003 based on monthly influent flow data. The results show a slight decrease in average influent flow for this period. Average daily flow was 5.29 mgd in 2001, 4.82 mgd in 2002, and 4.94 mgd in 2003. The Master Plan does not break down the existing flow for wastewater generated inside the City of Lake Forest, however it does break down increased projected flow specifically for the City of Lake Forest.

The ETWD 2004 Master Plan identified four possible areas of redevelopment within the borders of Lake Forest that will impact wastewater generation. The Arbor/El Toro Road redevelopment project is a landscape project and will not generate any additional sewage. An existing light industrial area along El Toro Road is proposed to be redeveloped with a rail station, commercial property and multi-family residential. An additional 244 units are proposed to be added to the Saddleback Ranch Apartments located on Los Alisos Boulevard. The City also anticipates redeveloping the mobile home parks, approximately 120 aces, into master planned communities in the future. It is estimated that these projects will increase the average daily wastewater generation by 146.6 gpm, or 0.211 mgd.

The projected wastewater flows that are directed to the ETWD WRP are presented in Table 7-2 along with the treatment capacity.

Trabuco Canyon Water District
The 1999 TCWD Master Plan does not specifically identify any possible development inside the borders of Lake Forest. It is assumed the projected flows for the Portola Hills Community will stay below 0.158 mgd. The Portola Hills community is not included in Table 7-2.
### Table 7-2 Projected Sewer Flow vs. Treatment Capacity (Million Gallons Per Day, MGD)

<table>
<thead>
<tr>
<th>Utility District</th>
<th>Projected Build-out Flow</th>
<th>Current Total Treatment Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>IRWD MWRP</td>
<td>32.6</td>
<td>28.0</td>
</tr>
<tr>
<td>IRWD LAWRP</td>
<td>5.0</td>
<td>7.5</td>
</tr>
<tr>
<td>ETWD WRP</td>
<td>6.9</td>
<td>6.0</td>
</tr>
</tbody>
</table>

Source: West Yost Associates, 2018

### Sewer Collection System and Wastewater Treatment Issues and Opportunities

Collection system and treatment issues and opportunities are discussed below.

#### Irvine Ranch Water District

For the Existing System Analysis completed as part of the IRWD Master Plan, a model of the system was constructed in 1999 using Innovyze’s InfoSWMM. This model was updated in 2014. The hydraulic analysis indicates that the trunk main in the Alton Parkway, which conveys flows from portions of the City, has future potential capacity deficiencies. IRWD relies on Sub-Area Master Plans (SAMPs) to determine infrastructure needs throughout its service area. A SAMP provides a focused evaluation of infrastructure requirements in a specific area of the IRWD service area, based upon the general evaluations performed for the master plan. It is likely that a SAMP would be developed in response to land use changes proposed by the City of Lake Forest General Plan Update (West Yost, 2018).

#### El Toro Water District

As of the 2004 El Toro Water District Master Plan, there were no deficient pipes in the existing collection system according to the model. The 2004 El Toro Water District Master Plan identified possible development in four areas within their system inside the borders of Lake Forest. The projects were estimated to increase average daily wastewater generation created by the City by 146 gpm. The model was run again with the projected increased wastewater generation values from the four possible development areas along with a 20 percent increase due to inflow and infiltration (I&I). The results were analyzed for the WRP and the existing sewer mains and are summarized by West Yost below.

The ETWD WRP was analyzed to determine if it had sufficient capacity to accommodate the projected development. The WRP was completely reconstructed in 1998 to accommodate the increased demands from heavy commercial and residential development during the 1990’s and now has a capacity under an average flow condition of 5.4 mgd. The WRP also has the ability to accommodate maximum month flows up to 6 mgd. After a capacity analysis was completed, it was found that the WRP capacity was adequate to treat flows after construction of all proposed developments within the entire ETWD identified in the Master Plan.

Pipelines were analyzed to determine if there would be any deficiencies as wastewater flow increased due to the proposed developments. After the model was run under the future loading condition with I&I, a total of 56 pipes exceeded the criteria for d/D (flow depth/pipe diameter) of 75 percent, with 40 of those pipes having a d/D value of 100 percent (indicating surcharging). Many of the deficient pipes identified are within the City of Lake Forests borders.

#### Trabuco Canyon Water District

There are currently no deficient pipes in the Portola Hills community, the only community in the City that is being serviced by TCWD. As stated above, the amount of flow capacity is limited by the total capacity that TCWD owns in SMWD’s wastewater collection system and the Chiquita Water Reclamation Plant. However, due to its small area of influence inside the City of Lake Forest, TCWD is not expected to have any significant issues in terms of capacity in the City and development in the future will not be an issue.
7.3 STORMWATER AND FLOOD CONTROL

Lake Forest's stormwater control systems are currently owned and operated by the City.

Federal Regulatory Framework

Clean Water Act (CWA)

The CWA, initially passed in 1972, regulates the discharge of pollutants into watersheds throughout the nation. Section 402(p) of the act establishes a framework for regulating municipal and industrial stormwater discharges under the NPDES Program. Section 402(p) requires that stormwater associated with industrial activity that discharges either directly to surface waters or indirectly through municipal separate storm sewers must be regulated by an NPDES permit.

The SWRCB is responsible for implementing the Clean Water Act and does so through issuing NPDES permits to cities and counties throughout regional water quality control boards. Federal regulations allow two permitting options for storm water discharges (individual permits and general permits). Pursuant to Section 402 of the CWA and the Porter-Cologne Water Quality Control Act, municipal stormwater discharge in the City of Lake Forest is subject to the Waste Discharge Requirements (WDRs) of the MS4 Permit (Order Number R8-2016-0001) and NPDES Permit No. CAS618030.

National Pollutant Discharge Elimination System (NPDES)

National Pollutant Discharge Elimination System (NPDES) permits are required for discharges to navigable waters of the United States, which includes any discharge to surface waters, including lakes, rivers, streams, bays, oceans, dry stream beds, wetlands, and storm sewers that are tributary to any surface water body. NPDES permits are issued under the Federal Clean Water Act, Title IV, Permits and Licenses, Section 402 (33 USC 466 et seq.).

The RWQCB issues these permits in lieu of direct issuance by the Environmental Protection Agency, subject to review and approval by the EPA Regional Administrator (EPA Region 9). The terms of these NPDES permits implement pertinent provisions of the Federal Clean Water Act and the Act's implementing regulations, including pre-treatment, sludge management, effluent limitations for specific industries, and anti-degradation. In general, the discharge of pollutants is to be eliminated or reduced as much as practicable so as to achieve the Clean Water Act's goal of "fishable and swimmable" navigable (surface) waters. Technically, all NPDES permits issued by the RWQCB are also Waste Discharge Requirements issued under the authority of the CWA.

These NPDES permits regulate discharges from publicly owned treatment works, industrial discharges, stormwater runoff, dewatering operations, and groundwater cleanup discharges. NPDES permits are issued for five years or less, and therefore must be updated regularly. To expedite the permit issuance process, the RWQCB has adopted several general NPDES permits, each of which regulates numerous discharges of similar types of wastes. The SWRCB has issued general permits for stormwater runoff from construction sites statewide. Stormwater discharges from industrial and construction activities in Lake Forest can be covered under these general permits, which are administered jointly by the SWRCB and RWQCB.

Construction associated throughout the City of Lake Forest could disturb more than one acre of land surface for centralized and regional structural Best Management Practices (BMPs) (and possibly for those distributed structural BMPs larger than one acre), affecting the quality of stormwater discharges into waters of the United States. The City would therefore be subject to the National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order 2009-0009-DWQ, NPDES No. CAS000002, Construction General Permit [CGP]), as amended by Order 2010-0014-DWQ and Order 2012-0006-DWQ). The CGP regulates discharges of pollutants in stormwater associated with construction activity to waters of the United States from construction sites that disturb one or more acres of land surface, or that are part of a common plan of development or sale that disturbs more than one acre of land surface.

The CGP requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) that includes specific BMPs designed to prevent pollutants from contacting stormwater and keep all products of erosion from moving off-site into receiving waters. The SWPPP BMPs are intended to protect surface water quality by preventing the off-site migration of eroded soil and construction-related pollutants from the construction area.
State Regulatory Framework

**California Water Code**

California’s primary statute governing water quality and water pollution issues with respect to both surface waters and groundwater is the Porter-Cologne Water Quality Control Act of 1970 (Division 7 of the California Water Code) (Porter-Cologne Act). The Porter-Cologne Act grants the SWRCB and each of the RWQCBs power to protect water quality, and is the primary vehicle for implementation of California’s responsibilities under the Federal Clean Water Act. The Porter-Cologne Act grants the SWRCB and the RWQCBs authority and responsibility to adopt plans and policies, to regulate discharges to surface and groundwater, to regulate waste disposal sites, and to require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, or oil or petroleum product.

