2015 Urban Water Management Plan

This plan was adopted on June 14, 2016 pursuant to San Luis Obispo City Council Resolution No. 10726 (2016 series).

San Luis Obispo City Council
Jan Marx, Mayor
Dan Carpenter
John Ashbaugh
Carlyn Christianson
Dan Rivoire

Plan Prepared by:
City of San Luis Obispo, Utilities Department
879 Morro Street
San Luis Obispo, CA. 93401

Carrie Mattingly, Director
Aaron Floyd, Deputy Director, Water Division
Jennifer Metz, Utilities Projects Manager
Mychal Boerman, Acting Utilities Services Manager

This document is available for public review at slowater.org and at the Utilities Department office located at 879 Morro Street in San Luis Obispo
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Chapter 1: Introduction

The City of San Luis Obispo (City) has diligently monitored and managed its water resources for many years. This Urban Water Management Plan (Plan) evaluates current and projected water supplies through the year 2035. The Plan was prepared in accordance with the requirements of the Urban Water Management Planning Act, as amended and includes the following chapters:

- Water Service Area and System Description
- Water Demand and Reduction Targets
- Water Sources
- Recycled Water
- Water Supply Reliability
- Demand Management Measures
- Water Shortage Contingency Plan

The Plan is consistent with the goals, policies, land uses, and population projections presented in the City’s General Plan.

1.1 URBAN WATER MANAGEMENT PLANNING ACT

The City’s Plan was prepared in accordance with the Urban Water Management Planning Act (Act). The Act is defined by the California Water Code (CWC), Division 6, Part 2.6, and Sections 10610 through 10656. The Act requires every urban water supplier that provides water for municipal purposes to more than 3,000 connections, or supplying more than 3,000 acre-feet (af) of water annually, to adopt and submit a plan every five years to the California Department of Water Resources (DWR).

Since its passage in 1983, several amendments have been added to the Act, such as those enacted in 2009 related to Senate Bill X7-7 (SB X7-7) requiring each urban retail water supplier to develop urban water use targets to help meet the 20 percent reduction goal by 2020 and an interim 10 percent goal by 2015. Chapter 4 of this Plan explains the City’s targets and implementation strategy to meet state requirements related to SBx7-7.

The other recent amendments made to the Act are set forth in SB 1087, Water and Sewer Service Priority for Housing Affordable to Lower-Income Households. SB 1087 requires water and sewer providers to grant priority for water service allocations to proposed developments that include low income housing. SB 1087 also requires Urban Water Management Plans to include projected water use for single- and multi-family housing needed for low-income households. Chapter 4 of this Plan incorporates these reporting requirements.

The Plan serves as a foundational document and source of information for a Water Supply Assessment, (Water Code Section 10613), and a Written Verification of Water Supply, (Water Code Section 66473.7). Both statutes require detailed information regarding water supply availability to be evaluated prior to approval of specific large development projects.

The purposes of the Plan are to:

- Assess current and future water use trends in the community
- Describe the sources of water supply and the water system
- Assess water supply reliability
- Document the water demand management measures in place to balance supply and demand
- Demonstrate compliance with SB X7-7
- Act as a source document for the City’s General Plan
- Act as a source document on the background and history of the water supply system
- Comply with the state requirements to qualify for water and wastewater State grants and loans.
1.2 AGENCY COORDINATION

The Act requires the City to coordinate the preparation of its Plan with other appropriate agencies, including other water suppliers that share a common source, water management agencies, and relevant public agencies. The following is a summary of the coordination that the City took in the preparation of this Plan. Supporting documentation is provided in Appendix I.

Whale Rock Reservoir Commission

Whale Rock Reservoir provides water to the City, California Polytechnic State University (Cal Poly), the California Men’s Colony, and the town of Cayucos. The Whale Rock Commission oversees the reservoir operations and is made up of representatives from the City, California Men’s Colony, and Cal Poly, as well as a representative from the State Department of Water Resources. The City provides the staff for oversight of daily operations and maintenance activities. City staff works closely with staff from the commission members relative to water planning issues. A discussion of the update process for the City’s Urban Water Management Plan was provided to the commission at its May 2016 meeting.

Cayucos Area Water Organization

The Cayucos Area Water Organization (CAWO) includes the three water purveyors that serve the town of Cayucos (Paso Robles Beach Water Association, Morro Rock Mutual Water Company, County Service Area 10A) and the Cayucos-Morro Bay Cemetery District. The Whale Rock Commission and the CAWO have an agreement which includes a provision to provide up to 600 acre feet of water per year from the reservoir. The agreement dates back to the period when the dam was being planned and constructed. The agreement has been amended since that time. The water provided to the CAWO is delivered from the Whale Rock pipeline to the Cayucos Water Treatment Plant operated by the County of San Luis Obispo (County). An update regarding the City’s preparation and updating of its UWMP was provided to the group at its May 2016 meeting.

