4.10 PUBLIC UTILITIES

This section contains a description and analysis of the impacts the 2030 General Plan may have on water, wastewater, solid waste, and storm drainage facilities and private utilities in Live Oak. The section also provides a brief analysis of regulations and plans pertinent to the implementation of the 2030 General Plan.

4.10.1 REGULATORY SETTING

The following programs, policies, and regulations direct the development and operation of utilities in the Live Oak Planning Area.

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

No federal plans, policies, regulations, or laws pertaining to public utilities and services are applicable to the proposed project.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

Water Supply Services and Management

Porter-Cologne Water Quality Control Act of 1969

The 1969 Porter-Cologne Water Quality Control Act first established the SWRCB and the nine RWQCBs as the primary state agencies with regulatory authority over water quality. Under the act, the SWRCB has the ultimate authority over state water rights and water quality policy, and the RWQCBs are responsible for overseeing water quality on a day-to-day basis at the local/regional level.

California Water Code

The California Water Code outlines the general state authority and responsibilities over water in California. It establishes the Department of Water Resources (DWR) as the primary research, supply development, and management agency for water. The Water Code identifies the State Water Resources Control Board (SWRCB) as the decision making body for overall water quality policy development and for dealing with water rights issues. The nine RWQCBs are charged with regulation, enforcement, and protection of the beneficial uses of water.

Surface Water Rights

The SWRCB has jurisdiction over all water rights in California under the common-law public-trust doctrine. Section 1735 of the California Water Code provides the regulatory framework for long-term transfers, subject to the requirements of CEQA.

Appropriative water rights allow the diversion of surface water for beneficial use. Before 1914, appropriative water rights involved a simple posting to describe intent and scope of water use, diversion, or construction of diversion activities. Since 1914, the sole method for obtaining appropriative water rights has been to file an application with the SWRCB. Before it can issue a water rights permit, the SWRCB must demonstrate the availability of unappropriated water. Both pre- and post-1914 appropriative water rights may be lost if the water has gone unused for a period of 5 years.

Riparian water rights apply only to lands that are traversed by or border on a natural watercourse. Riparian owners have a right (correlative with the right of each other riparian owner) to share in the reasonable beneficial use of the natural flow of water that passes the owners land. No permit is required for such use. Riparian water must be used reasonably, beneficially, and solely on riparian (adjacent) land and cannot be stored for later use.

Groundwater Rights

The state requires that counties enact regulations covering well design to protect groundwater quality from surface contamination, and to ensure proper well construction and development for domestic use. However, these regulations are not related to the quantity of water extracted. Counties can also enact an ordinance to ensure that wells developed on one property do not interfere with the use of adjacent wells. In some areas of overuse, and where there is a high dependence on groundwater, groundwater rights are determined judicially in what are termed "adjudicated groundwater basins."

Senate Bill 610

Senate Bill (SB) 610 (Chapter 643, Statutes of 2001; Water Code Sections 10910–10915) made changes to the Urban Water Management Planning Act to require additional information in UWMPs if groundwater is identified as a source available to the supplier. The information required includes a copy of any groundwater management plan adopted by the supplier, a copy of the adjudication order or decree for adjudicated basins, and if nonadjudicated, whether the basin has been identified as being overdrafted or projected to be overdrafted in the most current DWR publication on that basin. If the basin is in overdraft, that plan must include current efforts to eliminate any long-term overdraft. A key provision in SB 610 requires that any project subject to CEQA supplied with water from a public water system be provided a specified water supply assessment for large developments (e.g., projects of 500 or more residential units, 500,000 square feet of retail commercial space, or 250,000 square feet of office commercial space), except as specified in the law. These assessments, prepared by "public water systems" responsible for service, address whether there are adequate existing or projected water supplies available to serve proposed projects, in addition to urban and agricultural demands and other anticipated development in the service area in which the project is located.

Where a WSA concludes that insufficient supplies are available, the WSA must lay out steps that would be required to obtain the necessary supply. The content requirements for the assessment include, but are not limited to, identification of the existing and future water suppliers and quantification of water demand and supply by source in 5-year increments over a 20-year projection. This information must be provided for average normal, single-dry, and multiple-dry years. The absence of an adequate current water supply does not preclude project approval, but does require a lead agency to address a water supply shortfall in its project approval findings.

Senate Bill 221

SB 221 (Chapter 642, Statutes of 2001; Government Code Section 66473.7) prohibits approval of subdivisions consisting of more than 500 dwelling units unless there is verification of sufficient water supplies for the project from the applicable water supplier(s). This requirement also applies to increases of 10% or more of service connections for public water systems with less than 500 service connections. The law defines criteria for determining "sufficient water supply" such as using normal, single-dry, and multiple-dry year hydrology and identifying the amount of water that the supplier can reasonably rely on to meet existing and future planned uses. Rights to extract additional groundwater, if used for the project, must be substantiated.

Groundwater Management Act

The Groundwater Management Act, Assembly Bill 3030 (AB 3030), signed into law in 1992, provides a systematic procedure for an existing local agency to develop a groundwater management plan. This section of the code provides such an agency with the powers of a water replenishment district to raise revenue to pay for facilities to manage the basin (extraction, recharge, conveyance, quality). In some basins, groundwater is managed under other statutory or juridical authority.

Urban Water Management Act

The California Urban Water Management Planning Act of 1983 requires that each urban water supplier, providing 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, shall prepare, update and adopt its urban water management plan at least once every five years on or before December 31, in years ending in five and zero. The City of Live Oak is preparing an Urban Water Management Plan (UWMP) as of the writing of this document.

Wastewater Services and Stormwater Drainage

The SWRCB, in coordination with two of the nine RWQCBs, regulates water quality, including issuance of discharge permits. The RWQCBs issue waste discharge requirements for major point-source discharges, such as municipal wastewater treatment plants and industrial facilities. The RWQCBs also issue and monitor enforcement actions when water quality standards are violated, and oversee activities necessary to address those enforcement actions.

Solid Waste

California Integrated Waste Management Act

To minimize the amount of solid waste disposal, the State Legislature passed the California Integrated Waste Management Act (CIWMA) of 1989 (AB 939), effective January 1990. According to the CIWMA, all cities and counties were required to divert 25% of all solid waste from landfill facilities by January 1, 1995, and 50% by January 1, 2000. Each city is required to develop solid waste plans demonstrating integration of the CIWMA plan with the County plan. The plans must promote (in order of priority) source reduction, recycling and composting, and environmentally safe transformation and land disposal.

Regional and Local Plans, Policies, Regulations, and Ordinances

There are no regional or local plans, policies, regulations, or ordinances applicable to implementation of the 2030 General Plan.