Each RWQCB must formulate and adopt a Water Quality Control Plan (Basin Plan) for its region. The regional plans are to conform to the policies set forth in the Porter-Cologne Act and established by the SWRCB in its State water policy. The Porter-Cologne Act also provides that a RWQCB may include within its regional plan water discharge prohibitions applicable to particular conditions, areas, or types of waste.

**Water Quality Control Plan (Basin Plan)**

A Basin Plan is designed to preserve and enhance water quality and protect the beneficial uses of all regional waters. The Basin Plan is a resource for the Regional Board and others who use water and/or discharge wastewater in the region that the Basin Plan is designed to cover. Other agencies and organizations involved in environmental permitting and resource management activities also use the Basin Plan. Finally, the Basin Plan provides valuable information to the public about local water quality issues.

The City of Lake Forest is split between two regions – the Santa Ana River Basin and the San Diego River Basin, approximately delineated by El Toro Road.

**Water Quality Control Plan (Basin Plan) for the Santa Ana River Basin**

The Santa Ana Region (Region 8) includes the upper and lower Santa Ana River watersheds, the San Jacinto River watershed, and several other small drainage areas. The Santa Ana Region covers parts of southwestern San Bernardino County, western Riverside County, and northwestern Orange County. The northwestern portion of the City of Lake Forest, approximately north of El Toro Road, is located within this region.

**Water Quality Control Plan (Basin Plan) for the San Diego Basin**

The San Diego Region (Region 9) occurs within the Peninsula Range Physiographic Province of California. One of the most prominent physical features in the region is the northwest-trending Peninsula Range which includes from the north to south, the Santa Ana, Agua Tibia, Palomar, Volcan, Cuyamaca and Laguna Mountains. The southeastern portions of the City fall under the requirements of the San Diego Regional Water Quality Control Board. The San Diego Region is divided into a coastal plain area, a central mountain-valley area, and an eastern mountain valley area. The southern portion of the City of Lake Forest is located within this region.

**State Water Resources Control Board (State Water Board) Storm Water Strategy**

The Storm Water Strategy is founded on the results of the Storm Water Strategic Initiative, which served to direct the State Water Board’s role in storm water resources management and evolve the Storm Water Program by a) developing guiding principles to serve as the foundation of the storm water program, b) identifying issues that support or inhibit the program from aligning with the guiding principles, and c) proposing and prioritizing projects that the Water Boards could implement to address those issues. The State Water Board staff created a strategy-based document called the Strategy to Optimize Management of Storm Water (STORMS). STORMS includes a program vision, missions, goals, objectives, projects, timelines, and consideration of the most effective integration of project outcomes into the Water Board’s Storm Water Program.
Local Regulatory Framework

Orange County Drainage Area Management Plan
The specific water pollutant control elements of the Orange County Stormwater Program are documented in the 2003 Drainage Area Management Plan (DAMP) which is the County's primary policy, planning and implementation document for municipal NPDES Stormwater Permit compliance. The DAMP was prepared and is periodically updated using a consensus building process that involving public and private sector input and public review through the California Environmental Quality Act (CEQA) process. The DAMP is the principal guidance and compliance document for the county-wide implementation of the stormwater program and provides a foundation for the Orange County Stormwater Permittees to implement model programs designed to prevent pollutants from entering receiving waters to the maximum extent practicable. Review the Orange County DAMP.

City of Lake Forest Local Implementation Plan
The City Local Implementation Plan (LIP) is the principal guidance and compliance document specific to the City of Lake Forest's jurisdiction. The LIP provides description and detail of the City's water quality program implementation activities. The LIP is designed to work in conjunction with the Orange County DAMP.

Orange County Stormwater Resource Plan
The Orange County Stormwater Resource Plan (OC SWRP) was prepared by Orange County per the requirements of SB 985. SB 985 requires the preparation of a Storm Water Resource Plan as an eligibility requirement for an entity to receive grant funding from a voter-approved bond initiative for a storm water and/or urban runoff project. Four primary significant planning efforts referenced throughout this OC SWRP are used for functional equivalency to meet the SWRP guidelines. These include (1) the 2013/2014 Reports of Waste Discharge (ROWDs), (2) Integrated Regional Watershed Management Plans for North, Central and South Orange County, (3) Watershed Infiltration and Hydromodification Management Plan (WIHMP) mapping tools, and (4) the South Orange County Water Quality Improvement Plan (WQIP).

Municipal NPDES Permit Waste Discharge Requirements
On May 19, 2009, the Santa Ana Regional Water Quality Control Board adopted Order No. R8-2009-0030, NPDES No. CAS618030. On December 16, 2009, the San Diego Regional Water Quality Control Board adopted Order No. R9-200-0002, NPDES No. CAS018740. These Municipal NPDES Permits require the permittees to continue to implement stormwater quality management programs and develop additional programs in order to control pollutants in stormwater discharges.

The City of Lake Forest is split by the jurisdictional boundaries of two California Regional Water Quality Control Boards. The northwestern portions of the City fall under the requirements of the Santa Ana Regional Water Quality Control Board, and the southeastern portions of the City fall under the requirements of the San Diego Regional Water Quality Control Board. The jurisdictional boundaries are defined by the geographic division of watersheds; however, the boundary line can roughly be delineated by El Toro Road.

City of Lake Forest Regional Water Management Plan (IRWMP)
Within Orange County, water resource management has been structured into three primary Watershed Management Areas (WMA):

- North Orange County Watershed Management Area
- Central Orange County WMA
- South Orange County WMA

The 11 watersheds in Orange County were grouped by similar characteristics into these three WMAs. The City of Lake Forest is an active participating member of the Central and South Orange County WMAs.

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. Member agencies voluntarily enter into a cooperative agreement that forms the WMA.

Governance includes a policy committee of elected officials, the Executive Committee, to oversee each Watershed Management Area. Senior staff from each member organization form a Management Committee to develop a joint work plan and oversee its implementation. Regular stakeholder forums are held to involve the public and share information across organizations within each Watershed Management Area.
These WMA groups and respective committees meet together on a regular basis to collaborate on water resource issues, including water supply, surface water quality, flood management, wastewater, and natural resource protection. Integrated Regional Water Management Plans (IRWMPs) have been completed for each WMA. Goals and solutions specific to each Watershed Management Area are formulated through consensus with participating stakeholders. Likewise, a custom slate of projects and programs is developed to address the water resource needs of each WMA. The Central and South Orange County WMAs have existing cooperative agreements in place.

City of Lake Forest General Plan

The existing City of Lake Forest General Plan identifies policies related to stormwater and/or flood control. For a full list of the City’s goals and policies, please see the City’s Current General Plan.

General Description of the Storm Drainage System

The City’s stormwater control systems are currently owned and operated by the City of Lake Forest. Until recently, the Orange County Flood Control District owned and operated the stormwater control system within the City. The City took over control of all facilities recently and is currently in the process of tracking, mapping, and analyzing the facilities.

Description of Infrastructure

At this time, the City does not have its own mapping of the stormwater facilities; however, these are currently mapped by the Orange County Flood Control District. The Drainage Facilities Basemap Index and the maps specific to Lake Forest that describe the existing stormwater structures are included in the Appendix of this report (as shown in Appendix A of the West Yost Technical Memorandum). These maps have dates ranging from 2000 to 2007.
7.4 SOLID WASTE

Provided below is a discussion of the solid wastes services that serve the City of Lake Forest.

Key Terms

**Class I landfill**: A landfill that accepts for disposal 20 tons or more of municipal solid waste daily (based on an annual average); or one that does not qualify as a Class II or Class III municipal solid waste landfill.

**Class II landfill**: A landfill that (1) accepts less than 20 tons daily of municipal solid waste (based on an annual average); (2) is located on a site where there is no evidence of groundwater pollution caused or contributed by the landfill; (3) is not connected by road to a Class I municipal solid waste landfill, or, if connected by road, is located more than 50 miles from a Class I municipal solid waste landfill; and (4) serves a community that experiences (for at least three months each year) an interruption in access to surface transportation, preventing access to a Class I landfill, or a community with no practicable waste management alternative.

**Class III landfill**: A landfill that is not connected by road to a Class I landfill or a landfill that is located at least 50 miles from a Class I landfill. Class III landfills can accept no more than an average of one ton daily of ash from incinerated municipal solid waste or less than five tons daily of municipal solid waste.