County Water Resources Advisory Committee

The City is represented on the county-wide Water Resources Advisory Committee (WRAC). The WRAC is an advisory committee to the County Board of Supervisors on issues pertaining to water resources planning. The Committee holds monthly meetings to discuss water resource issues, planned projects or developments, policies, or other related issues that may have county-wide water resource impacts. Recommendations are forwarded to the County Board of Supervisors for its consideration. The Committee discusses items ranging from new water supply projects to water conservation programs and policies. An update regarding the City’s preparation and updating of its UWMP was provided to the WRAC in April 2016. Review and comment by interested members was requested.

Nacimiento Project Commission

The County has an entitlement of 17,500 acre feet of water from Nacimiento Lake and acts as the wholesaler of this water supply. The County oversees the project that delivers water from Nacimiento Reservoir to agencies participating in the Nacimiento Water Project. The current participating entities include the cities of Paso Robles and San Luis Obispo, Atascadero Mutual Water Company, Templeton Community Services District, Santa Margarita Ranch, Bella Vista Mobile home park, and County Service Area 10A (Cayucos).

The Nacimiento Project Commission (Commission) is made up of representatives from each of the four original participating agencies’ governing boards, as well as a representative from the County Flood Control and Water Conservation District (i.e. County Board of Supervisors). The Commission provides oversight and recommendations to the District relative to the project operations and maintenance and the associated budget. An update regarding the City’s preparation and update of its UWMP was provided to the Commission’s technical support group at its May 2016 meeting. The County, as the water supply “wholesaler”, was notified that the City was updating its UWMP in March 2016.

Integrated Regional Water Management Plan

The County has developed an Integrated Regional Water Management Plan which included involvement and participation by the City as well as other agencies and interested individuals throughout the County.
City staff in particular provided detailed input in the areas of water conservation and water recycling components of the plan because of the expertise the City has in these areas. The County was notified that the City was updating its UWMP in March 2016.

1.3 PUBLIC PARTICIPATION AND PLAN ADOPTION

The City encouraged public involvement in the Plan update through a Community Water Forum, Planning Commission study session, a Planning Commission public hearing for review of the draft document, and a City Council public hearing for review of the draft document. The City further encouraged involvement of the public through correspondence, public notices, and offers to meet with interested groups. Public hearing notifications were published in *The Tribune* (the local area newspaper). A copy of the published Notice of Public Hearing, correspondence, and the resolution of adoption are included in Appendix I. The hearing process provided an opportunity for all City water users to become familiar with the Plan and ask questions about its water resources in addition to the City’s continuing plans for providing a reliable, safe, and high-quality water supply.

1.4 PLAN IMPLEMENTATION

Implementation of the Plan is the responsibility of the City’s Utilities Department. Key staff overseeing the implementation is the Utilities Director, Deputy Director of Utilities and Utilities Services Manager. Annual updates regarding Plan implementation, as well as other City water resources issues, are provided to the City Council as part of the City’s annual Water Resources Status Report (Appendix II).

1.5 STANDARDIZED TABLES

In response to the requirements of the CWC, standardized tables for the reporting and submittal of UWMP data were developed and are required for use in 2015 UWMPs by the State. The standardization of data tables allows for more efficient data management, expedited review of UWMPs, and easier compilation of data for regional and statewide planning. The City will submit UWMP data electronically to DWR using standardized tables and have included the standardized tables in the body of this Plan at the end of each chapter.

1.6 COMPLIANCE CHECKLIST

The City completed the checklist of specific UWMP requirements and included it in the Plan as Appendix III as requested by DWR. The Checklist includes each UWMP requirement by subject, applicable CWC section, and the page number where the required element is addressed in the Plan to assist in the DWR review of the City’s UWMP.

City of San Luis Obispo Community Water Forum, April 2016.
1.7 ABBREVIATIONS & ACRONYMS