4.10.2 Environmental Setting

Water Supply, Quality, and Distribution

Water in Live Oak is currently supplied entirely from groundwater sources. The Live Oak groundwater wells are located within the Sacramento Valley Groundwater Basin, East Butte Subbasin. According to California's Groundwater Bulletin 118, as updated February 2005, the estimated storage capacity of the subbasin to a depth of 200 feet is approximately 3,128,959 acre-feet. It is estimated that groundwater extractions from the subbasin for agricultural, municipal, industrial, and environmental wetland uses total 180,000 acre-feet annually. The City of Live Oak uses approximately 1,496 acre-feet per annum (AFA), or less than 1 percent of the total annual subbasin withdrawals, and approximately 0.04 percent of the total estimated storage capacity of the basin.

Water Supply Capacity and Well System

Water supply capacity from the City's wells depends on specific operating conditions, particularly groundwater level and system pressure. The City owns and operates five groundwater wells that supply water for domestic uses and fire flow. Table 4.10-1 below describes the location, depth, capacity, and water quality issues of each well.

All of the wells are equipped with pumps. Wells 1A and 2A were reconstructed and updated to include a new 1.4 million gallon water storage tank and booster pump station. Wells 1a and 2a use submersible pumps, which

provide adequate pressure for discharge to the storage tank. Pumps at the other wells discharge into hydro-pneumatic tanks. The City relies on Wells 1a and 2a for the majority of the water produced within the City, utilizing wells 3 and 4 provide supplemental water supplies. Well 5 is no longer in service.

Table 4.10-1
Wells

Source	Status	Reliable Capacity (gpm)	Depth to Static Water (ft)	Depth to Pumping Water (ft)	Current Water Quality Concerns
1A	Active	650	11	51.5	Nitrate
2A	Active	700	11	47.0	Nitrate
3	Active	750	11	37.0	-
4	Active	935	11	Not Available	-
Booster PS	Active (assumes one pump off)	4,200	-	-	-
Total System Pumping Reliable Capacity		5,885	-	-	-

Source: City of Live Oak 2009, Urban Water Management Plan (Draft) 2009. ECO LOGIC, Draft Water Master Plan 2009a.

All wells have a flow meter that keeps track of the water produced. Each well is locally controlled, and there is no centralized operating or monitoring system. The City adds a chlorine solution to its water through each of its wells as a preventative measure against potential bacteriological contamination of the distribution system. Chlorine facilities at all of the sites consist of a chemical feed diaphragm pump and a storage tank. The City's storage tank and booster pump station provide additional pumping capacity and emergency storage for the entire water system. The booster pump station has a reliable capacity of 4,200 gallons per minute (gpm). The pumps operate on a variable frequency drive, which varies the speed of the pumps to maintain the distribution pressure at the set point, which is typically around 60 pounds per square inch (psi).

Peak pumping capacity of the City's active wells is approximately 4,400 gpm. The total pumping reliability capacity is approximately 7,605 gpm, which does not include the water pumped by Wells 1A and 2A, since they feed the water storage tank. In 2007 the City obtained approximately 1,496 AFA from municipal wells. The City is currently at approximately 65% of the pumping capacity for the existing distribution system.

Water Demand and Supply

Water use in Live Oak has increased with both population and economic growth. Residential, commercial and industrial developments are the primary water users, but schools and other public facilities are also significant water consumers. Currently, there are approximately 2,210 service connections to the City's water system.

According to the 1994 General Plan, water demand in Live Oak was estimated to be 260 gallons per capita per day. Per capita water production ranged from 151 to 179 gallons per day per person between 2006 and 2008.

An AB 1600 nexus study, prepared in 2005, indicated that water demand in Live Oak would reach 2,486,942 gallons per day by 2010, based on per-capita use and on projected population and employment growth. The City would have adequate water capacity under existing conditions to support average annual demand but not maximum daily demand (which conservatively includes approved development that is not yet built). Table 4.10-2 below shows a comparison of existing water demand and supply, along with capacity.

Table 4.10-2
Existing Demand and Supply Comparison

Scenario	Reliable Supply	Annual Average Demand	Maximum Day Demand[1]	Maximum Day + Fire Flow Demand[2]	Peak Hour Demand[3]	Surplus
Existing Development-Annual Average (gpm)	2,100 [4]	1,310	-	-	-	790
Existing Development-Maximum Day (gpm)	2,100 [5]	-	3,320	-	-	-1,220
Existing Development-Maximum Day+ Fire (gpm)	5,885 [6]	-	-	7,397	-	-1,435
Existing Development-Peak Hour (MG)[3]	1.4 [6]	-	-	-	1.2	0.2

Notes: gpm = gallons per minute; MG = million gallons

[1] Demand includes committed unbuilt demands and is therefore higher than actual demand.

[2] Based on a fire flow of 4,000 GPM.

[3] Per Title 22, Chapter 15, Section 64552, peak hour needs to be met for four hours.

[4] Includes Wells 1A, 2A, and 3. Well 4 is not included, because it is the largest source per Title 22, Chapter 15, Section 64554. The booster pump station is not included because average day and maximum day supply must come from the wells.

[5] Includes Wells 1A, 2A, 3, and 5. Well 4 not included because it is the largest source per Title 22, Chapter 15, Section 64554,R-13-03,. The booster pump station is not included because maximum day supply must come from the wells.

[6] Includes Wells 3 and 4 and booster pump station. The largest source out of service is the standby pump at the booster pump station.

Source: ECO: LOGIC 2009a.

California experienced severe droughts during the periods of 1977 and 1987 to 1991. The City had sufficient water supplies during these drought periods without any major issues or shortfalls. According to California's Groundwater Bulletin 118, updated February 2004, groundwater level fluctuations for composite wells within the southern portion of Butte County, near Live Oak, average about 4 feet during normal years and up to 10 feet during drought years. The groundwater fluctuations for wells constructed in the confined and semi-confined aquifer system average 4 feet during normal years and up to 5 feet during drought years.

No water level data is available for the City of Live Oak municipal wells. However, hydrographs for nine wells in the area surrounding Live Oak were obtained that have water level data extending back as far as 1947 and up to 2005. The monitoring well groundwater elevations indicate a groundwater flow direction to the south, at a gradient of about 2.4 feet per mile.

Similar to Bulletin 118, these data show that groundwater fluctuations are typically no more than 10 feet. Six of the wells do not show any long-term decline in groundwater elevations. In the other wells, long-term declines appear to be less than five feet. In the drought period of 1987 to 1991, additional declines in individual years of two to four feet are visible only in some wells, but water level recoveries in winter months were generally not as pronounced as in wetter years. The three closest wells show no long term water level declines, but do show decreased recharge during the drought period. However, these decreases are generally on the order of six feet or less. Trend lines for two of the three wells actually indicate rising water levels over the 60 year period. Based on these data, there are no reliability issues with the subbasin at current pumping rates.

Long-term pumping at existing rates has not significantly impacted the aquifer in the area of the City of Live Oak. Even during extended drought years, such at 1987 to 1991, temporary water level drops were limited to less than 10 feet.