Federal Regulatory Framework

**Resource Conservation and Recovery Act**

The Resource Conservation and Recovery Act (RCRA) was enacted in 1976 to address the huge volumes of municipal and industrial solid waste generated nationwide. After several amendments, the current Act governs the management of solid and hazardous waste and underground storage tanks (USTs). RCRA was an amendment to the Solid Waste Disposal Act of 1965. RCRA has been amended several times, most significantly by the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA is a combination of the first solid waste statutes and all subsequent amendments. RCRA authorizes the Environmental Protection Agency (EPA) to regulate waste management activities. RCRA authorizes states to develop and enforce their own waste management programs, in lieu of the Federal program, if a state’s waste management program is substantially equivalent to, consistent with, and no less stringent than the Federal program.

State Regulatory Framework

**California Integrated Waste Management Act (AB 939 and SB 1322)**

The California Integrated Waste Management Act of 1989 (AB 939 and SB 1322) requires every city and county in the state to prepare a Source Reduction and Recycling Element to its Solid Waste Management Plan that identifies how each jurisdiction will meet the mandatory state waste diversion goals of 25% by 1995 and 50% by 2000. The purpose of AB 939 and SB 1322 is to “reduce, recycle, and re-use solid waste generated in the state to the maximum extent feasible.” The term “integrated waste management” refers to the use of a variety of waste management practices to safely and effectively handle the municipal solid waste stream with the least adverse impact on human health and the environment. The Act has established a waste management hierarchy, as follows: Source Reduction; Recycling; Composting; Transformation; and Disposal.

**California Integrated Waste Management Board Model Ordinance**

Subsequent to the Integrated Waste Management Act, additional legislation was passed to assist local jurisdictions in accomplishing the goals of AB 939. The California Solid Waste Re-use and Recycling Access Act of 1991 ($42900-42911 of the Public Resources Code) directs the California Integrated Waste Management Board (CIWMB) to draft a “model ordinance” relating to adequate areas for collecting and loading recyclable materials in development projects. The model ordinance requires that any new development project, for which an application is submitted on or after September 1, 1994, include “adequate, accessible, and convenient areas for collecting and loading recyclable materials.” For subdivisions of single family detached homes, recycling areas are required to serve only the needs of the homes within that subdivision.

**California’s Mandatory Commercial Recycling Law (AB 341)**

Assembly Bill (AB) 341 directed CalRecycle to develop and adopt regulations for mandatory commercial recycling. CalRecycle initiated formal rulemaking with a 45-day comment period beginning Oct. 28, 2011. The final regulation was approved by the Office of Administrative Law on May 7, 2012. The purpose of AB 341 is to reduce GHG emissions by diverting commercial solid waste to recycling efforts and to expand the opportunity for additional recycling services and recycling manufacturing facilities in California.
Beginning on July 1, 2012, businesses have been required to recycle, and each jurisdiction has implemented programs that include education, outreach, and monitoring. Jurisdictions were required to start reporting on their 2012 Electronic Annual Report (due August 1, 2013) on their initial education, outreach, and monitoring efforts, and, if applicable, on any enforcement activities or exemptions implemented by the jurisdiction.

In addition to Mandatory Commercial Recycling, AB 341 sets a statewide goal for 75 percent disposal reduction by the year 2020. This is not written as a 75 percent diversion mandate for each jurisdiction. The 50 percent disposal reduction mandate still stands for cities, counties, and State agencies (including community colleges) under AB 939. CalRecycle continues to evaluate program implementation as it has in the past through the Annual Report review process for entities subject to either AB 939.

Assembly Bill 1826 Mandatory Commercial Organics Recycling

In October 2014 Governor Brown signed AB 1826, requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week. This law also requires that on and after January 1, 2016, local jurisdictions across the state implement an organic waste recycling program to divert organic waste generated by businesses, including multifamily residential dwellings that consist of five or more units (please note, however, that multi-family dwellings are not required to have a food waste diversion program). Organic waste (also referred to as organics) means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste. This law phases in the mandatory recycling of commercial organics over time, while also offering an exemption process for rural counties. In particular, the minimum threshold of organic waste generation by businesses decreases over time, which means an increasingly greater proportion of the commercial sector will be required to comply.

Starting on January 1, 2019, businesses that generate 4 cubic yards or more of commercial solid waste per week shall arrange for organic waste recycling services. By Summer/Fall 2021, if CalRecycle determines that the statewide disposal of organic waste in 2020 has not been reduced by 50 percent of the level of disposal during 2014, the organic recycling requirements on businesses will expand to cover businesses that generate 2 cubic yards or more of commercial solid waste per week. Additionally, certain exemptions may no longer be available if this target is not met.

Senate Bill 1383 Short-Lived Climate Pollutants: Organic Waste Methane Emissions Reductions

In September 2016, Governor Brown signed SB 1383, establishing methane emissions reduction targets in a statewide effort to reduce emissions of short-lived climate pollutants (SLCP) in various sectors of California’s economy. The bill codifies the California Air Resources Board’s Short-Lived Climate Pollutant Reduction Strategy, established pursuant to SB 605, in order to achieve reductions in the statewide emissions of short-lived climate pollutants. Actions to reduce short-lived climate pollutants are essential to address the many impacts of climate change on human health, especially in California’s most at-risk communities, and on the environment.

As it pertains to solid waste, SB 1383 establishes targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020 and a 75 percent reduction by 2025. The law grants CalRecycle the regulatory authority required to achieve the organic waste disposal reduction targets and establishes an additional target that not less than 20 percent of currently disposed edible food is recovered for human consumption by 2025.

Local Regulatory Framework

City of Lake Forest General Plan

The existing Lake Forest General Plan includes goals and policies related to solid waste. For a full list of the City’s goals and policies, please see the City’s Current General Plan.

Waste Collection Services

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.

Waste Disposal Facilities

The vast majority (99%) of landfill disposed from the City of Lake Forest in 2017 (the latest year of information available) went to Frank R. Bowerman Sanitary Landfill 1. The City of Lake Forest disposed of approximately 56,548 tons at this landfill. Other landfills

Note: data provided by Calrecycle, based on information provided by County disposal reports.
that received relatively small amounts of waste from the City of Lake Forest in 2017 include:

- Antelope Valley Public Landfill (1 ton);
- Azusa Land Reclamation Co. Landfill (184 tons);
- El Sobrante Landfill (161 tons);
- Mckittrick Waste Treatment Site (25 tons);
- Mid-Valley Sanitary Landfill (241 tons);
- Olinda Alpha Sanitary Landfill (223 tons);
- Prima Deshecha Sanitary Landfill (5,408 tons); and
- Simi Valley Landfill & Recycling Center (95 tons);

Frank R. Bowerman Sanitary Landfill has a remaining capacity of 87,384,799 cubic yards, and has a current maximum permitted throughput of 4,000 tons per day. The City of Lake Forest contributed a total of 62,887 tons of waste in 2017, well below the remaining capacity of the 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. This is well below the maximum permitted throughput of 4,000 tons per day at this landfill.

Frank R. Bowerman Sanitary Landfill

The Frank R. Bowerman Sanitary landfill is a Class III, municipal solid waste landfill. Opened in 1990 near Irvine, CA, it is one of the largest landfills in the state and the ninth largest in the United States. The property spans approximately 725 acres of Irvine hillside with 534 acres allocated for waste disposal. It is permitted for 11,500 tons per day (TPD) maximum with an 8,500 TPD annual average. The landfill has enough projected capacity to serve residents and businesses until approximately 2053.

The landfill is also the site for the world’s first landfill gas to liquid natural gas project. Opened in 2016, the Bowerman Power Plant is an award-winning, public-private partnership producing electricity to 14,700 homes, as of March 2018. It generates electric power by capturing landfill gas created by the millions of tons of waste buried at the landfill. A natural byproduct of solid waste decomposition, the gas contains high amounts of methane, a prevalent greenhouse gas and source of energy. Annual energy production at this site is approximately 154,500 megawatt-hours (MWH). The Power Plant has won awards from the Association of Energy Engineers (AEE), the American Society of Civil Engineers (ASCE), and the Solid Waste Association of North America (SWANA).

Solid Waste Generation Rates and Volumes

The California Integrated Waste Management Act of 1989 (AB 939), requires each city or county’s source reduction and recycling element to include an implementation schedule showing that a city or county must divert 50 percent of solid waste from landfill disposal or transformation on and after January 1, 2000. SB 1016, passed in 2008, required the 50 percent diversion requirement to be calculated in a per capita disposal rate equivalent. AB 341, passed in 2012, requires that California increase its diversion rate to 75% by 2020.

The California Department of Resources Recycling and Recovery (CalRecycle) tracks and monitors solid waste generation rates on a per capita basis. Per capita solid waste generation rates and total annual solid waste disposal volumes for the City of Lake Forest between 2011 and 2016 are shown in Table 7-3 below.