The aquifer appears to have the capacity to supply additional production. Not including recharge from irrigation, only a small percentage of the storage capacity in the upper 200 feet of the aquifer is tapped. It appears that properly spaced wells will be able to provide the required capacity, although water quality issues may be an issue in some areas.

Distribution System

The City's water distribution system is made up of approximately 30.4 miles of water pipelines ranging from 2 to 16 inches in diameter located throughout the City. The pipelines are constructed from various types of materials including asbestos cement, galvanized iron, ductile iron and poly vinyl chloride (PVC) piping. The system is primarily a looped system, which provides flexibility, improves water quality, and reduces pressure losses throughout that system. City staff flush the mains approximately 24 hours per month with special attention to dead ends in the system, which may have stale water resulting in degradation of the water quality. Water pressure in the system is considered to be good.

In the last few years, the City has replaced many of the smaller diameter asbestos concrete, cast iron, and galvanized steel pipes. The intent of the pipe replacement was to reduce the water system losses that may be caused by the older pipelines and to increase system conveyance capacity.

Water Quality

Public water supplies must meet Title 22 water quality standards established by the State of California to protect the public health and to assure consumer acceptance. Monitoring and testing of the City's water supply has been carried out in accordance with the applicable requirements.

Well 4 had taste and odor issues until arsenic treatment was installed. No other taste and odor problems have been reported for the other existing municipal wells.

Based on the number of active water service connections, the City collects water samples for bacteriological analysis every month. There have been no positive bacteriological samples collected since October 2004.

Wells 1 and 2 have had positive samples for organics 1,2-Dibromoethane (EDB) and 1,2-Dibromo-3-chloropropane (DBCP). However, the re-drilled wells, Wells 1A and 2A, had undetectable amounts of EDB and DBCP in their initial sampling in 2006 and continue to be sampled every three years.

The initial sampling for Well 2A on February 28, 2006 detected 1.06 µg/L methyl tertiary butyl ether (MTBE) that was confirmed in a second sample on April 21, 2006 with the result of 1.73 µg/L. The next quarterly sampling on October 9, 2006 produced a non-detectable MTBE result. Well 2A will continue to be sampled every three months for MTBE while the other wells will be sampled every six years.

Arsenic is a natural occurring element originating from erosion of natural deposits and is known to cause various types of cancer, harm the central and peripheral nervous systems, as well as heart and blood vessels, and cause serious skin problems with prolonged exposure to low concentrations in potable water. Arsenic has a Primary Maximum Contaminant Level (PMCL) which was lowered from 50 parts per billion (µg/L) to 10 µg/L in 2006. To address the lower arsenic regulation, treatment has been added to Wells 1A, 2A, 3, and 4. After adding treatment, these wells have been in compliance with the arsenic standard.

Historically, water pumped from Wells 1 and 2 have had higher nitrate concentrations than water from Wells 3 and 4. Nitrate concentration in Well 1 ranged from 8.9 mg/L in a sample taken on February 14, 1995 to 106.8 mg/L in a sample taken on April 7, 2005. This maximum value in Well 1 was the only recorded violation of the 45 mg/L MCL and based on subsequent sampling is considered to be an erroneous result, either due to lab or sampling errors. However, Well 1 has had other recent results of up to 35.6 mg/L taken on June 16, 2005, which is close to the MCL. The nitrate concentration in Well 2 ranged from 13.7 mg/L in a sample taken on April 4,

1995 to 41.25 mg/L in a sample taken on August 22, 2005. Natural nitrate concentrations in groundwater typically range from 0.1 to 10 mg/l. Common sources of nitrate in groundwater include contamination from human or animal wastes, and leaching of salts from fertilizers used in agriculture, and natural occurring salts in the groundwater.

Wellhead Treatment

Wellhead arsenic treatment was added in 2008 to four well sites including 1A, 2A, 3, and 4. At the 1A/2A site, a backwash tank was also added to allow recycling of backwash water. However, the City currently does not recycle the backwash water. The backwash water is sent to a sand drying bed to separate the solids that are sent to the landfill. Due to site constraints at well sites 3 and 4, the backwash water and sludge is disposed of into the existing sewer and treated at the City's wastewater treatment plant.

WASTEWATER

Description of Collection System

Because Live Oak is located in an area of very level topography, the City's sewer system is constructed as a network of gravity pipes and pump stations with force mains to convey raw wastewater to the wastewater treatment plant, which is located in the southwest portion of the City. The collection system consists of five distinct sub-basins, each served by a pump station. There are approximately 131,000 lineal feet (24.9 miles) of gravity and pressure pipe within the collection system. The first sewer infrastructure, approximately 30% of the current system, was constructed in 1952. Pipe materials include vitrified clay, asbestos cement, PVC, and ductile iron pipe. Pipe sizes range from 4" to 21" diameter. Depth of sewer lines ranges from 2.5 to 18 feet, as measured below manhole rims.

The density of development generates relatively low dry weather flow-rates, with the result that pipe diameters are not large. Smaller diameter pipes require steeper slopes to maintain minimum flow-rates and prevent sewer line plugging. The steeper pipe slopes, in conjunction with level topography, result in a distributed network of pump stations located approximately ½ mile apart in order to keep sewer line depths at reasonable levels. Groundwater depths range from 10–15 feet below the surface. The complications of installing and maintaining sewer lines below the groundwater table may have been another factor in trying to minimize the installation of deep sewer lines.

Condition of Collection System

The City is currently in the process of completing an extensive study of the condition of the existing sewer system. Although details regarding the exact system are not known at this time, it is known that the system does experience significant groundwater infiltration (GWI) and at least some parts of the collection system are in poor condition. In addition to the condition assessment, the City is also in the process of finalizing a capacity analysis to evaluate the impacts of peak wet weather flows on capacity in the collection system. Results from the capacity analysis will be utilized in conjunction with the condition assessment information to complete and refine the capital improvement program.

Pump Stations

There are currently six wastewater pump stations in the Live Oak collection system. Table 4.10-3 lists the pump stations and range of potential flow rates. The Date Street and Ash Street Pump stations deliver flow into a common force main, so there is a range of flow potential for these pump stations based on whether there is one or two pumps in operation, and whether the stations are pumping at the same time.

Table 4.10-3 City of Live Oak Wastewater Pump Stations		
Name	No. Pumps	Capacity (gpm)
Date Street Pump Station	3	1,900–2,540
Ash Street Pump Station	3	1,760–2,080
Peachtree Pump Station	2	N/A
Kola Pump Station	2	2,920–3,800
Musgrave Pump Station	2	700
Pennington Pump Station (serves portion of Ash Street collection area)	2	N/A
Source: ECO: LOGIC 2005.		

Wastewater Treatment and Disposal Facilities

Description of Existing Treatment System

The City of Live Oak operates and maintains its sewer system and wastewater treatment plant (WWTP). The majority of Live Oak residents are connected to the City's sewer system and WWTP for wastewater treatment services. Some individual septic systems are still in use throughout the City. However, the City's Municipal Code Section 13.32 requires that individual septic systems connect to the City's sewer system when Live Oak facilities are within 200 feet of the septic system.

The Live Oak WWTP is sized to accommodate 1.4 million gallons/day (MGD) average dry weather flow (ADWF), and a peak daily flow of 0.8 MGD. In 2008, existing development (8,500 population) generated approximately 0.76 MGD on an average dry weather flow basis (ECO:LOGIC 2009b).

The Live Oak WWTP provides secondary treatment of raw wastewater through a series of aerated ponds and lagoons, discharging disinfected effluent to an irrigation drain (Reclamation District 777 Lateral Drain Number 1). From Lateral Drain Number 1, effluent flows through the East Intercepting Canal and the Wadsworth Canal to the Sutter Bypass and the Sacramento River.

The effluent is disinfected with chlorine. The WWTP has been issued a Cease and Desist Order (Order No R5-2004-0097) by the RWQCB due to high levels of aluminum, ammonia, diazinon, and organochlorine pesticides in the effluent. The WWTP is currently not able to consistently comply with the aluminum, ammonia, diazinon, and organochlorine pesticide effluent limitations in their Waste Discharge Requirements (WDR) Order. Furthermore, the new discharge permit contains effluent discharge requirements that can only be achieved with tertiary treatment. The design for a new activated sludge tertiary treatment plant to address this is complete, as required by the Cease and Desist Order and new discharge permit.

The WWTP upgrade is planned for completion in December of 2011. The City's first phase WWTP upgrade is specifically designed to ensure the City can meet water quality related regulatory requirements. The new treatment facilities associated with this upgrade include:

- new odor control facilities;
- a new pump station;
- a new secondary treatment process;

- tertiary treatment process consisting of a chemical feed and storage facility modifications, new rapid mix and flocculation basins, and a dual train cloth media filter system;
- new ultraviolet disinfection system consisting of a single channel with five UV banks; and
- Other improvements.

The second phase of improvements is planned for completion in the year 2019. These improvements are designed to meet anticipated regulatory requirements. Components in the second phase include:

- Relocating effluent discharge via construction of an effluent pump station, pipeline, and outfall diffuser in the Feather River to meet new regulatory requirements through dilution.
- Upgrading the existing facilities to provide biological nutrient removal by constructing new anoxic basins.
- Constructing new grit removal facilities consisting of a dual train vortex grit removal system with a grit pump and a grit classifier and hydro cyclone.

The third phase of planned improvements to the WWTP would be implemented based on the need to increase capacity. The City could increase ADWF treatment capacity from 1.4 Mgal/d to 2.8 Mgal/d through the addition of new process trains. Facility upgrades include construction of a new influent pump station and headworks facilities and new solids handling facilities, in addition to a number of other identified improvements. A fourth phase of capital improvements at the WWTP would expand capacity from 2.8 MGD to 4.2 MGD. Please refer to the City's wastewater master plan, under separate cover, for more detailed information.

SOLID WASTE

The Yuba-Sutter Regional Waste Management Authority (RWMA) has authority over solid waste collection and disposal services in the City of Live Oak, as well as the Cities of Marysville, Wheatland, and Yuba City, and all of the unincorporated areas of both Yuba and Sutter Counties through a Joint Powers Agreement. Yuba-Sutter Disposal, Inc. (YSDI) provides the actual solid waste collection and disposal services for the RWMA. YSDI currently has more than 30,000 residential customers and 5,000 business customers located throughout Sutter and Yuba Counties (Sutter County 2008: 3.1-66). In December 2005, YSDI had 1,753 residential customers and 87 commercial customers in Live Oak (City of Live Oak 2006: PSF-19). In 2007, the entire jurisdiction disposed of approximately 146,000 tons of solid waste (CIWMB 2008). The Ostrom Road Landfill, near Wheatland in Yuba County, is the primary destination for solid waste collected by YSDI. In 2006, 137,989 tons of solid waste were delivered to the Ostrom Road Landfill from the Yuba-Sutter RWMA jurisdictions, include 5,262 tons from Live Oak (Sutter County 2008: 3.1-68-3.1-69). In 2007, the Ostrom Road Landfill was permitted to accept 3,000 tons of solid waste per day and had an estimated remaining capacity of 40,600,000 cubic yards (97.1%). The expected closure date of this facility is December 2066 (CIWMB 2008).

NATURAL GAS

The Pacific Gas and Electric Company (PG&E) provides the Live Oak Planning Area with natural gas service. According to the Background Report prepared in 2006 for this 2030 General Plan, there are multiple high pressure gas lines in the Live Oak area. One is under the entire length of Archer Avenue. Another heads north out of town on Metteer Road and under Sheldon Avenue between Pennington Road and Archer Avenue. Other lines lie under Kent Road, Bishop Avenue, Luther Road, Township Road, Billings Road, Campbell Road, Paseo Avenue, Orchard Way, north Larkin Road, and Pennington Road from Sheldon Avenue west out of the area. There also high pressure gas lines under multiple side streets throughout the city. Another high pressure line loops from Larkin Road under Nevada Street to the north end of the city, where it heads south under SR 99 to Nevada Street again (City of Live Oak 2006).

There are also transmission lines in the Live Oak area. One transmission line enters the area from the north under SR 99, continues under Nevada Street from the north end of the city to Larkin Road, continues south down Larkin Road to SR 99 at the south end of the city, and continues south out of the area under SR 99. A spur of transmission line traverses from this line east under Pennington Road from Larkin Road to Metteer Road.

ELECTRICITY

PG&E serves all of the Planning Area for electricity service. According to the Background Report prepared for this 2030 General Plan, the Live Oak electricity substation is located just north of Pennington Road between Larkin Road and SR 99 (City of Live Oak 2006).

Some of the main lines through the Live Oak area run along the following streets: Larkin Road; Archer Avenue; Pennington Road west of Larkin Road; Pennington Road east of Orchard Way; and, along Richards Road continuing south beyond the dead end of Richards Road. Another main line heads west on Kola Street from the Larkin Road main line, turns north along SR 99, heads south on Nevada to the northern edge of the city limits, turns west to N Street, and follows N Street south to the Pennington Road main line. Another main line heads west on Elm Street from the Larkin Road main line to California Street, north on California Street to Gum Street, west on Gum Street to N Street, south on N Street to Fir Street, west on Fir Street to P Street, and north on P Street to the main line on Pennington Road. Another main line heads west from the Larkin Road main line along Ivy Street and turns south along SR 99 to the Pennington main line. All of these main lines are above ground. Other, smaller above-ground lines branch off of these main lines and traverse through the neighborhoods throughout Live Oak. Other small below-ground lines also traverse neighborhoods throughout Live Oak.