Table 7-3 Solid Waste Generation Rates in the City of Lake Forest

<table>
<thead>
<tr>
<th>Year</th>
<th>Waste Generation Rates (pounds/person/day)</th>
<th>Total Disposal Tonnage (tons/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Per Resident</td>
<td>Per Employee</td>
</tr>
<tr>
<td>2011</td>
<td>4.6</td>
<td>10.3</td>
</tr>
<tr>
<td>2012</td>
<td>4.5</td>
<td>9.9</td>
</tr>
<tr>
<td>2013</td>
<td>4.4</td>
<td>9.6</td>
</tr>
<tr>
<td>2014</td>
<td>4.5</td>
<td>9.3</td>
</tr>
<tr>
<td>2015</td>
<td>4.4</td>
<td>9.1</td>
</tr>
<tr>
<td>2016</td>
<td>4.2</td>
<td>8.9</td>
</tr>
</tbody>
</table>

The City of Lake Forest has complied with State requirements to reduce the volume of solid waste through recycling and reuse of solid waste. As shown in Table 7-3, 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 (the latest year of information available). The City’s per capita disposal rates in 2016 were 4.2 and 8.3 pounds per person per day for residents and employees, respectively. The City’s per capita disposal rate satisfies the target rate established by CalRecycle (of 10.6 pounds/person/day for residents and 24.2 pounds/person/day for employees).

**Hazardous Waste Disposal**

Household hazardous waste are products that are flammable, corrosive, reactive or toxic. Examples of household hazardous waste include: automotive fluids, propane, paint and solvents, medical sharps, fertilizers, pool chemicals, cleaning products, pesticides, herbicides, and non-empty aerosol cans. Orange County operates year-round drop-off centers to collect household hazardous waste. The closest center to Lake Forest is in Irvine.

Separately, as of October 19, 2012, Assembly bill 1343 established the PaintCare Inc. program. The programs makes proper paint disposal more convenient for the public by setting up hundreds of new paint drop-off sites at retailers throughout the state. The closest drop-off location is currently located in Lake Forest at Sherwin-Williams (22500 Muirlands Boulevard).

Electronic waste (e-Waste) is anything with a circuit board or battery. It is illegal to dispose of e-Waste in any of the regular carts. CR&R will legally dispose of these items for a nominal fee.

Universal wastes are hazardous wastes that contain mercury, lead, cadmium, copper, and other substances hazardous to human and environment health. In general, universal waste may not be discarded in solid waste landfills or placed in any of your automated carts. Residents and businesses within Lake Forest can contact CC&R customer services to arrange a pick-up of E-waste or universal waste.

**7.5 ELECTRICITY AND NATURAL GAS**

Provided below is a discussion of the electricity and natural gas services that serve the City of Lake Forest.

**State Regulatory Framework**

*Public Utilities Commission*

The California Public Utilities Commission (PUC) is the primary State agency that regulates privately owned public utilities in California. These utilities include telecommunications, electricity, natural gas, water, railroad, rail transit, and passenger transportation companies. A primary role of the PUC is to authorize utility rate changes. It also establishes service standards and safety rules, monitors the safety of utility and transportation operations, prosecutes unlawful marketing and billing activities, and oversees the merger and restructure of utility corporations.

*Bioenergy Action Plan – Executive Order #S-06-06*

Executive Order #S-06-06 establishes targets for the use and production of biofuels and biopower, and directs State agencies to work together to advance biomass programs in California while providing environmental protection and mitigation. The executive order establishes the following target to increase the production and use of bioenergy, including ethanol and biodiesel fuels made from renewable resources: produce a minimum of 20% of its biofuels within California by 2010, 40% by 2020, and 75% by 2050. The executive order also calls for the State to meet a target for use of biomass electricity, including biomass cogeneration facilities.

*Senate Bill 14 and Assembly Bill 64*

Prior to the passage of SB 14 and AB 64 in 2009, California law required investor-owned utilities (IOUs) and energy service providers (ESPs) to increase their existing purchases of renewable energy by 1% of sales per year such that 20% of their retail sales, as measured by usage, are procured from eligible renewable resources (including biomass cogeneration) by December 31, 2010. This is known as the Renewable Portfolio Standard (RPS).

SB 14 and AB 64 require IOUs, POUs, and ESPs to increase their purchases of renewable energy such that at least 33% of retail sales are procured from renewable energy resources by December 31, 2020. For IOUs and ESPs, this is required only if the PUC determines that achieving these targets will result in just and reasonable rates.
Title 24

Title 24, Part 6, of the California Code of Regulations is also known as California’s Energy Efficiency Standards for Residential and Nonresidential Buildings. Title 24 was established in 1978 in response to a legislative mandate to reduce California’s energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The 2008 Energy Efficiency Standards went into effect on January 1, 2010. Title 24, Part 11, of the California Code of Regulations establishes the California Green Building Standards Code (CalGreen). Initially, the code requirements were voluntary; however, CalGreen became mandatory in 2011. CalGreen addresses five areas of green building: 1) planning and design, 2) energy efficiency, 3) water efficiency and conservation, 4) material conservation and resources efficiency, and 5) environmental quality. The mandatory requirements are separated into non-residential and residential projects. CalGreen also includes two optional tiers: Tier 1 and Tier 2. The tiers employ higher thresholds that jurisdictions may adopt or that projects may meet voluntarily.

Southern California Edison and Southern California Gas Company

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 only) is shown in the following table. As shown, approximately 25% of all electricity sold to California customers in 2016 were from eligible renewable energy resources.

Table 7-4 Southern California Edison – 2016 Power Content Label

<table>
<thead>
<tr>
<th>SCE Energy Resources</th>
<th>SCE Power Mix</th>
<th>California Power Mix**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eligible Renewable</td>
<td>28%</td>
<td>25%</td>
</tr>
<tr>
<td>Biomass &amp; biowaste</td>
<td>1%</td>
<td>2%</td>
</tr>
<tr>
<td>Geothermal</td>
<td>7%</td>
<td>4%</td>
</tr>
<tr>
<td>Eligible hydroelectric</td>
<td>0%</td>
<td>2%</td>
</tr>
<tr>
<td>Solar</td>
<td>10%</td>
<td>8%</td>
</tr>
<tr>
<td>Wind</td>
<td>10%</td>
<td>9%</td>
</tr>
<tr>
<td>Coal</td>
<td>0%</td>
<td>4%</td>
</tr>
<tr>
<td>Large Hydroelectric</td>
<td>6%</td>
<td>10%</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>19%</td>
<td>37%</td>
</tr>
<tr>
<td>Nuclear</td>
<td>6%</td>
<td>9%</td>
</tr>
<tr>
<td>Other</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Unspecified sources*</td>
<td>41%</td>
<td>15%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: http://www.energy.ca.gov/pcl/labels/2016_labels/Southern_California_Edison-Default.pdf

* “Unspecified sources of power” means electricity from transactions that are not traceable to specific generation sources.

** Percentages are estimated annually by the California Energy Commission based on the electricity sold to California consumers during the identified year.
SoCalGas provides natural gas to more than 21 million consumers through nearly 5.9 million meters in more than 500 communities. Most of the natural gas used in California comes from out-of-state natural gas basins. In 2012, California customers received 35% of their natural gas supply from basins located in the Southwest, 16% from Canada, 40% from the Rocky Mountains, and 9% from basins located within California. The vast majority of California's natural gas customers are residential and small commercial customers, referred to as "core" customers, who accounted for approximately 32% of the natural gas delivered by California utilities in 2012. SoCalGas is currently working on new ways to provide natural gas supplies to the growing number of automobiles in the Santa Ana region that rely on natural gas as a primary source of fuel.

Infrastructure to deliver electricity and natural gas throughout Lake Forest is currently in place. SCE and SoCalGas can generally provide these services to newer development on request.

References


Irvine Ranch Water District, 2018. Water and Wastewater Geographical Information System files received from Irvine Ranch Water District. Water Files Received 2018, Wastewater files received by West Yost Associates on 2016.


El Toro Water District, 2018. Geographical Information System files received from El Toro Water District. Received by West Yost Associates on March 5, 2018.


Trabuco Canyon Water District, 2017. Geographical Information System files received from Trabuco Canyon Water District. Received by West Yost Associates on March 9, 2018.
7.6 FIRE PROTECTION AND EMERGENCY MEDICAL

Fire services in the City of Lake Forest are provided by the Orange County Fire Authority (OCFA). OCFA provides fire protection and suppression, inspection services, paramedic emergency medical services and hazardous material response. Emergency medical transportation services in the City and the adjacent unincorporated Modjeska Canyon Area and Upper Trabuco/Cook Canyon Areas are provided by Care Ambulance Service.