COMMUNICATIONS SERVICE (TELEPHONE, DSL)

AT&T is the incumbent telephone service provider in the entire Live Oak Planning Area, meaning that they are the service provider that is legally bound to provide service where no other service provider voluntarily provides service. AT&T has a policy of not revealing line locations, plans for new facilities, or demand levels to the public.

4.10.3 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines, an impact on public utilities is considered significant if the proposed project would:

- exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- exceed water supplies available to serve the project from existing entitlements and resources and require new or expanded entitlements;
- result in a determination by the wastewater treatment provider which serves or may serve the project that it exceeds available capacity to serve the project's projected demand, in addition to the provider's existing commitments;

- be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs; or

- fail to comply with federal, state, and local statutes and regulations related to solid waste.

Impacts on utility infrastructure that would result from buildout of the 2030 General Plan are evaluated at a programmatic level by comparing existing infrastructure, its available capacity, and ability to serve future demand on utilities that would be caused by buildout. Once future demands have been estimated, the analysis determines whether the increased demand would result in the need for new or expanded facilities, the construction of which could possibly result in adverse impacts on the physical environment. Goals and policies of the 2030 General Plan that would reduce these impacts have been identified.

IMPACT ANALYSIS

IMPACT 4.10-1 New Water Facilities. *Implementation of the 2030 General Plan would result in population growth that would require the construction of new water supply and distribution facilities, such as groundwater wells. Construction of these facilities could potentially result in adverse impacts on the physical environment. This impact would be* ***less than significant****.*

New infrastructure will be needed to meet the City's projected water demand through 2030. The City estimates that demand for existing development and approved development that is not yet built would be approximately 1.9 MGD. The City estimates that water demand after full buildout of the 2030 General Plan within existing City limits would be approximately 2.5 MGD on an annual average basis. With full buildout of the entire 2030 General Plan, annual average water demand is estimated at approximately 10.5 MGD.

A variety of improvements will be needed to serve demand accommodated under the 2030 General Plan, including new groundwater wells, water storage tanks, water mains, and new pipelines. The improvements will be directed by the City's Water Master Plan (currently being drafted) to address reliable capacity of the water supply to meet short-term peaks and reliable capacity of the water supply to meet the maximum day demand condition (highest expected demand over a 24-hour period).

The phasing of water infrastructure improvements will depend on the pace of urban development within the Planning Area, which is not knowable at this time. Proposed water supply improvements (e.g., new wells, treatment and storage) will be planned, designed, and constructed according to the needs of future development within the City and the City's Water Master Plan.

The City estimates the need during General Plan buildout for approximately eight additional wells capable of providing a minimum of 2,000 gpm, each with appropriate well treatment facilities, as well as two water storage tanks with a total capacity of 1.4 million gallons. In addition to the construction of wells and storage tanks, extensive water distribution infrastructure will be needed to connect new development to the City's water supply. Improvements in the existing City are anticipated to serve buildout according to 2030 General Plan assumptions and to address existing needs for fire flow.

Construction of these components would affect the physical environment. The required improvements are anticipated to generally be constructed in rights-of-way and other already disturbed areas. The impacts of needed improvements are addressed at a programmatic level throughout this EIR. The precise effect of individual improvement projects is not knowable at this time. Environmental documentation will be prepared, as mandated by law, for improvements and construction projects associated with water delivery in the City.

Relevant Policies and Programs of the 2030 General Plan

The 2030 General Plan contains the following policies and programs which address water supply issues:

- **Policy PUBLIC-1.1:** The City will maintain a water master plan that provides for phased, efficient extension of water delivery and water quality infrastructure, including new wells, new pumping and storage capacity, and treatment systems, as necessary, to meet the needs of new development.

- **Policy PUBLIC-1.3:** New development shall provide land for wells and other water infrastructure, and shall construct and dedicate water infrastructure as directed by the City.

- **Policy PUBLIC-1.4:** New development shall contribute on a fair-share basis toward new groundwater wells, water treatment improvements, conveyance facilities, and water supply projects, consistent with the City's water master plan and City standards.

Conclusion

Due to the extent of the needed infrastructure, environmental impacts are expected to occur. Technical sections of this EIR evaluate the direct effects of construction and operation of these facilities related to specific environmental issue areas, such as biological resources, air quality, etc., the construction of water supply facilities. The General Plan includes policies and this EIR includes mitigation measures, where necessary, that would reduce or avoid impacts, as noted throughout Chapter 4 of this EIR. There is no additional significant impact beyond that considered comprehensively throughout this programmatic EIR. Therefore, the impact is considered **less than significant**.

Mitigation Measure

No mitigation is required.

IMPACT 4.10-2 Sufficient Water Supply Available to Serve City Residents at Buildout. *The City of Live Oak would need additional water supplies to meet the demand that would be created by buildout of the 2030 General Plan. This impact would be less than significant.*

The City can currently provide a reliable water supply up to 5,885 gpm of water for maximum day demand and 2,100 gpm on an annual average basis, based on the pumping capacity of its existing groundwater wells. Current water available water supply and pumping capacity is sufficient to support the current average daily demand, but cannot meet projected demand under the 2030 General Plan.

As mentioned above under "Groundwater Supplies," the East Butte Subbasin has a storage capacity of 3,128,959 AFA and annual extractions from the subbasin equal 180,000 AFA. Live Oak water withdrawals make up less than 1 percent of the total groundwater withdrawals from the subbasin, and approximately 0.04 percent of the subbasin's storage capacity.

The City has had sufficient water supplies during recent drought periods without any major issues or shortfalls. Substantial overall groundwater fluctuations have not been observed locally. Long term pumping at existing rates has not significantly impacted the aquifer in the area of the City of Live Oak. Even during extended drought years, such at 1987 to 1991, temporary water level drops were limited to less than 10 feet. The aquifer appears to have the capacity to supply additional production. Not including recharge from irrigation, only a small percentage of the storage capacity in the upper 200 feet of the aquifer is tapped. It appears that properly spaced wells will be able to provide the required capacity. The typical ground water levels are 10 to 16 feet below ground level and with the wells pumping water at 100 feet or deeper, droughts have an insignificant impact on the City's water supply.

Relevant Policies and Programs of the 2030 General Plan

Although implementation of the plan would result in a substantial increase in water demand, the 2030 General Plan contains several goals and policies intended to reduce per capita water using water conservation measures. Policies that would aid in reducing the City's overall water demand and therefore lessening the need for additional infrastructure and the need for new water supplies include:

- **Policy PUBLIC-1.5:** City approval of new development requires analysis and demonstration of secure and reliable water supply prior to approval. A formal water supply assessment, as defined in California Water Code Sections 10910–10912, will be required as part of City environmental review and project approval for projects that meet the minimum size requirements defined by this state law.

- **Policy PUBLIC-1.8:** The City will proactively leverage state, regional, and federal funding for water supply and water quality improvements to serve developed areas.

- **Policy PUBLIC-2.1:** The City will ensure that new groundwater well sites are located where the aquifer is stable enough to avoid long-term drawdown.

- **Policy PUBLIC-2.2:** The City will explore the use of recycled water from the City's wastewater treatment plant for landscape irrigation and other appropriate uses.

- **Policy PUBLIC-2.3:** The City will plan for, and new development shall be consistent with state law requirements for water conservation through the City's Urban Water Management Plan (California Water Code sections 10630–10656).

- **Policy PUBLIC-2.4:** New development should install water-conserving appliances and faucets, drought-tolerant landscaping, recycled water systems, and other water conservation improvements and programs, to the greatest extent feasible.

- **Policy PUBLIC-2.5:** The City will encourage water conservation measures not required by state law, such as recycled water systems.

- **Policy Water-2.1:** The City will incorporate into its entitlement review process compliance with portions of state law that require demonstration of adequate long-term water supply for large development projects (Senate Bills 610 and 221).

- **Policy Water-2.2:** The City will condition approval of new development on the availability of sufficient water supply, storage, and fire flow (water pressure), per City standards.

- **Policy Water-2.3:** The City will encourage the use of native, drought-tolerant landscaping throughout the City to conserve water and filter runoff.

- **Policy Water-2.5:** The City will require the use of water conservation technologies, such as low-flow toilets, efficient clothes washers, and more efficient water-using industrial equipment, in all new construction and retrofitted and substantially remodeled buildings, consistent with building code requirements.

- **Policy Water-2.7:** The City will participate in regional groundwater basin planning and regional water-management planning efforts to ensure that future demand for water does not overdraft the groundwater supply.

- **Policy Water-2.8:** The City will adopt water conservation pricing (e.g., tiered rate structures) to encourage efficient water use.

Conclusion

By adhering to the goals and policies listed above, the City of Live Oak would reduce its overall water demand using conservation measures. Although water demand would increase substantially over current levels, the City's total water demand in 2030 would be roughly 0.4 percent of the East Butte Subbasin's total storage capacity. There has not been substantial decrease in groundwater levels that would suggest long-term water supply will be a substantial issue in the Live Oak area. The City has no reason to believe that the implementation of the General Plan would have a long-term substantial adverse effect on groundwater levels or supply in the region. This impact is considered **less than significant**.

Mitigation Measure

No mitigation beyond the 2030 General Plan policies and programs is required.

IMPACT 4.10-3 Exceed Wastewater Treatment Requirements of the Central Valley Regional Water Quality Control Board (CVRWQCB). *The 2030 General Plan would require upgrades to wastewater treatment infrastructure; however, the upgrades would not exceed any wastewater treatment requirements of either the CVRWQCB or the State. This impact would be less than significant.*

The City's WWTP has been issued a Cease and Desist Order (Order No R5-2004-0097) by the CVRWQCB due to high contaminant levels in the effluent. In addition, the current WWTP cannot consistently meet with the effluent limitations for aluminum, ammonia, diazinon, and organochlorine pesticides in their WDR.

As noted previously, in response, the City has designed several phases of improvements to the WWTP to meet water quality requirements and increased demand for wastewater treatment. The City has recently received grant funding to implement improvements to the WWTP that will ensure the City's compliance with water quality standards.

Relevant Policies and Programs of the 2030 General Plan

The 2030 General Plan includes goals and policies that describe the City's linking of long-range infrastructure improvements with long-range planning and land use change. These goals and policies are listed below:

- **Policy PUBLIC-3.1:** The City will prepare a wastewater master plan that provides for phased, efficient extension of wastewater collection and improvements to wastewater treatment and disposal systems, to meet existing and future needs.
- **Policy PUBLIC-3.2:** The City will investigate and identify, through the wastewater master plan process, cost-effective options for adding treatment capacity to serve new growth.
- **Policy PUBLIC-3.6:** Wastewater infrastructure extensions will be phased by the City as part of the City's overall growth. Wastewater infrastructure will generally be provided first to areas directly adjacent to City limits, and then infrastructure will be extended outward.
- **Policy PUBLIC-3.9:** The City will ensure compliance with state and federal standards for wastewater disposal. Monitoring and reporting programs may be required, as appropriate.

Conclusion

The WWTP upgrade is planned for completion in December of 2011. The City's first phase WWTP upgrade is specifically designed to ensure the City can meet water quality related regulatory requirements. The City has also prepared plans for phased expansion of treatment capacity and in anticipation of future water quality regulations.

General Plan policy requires master planning for wastewater treatment capacity and phased expansions of the WWTP to serve new growth anticipated under the General Plan. General Plan policy and current regulations require compliance with water quality standards. The City is in the process of implementing improvements to the WWTP to achieve compliance with treatment standards, making use of grant funding. There are no land uses in the General Plan that would be expected to generate wastewater of such poor quality and concentration or in such amounts that future treatment systems would not be able to adequately treat according to applicable water quality standards. The impact is considered **less than significant**.

Mitigation Measure

No mitigation beyond the 2030 General Plan policies and implementation strategies is required.

IMPACT 4.10-4 New or Expanded Wastewater Collection, Conveyance, and Treatment Facilities. *Implementation of the 2030 General Plan would accommodate land use change that increase demand for wastewater collection, conveyance, and treatment facilities. It is anticipated that land use change under the 2030 General Plan would generate wastewater demand in excess of the capacity of the City's existing wastewater treatment plant, necessitating the expansion of existing or construction of new wastewater facilities. Construction of such facilities could have adverse effects on the physical environment. This impact would be* ***less than significant.***

As noted previously, the City is preparing a wastewater master plan that would identify infrastructure improvements necessary to serve the Planning Area at General Plan buildout, including replacing the current secondary treatment process and adding tertiary treatment. The improvements identified in the wastewater master plan would include both that necessary to serve existing developed portions of the City, as well as new growth areas. The impacts of such improvements are analyzed at a programmatic level in each of the environmental topic areas included in this EIR. For example, the agricultural resource impacts of infrastructure improvements required to serve the 2030 General Plan at buildout are analyzed in Section 4.8 of this EIR, along with other components related to General Plan buildout.

Analysis of the existing sewer system indicates that the system is large enough to accommodate peak hourly flows from the existing development during design storm conditions despite significant groundwater infiltration. Future development within the current City limits, as well as future development outside the current limits connecting to the system on an interim basis will likely be required to upsize certain sections of pipe to provide capacity. Also, some portions of the system are suspected to be in poor condition and may require rehabilitation and replacement. For all improvements pipeline alignment is expected to remain the same and within existing road right of ways.

Future wastewater flow within the Planning Area will be routed to large trunk sewers that will generally follow right of ways (in roadways). Recommended trunk sewer lines are estimated to range from 18 to 27 inches in diameter. There will likely be two new main trunks serving new growth within the Planning Area at buildout. One would serve the northeast, east, and the majority of the southern portions of the Planning Area. The second would serve most of the north and all of the west side of the Planning Area. The planning for wastewater collection and conveyance is based on the best available buildout estimates. However, trunk sewers would be constructed based on actual demand and phasing of this and other infrastructure will be appropriate, based on the timing of development.