State Regulatory Framework

California Occupational Safety and Health Administration

In accordance with California Code of Regulations Title 8 Sections 1270 “Fire Prevention” and 6773 “Fire Protection and Fire Equipment,” the California Occupational Safety and Health Administration (Cal/OSHA) has established minimum standards for fire suppression and emergency medical services. The standards include, but are not limited to, guidelines on the handling of highly combustible materials, fire hose sizing requirements, restrictions on the use of compressed air, access roads, and the testing, maintenance, and use of all firefighting and emergency medical equipment.

Office of Emergency Services

The State of California passed legislation authorizing the Office of Emergency Services (OES) to prepare a Standard Emergency Management System (SEMS) program, which sets forth measures by which a jurisdiction should handle emergency disasters. Non-compliance with SEMS could result in the State withholding disaster relief from the non-complying jurisdiction in the event of an emergency disaster.

Local Regulatory Framework

City of Lake Forest General Plan

The existing City of Lake Forest General Plan identifies goals and policies related to fire protection services. For a full list of the City’s goals and policies, please see the City’s Current General Plan.
Fire Protection Services

The Orange County Fire Authority (OCFA) is a regional fire service agency that serves the City of Lake Forest as well as a total of 23 cities and all unincorporated areas in Orange County. The OCFA protects over 1,790,000 residents from its 72 fire stations located throughout Orange County. OCFA Reserve Firefighters work 10 stations throughout Orange County.

The mission of the OCFA is to "enhance public safety and meet the evolving needs of our communities through education, prevention, and emergency response."

Prior to the 1980s fire services for many of the cities of Orange County and unincorporated areas were provided by the California Department of Forestry. However, in 1980, the Orange County Fire Department (OCFD) was formed to take over firefighting responsibilities for the area. Since that time the organization has continued to grow and develop. In 1995 the Orange County Fire Authority (OCFA) was formed at which time the City of Lake Forest joined the OCFA’s service area.

The OCFA now serves Orange County’s 1.8 million residents, protecting 23 cities and unincorporated areas of Orange County which amounts to 571 square miles including 175,000 acres of wildland. The OCFA has a 97.3% service approval rating for its work in educating, preventing, and responding to emergency situations. Lake Forest is currently served by Division 5, Battalion 4 of the OCFA.

In 2017, the OCFA responded to a total of 5,514 incidents. Of these calls, the vast majority were associated with provision of emergency medical services.

Table 7-5 Fire Department Incident Type Report by Type

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Population*</td>
<td>78,391</td>
<td>78,877</td>
<td>79,278</td>
<td>79,852</td>
<td>82,147</td>
<td>83,240</td>
<td>84,931</td>
</tr>
<tr>
<td>Square Miles</td>
<td>16.79</td>
<td>16.79</td>
<td>16.79</td>
<td>16.79</td>
<td>16.79</td>
<td>16.79</td>
<td>16.79</td>
</tr>
<tr>
<td>Fire Stations</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Unit Responses</td>
<td>6,900</td>
<td>7,464</td>
<td>7,580</td>
<td>7,183</td>
<td>7,763</td>
<td>6,837</td>
<td>7,150</td>
</tr>
<tr>
<td>Fire Incidents</td>
<td>92</td>
<td>76</td>
<td>69</td>
<td>78</td>
<td>80</td>
<td>98</td>
<td>90</td>
</tr>
<tr>
<td>EMS Incidents</td>
<td>3,063</td>
<td>3,272</td>
<td>3,297</td>
<td>3,384</td>
<td>3,792</td>
<td>4,013</td>
<td>4,325</td>
</tr>
<tr>
<td>Other Incidents</td>
<td>1,014</td>
<td>1,028</td>
<td>1,074</td>
<td>936</td>
<td>1,002</td>
<td>1,083</td>
<td>1,099</td>
</tr>
<tr>
<td>Difference from</td>
<td>-</td>
<td>5%</td>
<td>1%</td>
<td>-1%</td>
<td>11%</td>
<td>7%</td>
<td>6%</td>
</tr>
<tr>
<td>Previous Year</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Incidents</td>
<td>4,169</td>
<td>4,376</td>
<td>4,440</td>
<td>4,398</td>
<td>4,874</td>
<td>5,194</td>
<td>5,514</td>
</tr>
</tbody>
</table>


Fire Stations

The Orange County Fire Department (OCFD) operates three fire stations within the City of Lake Forest, as shown on Figure 7-4.

- Fire Station 19 is located at 23022 El Toro Road.
- Fire Station 42, located at 19159 Ridgeline Road.
- Fire Station 54 is located at 19811 Pauling Avenue.
Fire Department Programs

The Orange County Fire Authority provides more than fire and emergency medical services. It operates a number of programs that include information on cooking fires, disaster preparedness, drowning prevention, fire safety, smoke alarm and home escape plans, the Ready, Set, Go! Wildfire Emergency Preparedness Action Plan, the Fire FRIENDS program, and information current wildfire danger. In 2017, the OCFA participated in a total of 107 community outreach and educational events as part of its mission to enhance the public safety through education.

Fire FRIENDS

Fire FRIENDS is a collaboration of community-based partners joining together with the common goal of reducing the number of deaths, burn injuries and property destruction caused by juvenile firesetting. The OCFA provides fire safety education and intervention to children with an interest in fire or explosives, and to those who have been involved in a firesetting incident. In situations where the behaviors or concerns appear to be more serious, the Fire FRIENDS program offers a referral for a free confidential behavioral health evaluation with an experienced behavioral health professional.

Ready, Set, Go! Wildfire Emergency Preparedness

The "Ready, Set, Go!" Action Plan, available to all City of Lake Forest residents on the Fire Department’s website, is an easy to understand guide for how to make your home resistant to wildfires as well as preparing your family to leave early and safely. This process is called “Ready, Set, Go!” (RSG). The publication was prepared by the International Association of Fire Chief’s RSG! Program and the U.S.D.A Forest Service, U.S. Department of the Interior, and the U.S. Fire Administration, in collaboration with the Lake Forest Fire Department.

The Action Plan describes the risks and responsibilities associated with living in a Wildland Urban Interface and Ember Zone, which is generally the area where residential development meets natural open space. Residents in these areas and on the wildland boundary should assist firefighters by providing "defensible space" around their home, effectively creating a buffer zone by removing weeds, brush, and other vegetation. The Action Plan also provides direction on how to make your home more fire resistant by selecting certain materials and design features that protect the home against fire and assist firefighters with defending the structure. Information is included to help people prepare their own Action Guide, including a checklist for getting ready, a checklist to ensure you’re prepared to leave, and a checklist of how you should respond when it’s time to leave.

References


Orange County Fire Authority. 2018. Available at: https://www.ocfa.org/.
7.7 LAW ENFORCEMENT

Police Services for the City of Lake Forest are provided by contract with the Orange County Sheriff’s Department (OCSD). The Sheriff’s Department is responsible for providing the protection of citizens, the enforcement of laws, and crime prevention. Law enforcement services include patrol, traffic enforcement, accident analysis and investigation, parking enforcement, general and special investigations, and the Community Support Unit.

Local Regulatory Framework

City of Lake Forest General Plan

The existing City of Lake Forest General Plan identifies goals and policies related to law enforcement and police protection services. For a full list of the City’s goals and policies, please see the City’s Current General Plan.

Police Protection Services

The City of Lake Forest contracts with the Orange County Sheriff’s Department for law enforcement. Lake Forest enjoys relatively low crime rate and was recognized in 2010 by a national firm as the 7th safest City in the United States (of cities with populations between 75,000 and 100,000).

The mission of the Orange County Sheriff’s Department states: “The men and women of the Orange County Sheriff’s Department are dedicated to the protection of all we serve. We provide exceptional law enforcement services free from prejudice or favor, with leadership, integrity, and respect.”

The Orange County Sheriff’s Department Staff include: five Sergeants, three Investigators, 38 Deputies, an Investigative Assistant, five Community Services Officers, and a Crime Prevention Specialist.

Services provided through the City include direct and preventative patrol, a Special Enforcement Team, Traffic Enforcement (motorcycle and commercial), a Homeless Liaison Officer, a deputy assigned to the regional Directed Enforcement Team, School Resource Officers, Bike Patrol, Neighborhood and Business Watch programs, as well as emergency preparedness classes for the community. In addition to these services, the sheriff’s department also provides street and regional narcotics suppression programs, a Gang Enforcement Team, Mounted Unit, Special Weapons and Tactics Team (SWAT), Hostage Negotiations, the Drug Use is Life Abuse drug prevention program, and a complement of patrol-trained Reserve Deputy Sheriffs, many of whom volunteer their time for City events such as the Annual 4th of July Parade.
In addition to being responsible for the protection of citizens, the enforcement of laws, and crime prevention, the Orange County Sheriff’s Department runs a number of programs including:

- The Orange County Sheriff’s Department Citizen’s Academy
- Stay Safe OC

**The Citizen’s Academy**
The Citizens’ Academy is a 9-week informational series designed to give citizens a view into the daily operations of the Orange County Sheriff’s Department. It is an interactive course that includes instruction and field trips.