The existing average dry weather wastewater flow is estimated to be approximately 0.7 MGD. The City estimates that full buildout of General Plan land use designations within the existing City limits would result in an additional 0.4 MGD of average daily wastewater flows. Development outside of the current City limits is estimated to add approximately 2.8 MGD of average daily wastewater flows. With full buildout of the entire General Plan, average dry weather flow would be approximately 4 MGD (ECO:LOGIC 2009b). The current WWTP is sized to accommodate 1.4 MGD (ECO:LOGIC 2007). As noted previously, the City has preliminarily identified four phases of improvements to the WWTP to improve effluent water quality and expand treatment

capacity to serve growth anticipated under the General Plan, including expansion of wastewater treatment capacity. Phased construction of these facilities could result in effects on the physical environment. These impacts are address at a programmatic level in the topic-specific sections of this EIR (air quality, biological resources, etc.).

Conclusion

By adhering to the General Plan, the City would ensure that the wastewater infrastructure necessary to serve its projected population through buildout. Due to the extent of the needed infrastructure, environmental impacts are anticipated to occur as a result of development under the General Plan, as well as the construction and operation of wastewater infrastructure required to serve development anticipated under the General Plan. Technical sections of this EIR evaluate the direct effects of construction and operation of these facilities relative to specific environmental issue areas, such as biological resources, air quality, etc. The General Plan includes policies and this EIR includes mitigation measures, where necessary, that would reduce or avoid impacts, as noted throughout Section 4.0 of this EIR. There is no additional significant impact beyond that considered comprehensively throughout this programmatic EIR. Therefore, the impact is considered **less than significant**.

Mitigation Measure

No mitigation is required.

IMPACT 4.10-5 Require the Construction of New or Expanded Stormwater Drainage Facilities. *The City would need to provide new and expanded stormwater drainage facilities in order to accommodate growth anticipated under the 2030 General Plan. Construction of such facilities could result in significant adverse environmental affects. This impact would be less than significant.*

The 2030 General Plan would result in changes to land uses that would generate larger amounts of stormwater in portions of the City of Live Oak. The increased flow in stormwater would result in the need for new stormwater infrastructure to convey stormwater flows out of the City and prevent flooding.

The City is in the process of preparing a drainage master plan, which will report on drainage issues and flood control problems, as well as specifically identify improvements to the drainage system necessary to address existing issues and accommodate buildout of the 2030 General Plan. The study will also identify the costs of implementing these improvements and the costs for operation and maintenance (O&M). Although the study is not yet complete, it is known that there are some areas of the city that are in need of improvements to drainage infrastructure to prevent issues during both the 10-year and 100-year flood events due to insufficient infrastructure. In addition, new infrastructure will be needed throughout in new growth areas to serve future populations.

Relevant Policies and Programs of the 2030 General Plan

The 2030 General Plan includes goals and policies that are intended to provide adequate stormwater infrastructure that would protect the city from flooding and water quality issues. These goals and policies include:

- **Policy PUBLIC-4.1:** The City will prepare and maintain a drainage master plan to provide phased extension of drainage infrastructure to serve new growth and address existing deficiencies.
- **Policy PUBLIC-4.2:** As part of the master plan and capital improvements planning, the City will set priorities and make repairs to the City's existing stormwater drainage system.
- **Policy PUBLIC-4.3:** The City will develop a funding mechanism to improve existing drainage systems and develop new ones in existing City areas that currently lack stormwater drainage infrastructure.

- **Policy PUBLIC-4.4:** New development shall construct and dedicate facilities for drainage collection, conveyance, and detention, and shall contribute on a fair-share basis to areawide drainage facilities, as directed by the City's drainage master plan.

- **Policy PUBLIC-4.5:** Drainage infrastructure will be phased to serve the new growth area. Temporary drainage facilities may be required at some phases of new development, to be replaced by permanent facilities at buildout.

- **Policy PUBLIC-4.6:** The City will identify regional, state, or federal funding and will leverage this funding, as appropriate, to make improvements to the City's existing drainage infrastructure to encourage infill development.

- **Policy PUBLIC-4.7:** The City will explore opportunities in the new growth area to provide oversized stormwater drainage infrastructure that can accommodate both flows from new development and flows from existing city areas that lack the necessary infrastructure. The City or Redevelopment Agency will consider reimbursing new development for these improvements, on a fair-share basis.

- **Policy Water-1.1:** New development shall incorporate drainage system design that emphasizes infiltration and decentralized treatment (rather than traditional piped approaches that quickly convey stormwater to large centralized treatment facilities), to the greatest extent feasible.

- **Policy Water-1.2:** Existing swales and sloughs should be preserved, restored, and used for stormwater drainage whenever possible.

- **Policy Water-1.3:** The City will require developments to use best management and design practices to reduce stormwater runoff levels, improve infiltration to replenish groundwater sources, and reduce pollutants close to their source. The City will require new development to use permeable surfaces for hardscape wherever possible. Impervious surfaces such as driveways, streets, and parking lots should be interspersed with vegetated areas that allow for infiltration of stormwater. LID techniques, such as rain gardens, filter strips, swales, and other natural drainage strategies, should be used to absorb stormwater, reduce polluted urban runoff, recharge groundwater, and reduce flooding.

- **Policy Water-1.4:** The City will require development projects to incorporate appropriately scaled stormwater facilities. The City will place emphasis on making these holding areas serve multiple functions, such as soccer fields or passive recreation areas.

Conclusion

There will be a substantial amount of stormwater infrastructure required to serve new growth areas anticipated under the 2030 General Plan. General Plan policies will minimize the physical environmental impacts that could result from construction of the improvements to and new stormwater drainage infrastructure. Technical sections of this EIR evaluate the direct effects of construction and operation of these facilities relative to specific environmental issue areas, such as biological resources, air quality, etc. The construction of stormwater infrastructure to support the development envisioned by the 2030 General Plan would contribute to significant impacts identified in other impact areas. However there is no additional significant impact beyond that considered comprehensively throughout this programmatic EIR. Therefore, the impact is considered **less than significant**.

Mitigation Measure

No mitigation is required.

IMPACT 4.10-6 **Increased Demand for Landfill Capacity to Accommodate Solid Waste Disposal Needs and Compliance with Solid Waste Regulations.** *Implementation of the 2030 General Plan would allow for the development of new homes and businesses within Live Oak, which would result in an increase in the amount of solid waste sent to landfills. This impact would be less than* ***less than significant.***

As mentioned under the "Environmental Setting," the majority of solid waste generated within the City of Live Oak is transported to and disposed of at the Ostrom Road Landfill by YSDI, the solid waste hauler. In 2006, 5,262 tons of solid waste generated in the City of Live Oak were disposed of at the landfill, which amounts to approximately 14.4 tons per day. To compare, the landfill accepted a total of 137,989 tons of solid waste from all of the Yuba-Sutter RWMA jurisdictions (378 tons per day). Live Oak's contribution was less than 4% of the waste delivered to the Ostrom Road Landfill from Yuba City, Marysville, Live Oak, Wheatland, and all of the unincorporated areas of Yuba and Sutter Counties.