**Stay Safe OC**
Stay Safe OC is a partnership between the OC Sheriff’s Department and the various communities it serves. It involves educational programs and resources that focus on reducing and preventing crime.

Other community policing and educational programs or services offered by the City of Lake Forest include:

- Alert OC
- Don’t Make It Easy
- Homeless Program
- Neighborhood Watch
- Business Watch
- Crime Information
- Fingerprinting
- Shredding Program
- Vacation Home Checks

**Nearby Jail Facility**
The James A. Musick Facility is a one-hundred-acre minimum security facility known as “The Farm.” The facility is located in an unincorporated area of the county near the cities of Irvine and Lake Forest. The inmates housed at the facility are considered to be a low security risk and most are in jail for crimes such as driving under the influence, minor drug possession, burglary, failure to pay child support, and or prostitution. Inmates and ICE detainees who have committed violent crimes, sex crimes or mayhem are not eligible for transfer to the facility.

The James A. Musick Facility provides custodial and rehabilitative programs for 1,322 adult male and female inmates and ICE detainees. Educational programs are available which enable the inmates to receive a G.E.D. while incarcerated. In addition, educational classes are offered in subjects such as; parenting, substance abuse, HiSET, and English as a Second Language (ESL). Vocational Classes that are offered at the facility includes; Cabinetry, Welding, and Workforce Readiness. The laundry facility at Musick also serves the Theo Lacy facility as well as Orange County Juvenile Hall in addition to the laundry needs for the Musick facility.
## Crimes by Category in Lake Forest

Statistics on the number of crimes by category of crime in Lake Forest during each year from 2010 to 2015, as reported by the Federal Bureau of Investigation (FBI) Criminal Justice Information Services Division, are shown in Table 7-6 below.

### Table 7-6 Crimes by Category

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>75,780</td>
<td>78,172</td>
<td>79,166</td>
<td>79,336</td>
<td>79,748</td>
<td>80,798</td>
<td>83,511</td>
</tr>
<tr>
<td>Violent Crime</td>
<td>92</td>
<td>89</td>
<td>107</td>
<td>105</td>
<td>104</td>
<td>109</td>
<td>105</td>
</tr>
<tr>
<td>Homicide</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Rape</td>
<td>8</td>
<td>1</td>
<td>8</td>
<td>12</td>
<td>19</td>
<td>15</td>
<td>17</td>
</tr>
<tr>
<td>Robbery</td>
<td>32</td>
<td>22</td>
<td>20</td>
<td>23</td>
<td>18</td>
<td>23</td>
<td>13</td>
</tr>
<tr>
<td>Aggravated Assault</td>
<td>52</td>
<td>64</td>
<td>79</td>
<td>68</td>
<td>67</td>
<td>71</td>
<td>75</td>
</tr>
<tr>
<td>Violent Crime Rate Per 100,000 Population</td>
<td>121.4</td>
<td>113.9</td>
<td>135.2</td>
<td>132.3</td>
<td>130.1</td>
<td>134.9</td>
<td>125.7</td>
</tr>
<tr>
<td>Property Crimes</td>
<td>959</td>
<td>947</td>
<td>1,088</td>
<td>813</td>
<td>682</td>
<td>908</td>
<td>746</td>
</tr>
<tr>
<td>Burglary</td>
<td>161</td>
<td>140</td>
<td>227</td>
<td>150</td>
<td>127</td>
<td>134</td>
<td>135</td>
</tr>
<tr>
<td>Larceny-Theft</td>
<td>736</td>
<td>763</td>
<td>798</td>
<td>620</td>
<td>493</td>
<td>684</td>
<td>533</td>
</tr>
<tr>
<td>Vehicle Theft</td>
<td>62</td>
<td>44</td>
<td>63</td>
<td>43</td>
<td>62</td>
<td>90</td>
<td>78</td>
</tr>
<tr>
<td>Arson</td>
<td>5</td>
<td>8</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Property Crime Rate Per 100,000 Population</td>
<td>1,265.5</td>
<td>1,211.4</td>
<td>1,374.3</td>
<td>1,024.8</td>
<td>855.2</td>
<td>1,123.8</td>
<td>893.3</td>
</tr>
</tbody>
</table>


As shown in the table, the majority of crimes committed in Lake Forest consist of non-violent property crimes, primarily larceny-theft.

### References

City of Lake Forest. 2018. Police Services. Available at: [https://www.lakeforestca.gov/298/Police-Services](https://www.lakeforestca.gov/298/Police-Services).


Federal Bureau of Investigation. 2010. Table 8, California, Offenses Known to Law Enforcement, by City.

Federal Bureau of Investigation. 2011. Table 8, California, Offenses Known to Law Enforcement, by City.

Federal Bureau of Investigation. 2012. Table 8, California, Offenses Known to Law Enforcement, by City.

Federal Bureau of Investigation. 2013. Table 8, California, Offenses Known to Law Enforcement, by City.

Federal Bureau of Investigation. 2014. Table 8, California, Offenses Known to Law Enforcement, by City.

Federal Bureau of Investigation. 2015. Table 8, California, Offenses Known to Law Enforcement, by City.

Federal Bureau of Investigation. 2016. Table 8, California, Offenses Known to Law Enforcement, by City.

7.8 PARKS AND RECREATION

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 Sports Park and Skatepark. The City's Public Works Maintenance Division maintains the City's lakes, creeks, forests, parks, and open space. The City maintains 30 parks with the development of additional parks planned in the future. The City is currently updating 10 smaller City parks.

State Regulatory Framework

Quimby Act
The Quimby Act (California Government Code Section 66477) states that “the legislative body of a city or county may, by ordinance, require the dedication of land or imposing a requirement of the payment of fees in lieu thereof, or a combination of both, for park or recreational purposes as a condition to the approval of a tentative or parcel map.” Requirements of the Quimby Act apply only to the acquisition of new parkland and do not apply to the physical development of new park facilities or associated operations and maintenance costs. The Quimby Act seeks to preserve open space needed to develop parkland and recreational facilities; however, the actual development of parks and other recreational facilities is subject to discretionary approval and is evaluated on a case-by-case basis with new residential development. The City has adopted park fees as allowed by the Quimby Act, as described in greater detail below.

Local Regulatory Framework

City of Lake Forest Municipal Code
Title 13, Parks and Recreational Facilities, of the Lake Forest Municipal Code addresses the Parks and Recreation Commission, Operational Policies, Facilities, Skatepark Regulation, User Fees, Camping and Storage of Personal Property on Public Property, and the Naming of City Property.

City of Lake Forest General Plan
The existing Lake Forest General Plan includes goals and policies related to parks and recreation. For a full list of the City's goals and policies, please see the City's Current General Plan.

Types of Parks
The National Recreation and Parks Association (NRPA) has created a set of standards for classification of park and recreation facilities to help serve as a guide to planning. This classification system is to be used as a boilerplate set of standards to be modified to fit the individual municipality's needs. According to the NRPA classification system, parks are usually categorized according to their service area, size, function, and acres/1,000 population. The Recreation and Resources Element of the General Plan was updated by the City of Lake Forest in 2015. Below are descriptions of the three categories of parks as defined by the NRPA, as well as the standards created by the City of Lake Forest:

Mini Parks
These parks serve the recreational needs of a specific user group such as small children or senior citizens. These parks should be located within high density neighborhoods (condominium/apartment complexes, townhouse developments, or senior developments) in close proximity to the intended users and often serve as a substitute for backyards.

City standards:
• Desirable Size: 0.5 to 1.0 acre
• Service Area: < 0.25-mile radius
• Acres/Population: 0.25 to 0.5 acres/1,000 pop.

Neighborhood Parks
Neighborhood parks are designed for intense recreational activities such as: field games, court games, crafts, playground areas, picnicking, etc. These parks should be easily accessible to the neighboring population and geographically centered with safe bicycling or walking access.

City standards:
• Desirable Size: 1.0 to 10.0 acres
• Service Area: 0.25- to 0.5-mile radius
• Acres/Population: 1.0 to 2.0 acres/1,000 pop.

Community parks: This category of park generally offers a wide range of recreational amenities and facilities including: athletic complexes, swimming pools, arenas, sheltered picnic areas, playground facilities, and/or areas of natural quality for outdoor recreation. Amenities in community parks may vary depending on the park setting and the needs of the surrounding community.

City standards:
• Desirable Size: 10.0 to 25.0 acres
• Service Area: 1.0- to 2.0-mile radius
• Acres/Population: 5.0 to 8.0 acres/1,000 pop.

Within the City of Lake Forest, strict adherence to the NRPA classification system for park facilities is difficult because there are instances where parks may function as both neighborhood and community parks.