In 2007, the Ostrom Road Landfill had 97.1% of its remaining capacity still available (40,600,000 cubic yards) and an expected closure date in 2066. With this much capacity available to serve many jurisdictions in addition to Live Oak, it is not likely that additional solid waste from the City of Live Oak would result in a substantial reduction in the landfill's available capacity or substantially shorten its lifespan. In addition, the 2030 General Plan does not include any components that would violate any applicable federal, state, or local solid waste regulations, including the California Integrated Waste Management Board's (CIWMB) required 50% solid waste diversion rate; in fact, the 2030 General Plan includes policies that help to ensure that these regulations are fulfilled by Live Oak.

Relevant Policies and Programs of the 2030 General Plan

In addition to the policies that ensure compliance with state solid waste regulations, the 2030 General Plan proposes goals and policies that would help to reduce the amount of solid waste generated in the City, including provide incentives for recycling . Each of these goals and policies would ensure that sufficient landfill capacity is provided at the solid waste facilities used by the City and that these facilities would accommodate the buildout of the 2030 General Plan. Applicable goals and policies pertaining to solid waste include the following:

- **Policy PUBLIC-14.1:** The cost of recycling and yard waste collection shall be substantially less than the same volume of garbage, as appropriate, to encourage recycling and composting of yard waste.
- **Policy PUBLIC-14.2:** The City will encourage the use of compost in community gardens and other appropriate locations. The City will coordinate with the local solid waste collection provider to implement community or Citywide composting facilities for yard waste collected locally.
- **Policy PUBLIC-14.3:** The City will comply with state law on solid waste collection and will implement regulations of the California Integrated Waste Management Board.
- **Policy PUBLIC-14.4:** The City will pursue funding and grants to help fund solid waste reduction programs.
- **Policy PUBLIC-14.5:** Construction and demolition waste from development projects should be recycled or reused to aid in reducing the City's overall waste stream.
- **Policy PUBLIC-14.6:** The City will implement recycling education programs for city residents to promote source reduction, recycling, and composting to decrease the City's waste stream.

Conclusion

Although buildout of the 2030 General Plan would increase local generation of solid waste, goals and policies would help to reduce potential future impacts. The combination of 2030 General Plan policies and existing

regulations related to the disposal and reduction of solid waste, and in general reduces the amount of solid waste generated locally and sent to the Ostrom Road Landfill.

The City does not manage the Ostrom Road Landfill and the City's portion of the waste stream at this landfill is less than 4 percent of the total municipal waste received at the landfill on an annual basis. Since it appears that there will be sufficient capacity to meet the City's needs during this General Plan time horizon, the City does not anticipate the need for new landfills or expand existing landfills. The impact is **less than significant**.

Mitigation Measure

No mitigation is required.

IMPACT 4.10-7 Increased Demand for Private Utility Services. *Implementation of the 2030 General Plan would accommodate land use change, which would increase local demand for electricity, natural gas, and telecommunication services. The extension of these private utility services could potentially result in the need for the development of new or expanded facilities, the construction of which could possibly result in adverse impacts on the physical environment. This impact is considered* less than significant.

The 2030 General Plan would allow for new development in the City of Live Oak's Planning Area. The addition of new residences and businesses within the City would result in increases in demand for private utility services that are not provided by a government entity. In the City of Live Oak, this includes the provision of electricity, natural gas, and telecommunications (phone service and internet) services. Specifically, electricity and natural gas are provided to City residents by PG&E, while telecommunications services are provided by AT&T.

In order to provide these services to residents and businesses, additional utility infrastructure would likely need to be built to accommodate the increase in demand; however, at this time, it cannot be said to what extent these facilities would need to be expanded and/or built, and the locations of construction and potential environmental impacts cannot be known for certain at this time.

The 2030 General Plan itself does not cause these facilities to be built; it provides the City with direction for growth that would ultimately result in the need for new or expanded facilities. Once the demand for new facilities has been created by new growth and assessed, locations for new facilities would be chosen and the environmental review process would evaluate the specific impacts associated with that project.

Relevant Policies and Programs of the 2030 General Plan

The following goals and policies would aid in reducing future impacts associated with the expansion of existing or development of new facilities to provide private utility services to future residents and businesses within Live Oak:

- **Policy PUBLIC-15.1:** New development shall accommodate public and private utilities (natural gas, electricity, telecommunications, and other utility services) in rights-of-way and easements, according to City standards.

- **Policy PUBLIC-15.2:** The City will work with local gas, communications, and electricity providers to maintain and improve current levels of service and to meet future demands and promote the City's economic development policies.

- **Policy PUBLIC-15.3:** The City will provide all utility providers the opportunity to participate in the planning process for new development in Live Oak.

- **Policy PUBLIC-15.4:** The City will encourage active coordination between developers and utility providers in order to ensure that the best possible services are provided to existing and future city residents. Such coordination will also ensure public safety related to existing underground utilities.

- **Policy PUBLIC-15.5:** In new growth areas, new utility infrastructure shall be placed underground wherever possible. Where infrastructure cannot be placed underground, it shall be designed and built to blend as much as possible with the characteristics of the natural and/or created surrounding environment.

- **Policy PUBLIC-15.6:** The City will coordinate with utility providers to relocate existing utility infrastructure underground during street construction or repair work, infill development, or other infrastructure work.

- **Policy PUBLIC-15.7:** New utility infrastructure required to serve new development will be funded entirely by those that benefit from new development. Existing residents shall not pay for the extension and development of utility infrastructure necessary to provide services to new development.

Conclusion

Buildout of the 2030 General Plan would require the extension of private utility infrastructure for electricity, natural gas, and telecommunications services, the construction of which could potentially result in adverse significant impacts. These impacts are evaluated at a programmatic level along with all other foreseeable components of General Plan implementation throughout the environmental topic sections of this EIR, such as air quality, biological resources, and other sections. The General Plan includes policies and this EIR includes mitigation measures, where necessary, that would reduce or avoid impacts, as noted throughout Section 4.0 of this EIR. The policies identified above address potential impacts related to growth and encourage coordination between the City and utility providers during growth. The policies would provide the opportunity to reduce potentially adverse environmental impacts that could occur as a result of construction of utility infrastructure. There is no additional significant impact beyond that considered comprehensively throughout this programmatic EIR. Therefore, the impact is considered **less than significant**.

Mitigation Measure

No mitigation is required.