Regional Parks
This category of park generally offers a wide range of recreational amenities or allows access to open space. It attracts and serves people from all over the community as well as surrounding areas. The County of Orange owns and operates a number of regional parks including: Limestone/Whiting Wilderness Park, Heritage Hill Historical Park, and the O’Neill Regional Park. The Cleveland National Forest, located just east of the City, also offers recreational opportunities. The Lake Forest Sports Park is approximately 86 acres and attracts visitors from all over.

City Parks
A summary of existing City parks with notable amenities and locations is provided in Table 7-7 (opposite page), prepared by the City of Lake Forest. The location of these parks is also shown on Figure 7-5, which includes all public parks as well as private parks that are open to the public.

The City adopted standard for park space acreage is 5.0 acres for every 1,000 people. The City’s 2017 population was approximately 84,931. With 294 acres of parkland, the City currently provides 3.5 acres of parkland for every 1,000 people, which is below the City’s standard of 5.0 acres for every 1,000 people. The deficit in park land is currently being offset with the recreational opportunities available in the Limestone/Whiting Wilderness Park, private parks, and other nearby regional parks.

Trails
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. The location of the hiking trails, equestrian trails, and bicycle paths are shown on Figure 7-6.

References
City of Lake Forest. 2018. Parks and Recreation. Available at: https://www.lakeforestca.gov/159/Parks-Recreation.
Table 7-7 Existing Park Facilities

### CITY PARKS

<table>
<thead>
<tr>
<th>Park</th>
<th>Address</th>
<th>Acres</th>
<th>Barbecues</th>
<th>Baseball</th>
<th>Basketball</th>
<th>Multi-Use Fields</th>
<th>Outdoor Exercise Equipment</th>
<th>Picnic</th>
<th>Playground</th>
<th>Restrooms</th>
<th>Soccer</th>
<th>Tennis Court</th>
<th>Walking Path</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alton Park</td>
<td>18952 Alton Parkway</td>
<td>2.9</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Baker Ranch Community Park</td>
<td>25630 Rancho Parkway</td>
<td>8</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Baker Ranch Dog Park</td>
<td>26500 Baffin Bay Drive</td>
<td>0.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Borrego Park</td>
<td>26992 Capricole</td>
<td>11</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Borrego Overlook Park</td>
<td>21 Viejo Lane</td>
<td>1.6</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cavanaugh Mini Park</td>
<td>23782 Canaveral Road</td>
<td>0.2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cherry Park</td>
<td>22611 Cherry Avenue</td>
<td>4.5</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concourse Park</td>
<td>19831 Saddleback Ranch Road</td>
<td>7</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Darrin Park</td>
<td>25421 Jeronimo Road</td>
<td>3.1</td>
<td>6</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>El Toro Park</td>
<td>23701 Los Alisos Boulevard</td>
<td>10</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Etnies Skatepark of Lake Forest</td>
<td>20028 Lake Forest Drive</td>
<td>15.5</td>
<td>2</td>
<td>1</td>
<td>9</td>
<td>2</td>
<td></td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Foothill Ranch Community Park</td>
<td>19422 Rue De Valore</td>
<td>12.4</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td></td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heroes Park</td>
<td>25421 Jeronimo Road</td>
<td>2.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lake Forest Park</td>
<td>24000 Serrano Road</td>
<td>10.7</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td></td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Lake Forest Sports Park/Recreation Center</td>
<td>20000 Rancho Parkway</td>
<td>6.6</td>
<td>8</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Montbury Park</td>
<td>21962 Montbury Drive</td>
<td>3.5</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mountain View Park</td>
<td>24011 Saddleback Ranch Road</td>
<td>5.3</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Nature Park</td>
<td>26210 Dimension Drive</td>
<td>4.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peachwood Park</td>
<td>21132 Peachwood</td>
<td>8.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pebble Creek Park</td>
<td>26441 Pebble Creek Road</td>
<td>1.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pittsford Park</td>
<td>21701 Pittsford Drive</td>
<td>10.2</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Portola Hills Park</td>
<td>26441 Portola Hills Park</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rancho Serrano Park</td>
<td>25842 Paso Sombra</td>
<td>5.1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ranchwood Park</td>
<td>25000 Killy Street</td>
<td>1.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regency Park</td>
<td>26000 Regency Lane &amp; Osterman Rd.</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ringate Park</td>
<td>25722 Ringate</td>
<td>5</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Serrano Creek Park</td>
<td>25000 Serrano Road</td>
<td>4.4</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>13</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Sundowner Park</td>
<td>22041 Sundowners Lane</td>
<td>0.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tamarisk Park</td>
<td>22001 Tamarisk</td>
<td>11.2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Village Pond Park</td>
<td>23102 Ridge Route Drive</td>
<td>4.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vintage Park</td>
<td>25000 Serrano Road</td>
<td>4.8</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

### OTHER FACILITIES

<table>
<thead>
<tr>
<th>Facility</th>
<th>Address</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>City Hall /Community Center</td>
<td>25550 Commercentre #100</td>
<td>461-3400</td>
</tr>
<tr>
<td>Heritage Hill Historical Park</td>
<td>2151 Serrano Road</td>
<td>923-2230</td>
</tr>
<tr>
<td>Lake Forest Golf</td>
<td>23308 Cherry Avenue</td>
<td>859-1455</td>
</tr>
</tbody>
</table>
7.9 COMMUNITY FACILITIES

Lake Forest is a proud community with strong support for public schools. There are nine public schools, which form a part of the Saddleback Valley Unified District as well as a number of parochial schools.

State Regulatory Framework

Leroy F. Greene School Facilities Act of 1998 (SB 50)

The “Leroy F. Greene School Facilities Act of 1998,” also known as Senate Bill No. 50 or SB 50 (Chapter 407, Statutes of 1998), governs a school district’s authority to levy school impact fees. This comprehensive legislation, together with the $9.2 billion education bond act approved by the voters in November 1998 known as “Proposition 1A,” reformed methods of school construction financing in California. SB 50 instituted a new school facility program by which school districts can apply for State construction and modernization funds. It imposed limitations on the power of cities and counties to require mitigation of school facilities impacts as a condition of approving new development and provided the authority for school districts to levy fees at three different levels:

Level I fees are the current statutory fees allowed under Education Code 17620. This code section provides the basic authority for school districts to levy a fee against residential and commercial construction for the purpose of funding school construction or reconstruction of facilities. These fees vary by district for residential construction and commercial construction and are increased biannually.

Level II fees are outlined in Government Code Section 65995.5, allowing school districts to impose a higher fee on residential construction if certain conditions are met. These conditions include having a substantial percentage of students on multi-track year-round scheduling, having an assumed debt equal to 15–30% of the district’s bonding capacity (percentage is based on revenue sources for repayment), having at least 20% of the district’s teaching stations housed in relocatable classrooms, and having placed a local bond on the ballot in the past four years which received at least 50% plus one of the votes cast. A Facility Needs Assessment must demonstrate the need for new school facilities for unhoused pupils is attributable to projected enrollment growth from the construction of new residential units over the next five years.

Level III fees are outlined in Government Code Section 65995.7. If State funding becomes unavailable, this code section authorizes a school district that has been approved to collect Level II fees to collect a higher fee on residential construction. This fee is equal to twice the amount of Level II fees. However, if a district eventually receives State funding, this excess fee may be reimbursed to the developers or subtracted from the amount of State funding.

The Kindergarten-University Public Education Facilities Bond Act of 2002 (Prop 47)

This act was approved by California voters in November 2002 and provides for a bond issue of $13.05 billion to fund necessary education facilities to relieve overcrowding and to repair older schools. Funds will be targeted at areas of greatest need and must be spent according to strict accountability measures. Funds will also be used to upgrade and build new classrooms in the California Community Colleges, the California State University, and the University of California in order to provide adequate higher education facilities to accommodate growing student enrollment.

California Department of Education

The California Department of Education (CDE) School Facilities Planning Division (SFPD) prepared a School Site Selection and Approval Guide that provides criteria for locating appropriate school sites in the State of California. School site and size recommendations were changed by the CDE in 2000 to reflect various changes in educational conditions, such as lowering of class sizes and use of advanced technology. The expanded use of school buildings and grounds for community and agency joint use and concern for the safety of the students and staff members also influenced the modification of the CDE recommendations. Specific recommendations for school size are provided in the School Site Analysis and Development Guide. This document suggests a ratio of 1:2 between buildings and land. CDE is aware that in a number of cases, primarily in urban settings, smaller sites cannot accommodate this ratio. In such cases, the SFPD may approve an amount of acreage less than the recommended gross site size and building-to-ground ratio.

- Certain health and safety requirements for school site selection are governed by State regulations and the policies of the SFPD relating to:
  - Proximity to airports, high-voltage power transmission lines, railroads, and major roadways;
  - Presence of toxic and hazardous substances;
  - Hazardous facilities and hazardous air emissions within one-quarter mile;
  - Proximity to high-pressure natural gas lines, propane storage facilities, gasoline lines, pressurized sewer lines, or high-pressure
water pipelines;
• Noise;
• Results of geological studies or soil analyses; and
• Traffic and school bus safety issues.

**Local Regulatory Framework**

**City of Lake Forest General Plan**

The City of Lake Forest General Plan contains goals and policies related to parks and recreation. For a full list of the City’s goals and policies, please see the City’s Current General Plan.

**Public and Parochial Schools**

The City of Lake Forest is served by the Saddleback Valley Unified School District as well as several parochial schools. Table 7-8 provides a summary of the schools serving the City’s population.

**Table 7-8 Schools Serving Lake Forest**

<table>
<thead>
<tr>
<th>School</th>
<th>Grades Served</th>
<th>Address</th>
<th>Enrollment (2016-2017)</th>
<th>Average Class Size</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Public Elementary Schools</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foothill Ranch Elementary</td>
<td>K-6</td>
<td>1 Torino Drive</td>
<td>1,133</td>
<td>29.15</td>
</tr>
<tr>
<td>La Madera</td>
<td>K-6</td>
<td>25350 Serrano Road</td>
<td>626</td>
<td>27.26</td>
</tr>
<tr>
<td>Lake Forest</td>
<td>K-6</td>
<td>21801 Pittsford Drive</td>
<td>894</td>
<td>25</td>
</tr>
<tr>
<td>Olivewood Elementary</td>
<td></td>
<td>23391 Dune Mear Road</td>
<td>490</td>
<td>28.28</td>
</tr>
<tr>
<td>Ralph A. Gates Elementary</td>
<td>K-6</td>
<td>23882 Landisview Avenue</td>
<td>1,059</td>
<td>30.21</td>
</tr>
<tr>
<td>Rancho Canada Elementary</td>
<td>K-6</td>
<td>21801 Winding Way</td>
<td>696</td>
<td>26.81</td>
</tr>
<tr>
<td>Santiago Elementary</td>
<td>K-6</td>
<td>24982 Rivendell Drive</td>
<td>414</td>
<td>26.43</td>
</tr>
<tr>
<td><strong>Public Middle Schools</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serrano Intermediate School</td>
<td>7-8</td>
<td>24642 Jeronimo Road</td>
<td>1,233</td>
<td>30.38(^1)</td>
</tr>
<tr>
<td><strong>Public High Schools</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>El Toro High School</td>
<td>9-12</td>
<td>25255 Toledo Way</td>
<td>2,548</td>
<td>29.29(^1)</td>
</tr>
<tr>
<td><strong>Parochial Schools</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grace Christian</td>
<td>PK-6</td>
<td>26052 Trabuco Road</td>
<td>480</td>
<td>Pre-K: &lt;12 Elem: &lt;20</td>
</tr>
<tr>
<td>Heritage Christian</td>
<td>7-12</td>
<td>23302 El Toro Road</td>
<td>196</td>
<td>22(^2)</td>
</tr>
<tr>
<td>Lake Forest Montessori</td>
<td>PK-1</td>
<td>2535 Trabuco Rd Ste 5</td>
<td>87</td>
<td>13</td>
</tr>
<tr>
<td>Arbor Christian</td>
<td>PK-6</td>
<td>23302 El Toro Road</td>
<td>81</td>
<td>&lt;12</td>
</tr>
<tr>
<td>Abiding Savior Lutheran</td>
<td>PK-8</td>
<td>23262 El Toro Road</td>
<td>360</td>
<td>&lt;25</td>
</tr>
</tbody>
</table>


1. Average taken excluding class sizes for the following subject areas: self-contained classes & other instruction related assignments
2. For First through Sixth grade students only
Library System
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 El Toro Library is located at 24672 Raymond Way. The library is open from 10 am to 7 pm Monday through Thursday, and 9 am to 5 pm Friday through Sunday.

The Foothill Ranch Library is located at 27002 Cabriole Way. The library is open from 10 am to 7 pm Monday through Thursday, and 9 am to 5 pm on Saturday. The library is closed on Friday and Sunday.

Lake Forest City Hall
Lake Forest City Hall is currently located at 25550 Commercentre Drive. A new Civic Center is under construction that once complete will house not only City Hall, but a range of community services. The new facility will be 12.5 acres and is envisioned as a gathering place with public facilities to meet some of the community’s current unmet needs. It will include a Senior Center, City Hall, Council Chambers, Performing Arts Center, Community Policing Center, and Community Center.

The new Civic Center was designed along the following planning principles:

- Reflect Lake Forest. Emphasize the pastoral landscape, natural topography, and unique history that set Lake Forest apart from its neighbors.
- Be a destination. Develop the Civic Center complex as a destination through site location, architecture, and landscaping.
- Provide new amenities. Prioritize services at the Civic Center currently unavailable to the community.
- Accommodate multiple uses. Design the Civic Center buildings and amenities to accommodate multiple uses whenever possible.

Lake Forest Sports Park
The City of Lake Forest hosts a range of events and services at the Lake Forest Sports Park. The Sports Park includes a 27,000 square foot Recreation Center with a gymnasium, classrooms, and activity rooms. The City hosts a range of classes, youth and teen camps, special events, the preschool program, and youth and adult sports at this facility.

The 57 acre Sports Park opened in November 2014, and is one of the largest sports parks in Orange County. It includes a variety of amenities including:

- 5 Baseball/Softball Diamonds
- 3-Acre Common Lawns
- 27,000 Square Foot Recreation Center/Gymnasium
- Outdoor Exercise Equipment
- 2 Restroom and Concession Buildings
- 2 Synthetic Turf Soccer Fields with spectator seating areas
- 2 Outdoor Basketball Courts
- 8 Gazebo Picnic Structures
- 2 Playgrounds/Tot Lots
- Pet Friendly Park
- Free Wifi

References
City of Lake Forest Sports Park and Recreation Center. Available at: http://lfsportspark.com/.
Figure 7-1 Municipal Water Districts

Legend
- El Toro Water District
- Irvine Ranch Water District
- Moulton Niguel Water District
- Santa Margarita Water District
- Trabuco Canyon Water District

Sources: City of Lake Forest; Caltrans; DWR.
Map date: August 22, 2018.
This page intentionally left blank.
Figure 7-2. Water Utility Infrastructure
This page intentionally left blank.
Figure 7-3  Sewer Utility Infrastructure

Legend

Sewer Infrastructure
Sewer Mains by Diameter
- No Data
- 2-8 inches
- 10-18 inches
- 21+ inches

Sewer Lift Station
Wastewater Treatment Plant

Boundaries
- City of Lake Forest
- El Toro Water District Boundary
- Irvine Ranch Water District Boundary
- Trabuco Canyon Water District Boundary

Source: West Yost Associates 6/26/2018
Map date: August 22, 2018
This page intentionally left blank.
Figure 7-4 Fire Stations

Legend
- City of Lake Forest
- Other City Boundaries
- Orange County Fire Authority (OCFA) Station

Sources: City of Lake Forest; Caltrans. Map date: August 16, 2018.
This page intentionally left blank.
Figure 7-5  Parks

Legend
- City of Lake Forest
- Other City Boundaries
- Riding & Hiking Trails
- City Park
- County Park
- Private Park
- Private Park (Proposed)

Sources: City of Lake Forest; Caltrans. Map date: August 16, 2018.
Figure 7-6 Riding and Hiking Trails

Legend
- Closed Trail
- Unnamed Trail
- 1-Bolero Lookout Road
- 2-Red Rock Trail (Hiking Only)
- 3-Vista Lookout Trail
- 4-Cattle Pond Loop
- 5-Mustard Road
- 6-Billy Goat Trail (Hiking Only)
- 7-Whiting Spur Road
- 8-Upper Pond Trail
- 9-Cactus Hill Trail
- 10-Santiago Ranch Road
- 11-Sage Scrub Trail
- 12-Water Tank Road
- 13-Whiting Road
- 14-Sleepy Hollow Trail (Hiking Only)
- 15-Edison Road
- 16-Whiting Access
- 17-Serrano Cow Trail
- 18-Dreaded Hill Road
- 19-Line Shack Road
- 20-Live Oak Trail
- 21-Coyote Brush Road
- 22-Raptor Road
- 23-Aliso-Serrano Trail
- 24-McFadden Ranch House Access
- 25-Aliso Creek Trail
- 26-Edison Riding & Hiking Trail
- 27-Serrano Creek Trail
- 28-Borrego Trail

Sources: City of Lake Forest, California. Map date: August 16, 2018.