AB - Assembly Bill
AF - Acre-Foot or Acre-Feet
AFY (of afy) - Acre-Feet per Year
AWWA - American Water Works Association
BMP - Best Management Practice
CII - Commercial, Industrial, and Institutional water use sectors
CIMIS - California Irrigation Management Information System
CUWCC - California Urban Water Conservation Council
CWC - California Water Code
DDW - State Water Resources Control Board, Division of Drinking Water
DMMs - Demand Management Measures
DOF - Department of Finance
DWR - California Department of Water Resources
EPA - U.S. Environmental Protection Agency
ETo - Reference Evapotranspiration
GIS - Geographic Information System
GPCD (or gpcd) - Gallons per Capita per Day
GPPD - Gallons per Person per Day
IRWM - Integrated Regional Water Management
LRAA - Locational Running Annual Average
LAFCO - Local Agency Formation Commission
MGD - Million Gallons per Day
NOAA NMFS - National Oceanic and Atmospheric Administration, National Marine Fisheries Service
NPDES - National Pollutant Discharge Elimination System
PCE - Tetrachloroethylene
pH - The measure of how acidic/basic water is ranging from 0 (acidic) to 14 (basic), with 7 being neutral.
PRV - Pressure Reducing Valve
RGPCD - Residential Gallons per Capita Daily
RWQCB - Regional Water Quality Control Board
SB - Senate Bill
SB X7-7 - Senate Bill Seven of the Senate’s Seventh Extraordinary Session of 2009
SDWA - Safe Drinking Water Act
SGMA - Sustainable Groundwater Management Act
SWRCB - State Water Resources Control Board
THMs - Trihalomethanes
UWMP - Urban Water Management Plan
WDR - Waste Discharge Requirement
WRRF - City of San Luis Obispo Water Resources Recovery Facility
WSCP - Water Shortage Contingency Plan
WTP - City of San Luis Obispo Water Treatment Plant
### Required UWMP Standardized Tables:

#### Retail Only: Public Water Systems

<table>
<thead>
<tr>
<th>Public Water System Number</th>
<th>Public Water System Name</th>
<th>Number of Municipal Connections 2015</th>
<th>Volume of Water Supplied 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>4010009</td>
<td>City of San Luis Obispo</td>
<td>15,116</td>
<td>4,908</td>
</tr>
</tbody>
</table>

**TOTAL** 15,116 4,908

NOTES: Table 2-1

Volume of water supplied in this table includes potable (4721 AF) and recycled water (187 AF).

#### Plan Identification (Select One)

- Individual UWMP
- Regional UWMP (RUWMP)

NOTES: Table 2-2

#### Agency Identification

**Type of Agency (select one or both)**

- Agency is a wholesaler
- **Agency is a retailer**

**Fiscal or Calendar Year (select one)**

- **UWMP Tables Are in Calendar Years**
- UWMP Tables Are in Fiscal Years

If Using Fiscal Years Provide Month and Day that the Fiscal Year Begins (dd/mm)

N/A

**Units of Measure Used in UWMP (select from Drop down)**

<table>
<thead>
<tr>
<th>Unit</th>
<th>AF</th>
</tr>
</thead>
</table>

NOTES: Table 2-3
Retail: Water Supplier Information Exchange

The retail supplier has informed the following wholesale supplier(s) of projected water use in accordance with CWC 10631.

<table>
<thead>
<tr>
<th>Wholesale Water Supplier Name (Add additional rows as needed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>County of San Luis Obispo</td>
</tr>
</tbody>
</table>

NOTES: Table 2-4

---

Notification to Cities and Counties

<table>
<thead>
<tr>
<th>City Name</th>
<th>60 Day Notice</th>
<th>Notice of Public Hearing</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td></td>
<td></td>
</tr>
<tr>
<td>County Name</td>
<td>60 Day Notice</td>
<td>Notice of Public Hearing</td>
</tr>
<tr>
<td>San Luis Obispo County</td>
<td>✔️</td>
<td>✔️</td>
</tr>
</tbody>
</table>

NOTES: Table 10-1 (R).
Chapter 2: Service Area and Water System Description

2.1 SERVICE AREA DESCRIPTION

The City of San Luis Obispo is located about half way between Los Angeles and San Francisco and has a total area of 10.8 square miles of which 10.6 square miles is land and 0.18 square miles (1.66 percent) is water. Situated in a coastal valley approximately 10 miles inland from the Pacific Ocean, the City's Mediterranean climate provides for mild and dry summers and cool winters, with an annual average of about 23 inches of precipitation. Summers are generally warm and sunny, often with morning fog from the Pacific coast. Winters are generally mild, though below freezing lows may be expected during the winter. Temperatures vary widely at any time of the year, with 80° F readings in January and February not uncommon. Table 1, San Luis Obispo Climate, includes the average monthly evapotranspiration rate, average maximum high temperature and average precipitation for the City of San Luis Obispo. As the City receives water from reservoirs located in vastly different watersheds, climate data specific to those surrounding the reservoirs are utilized in water management models.

The CWC does not require that 2015 Urban Water Management Plans address climate change. However, the City is concerned about the potential long-term effects of climate change on its water supply. While the City has secured an adequate water supply to serve the projected buildout of the City, and uses conservative water projection methods, the City continues to focus on securing supplemental water sources and promoting conservation to strengthen its multi-source water supply to withstand potential long-term effects of climate change.

2.2 SERVICE AREA POPULATION PROJECTION & OTHER DEMOGRAPHIC INFORMATION

Founded in 1772 and incorporated in 1856, San Luis Obispo is one of California’s oldest communities and now serves as the County’s hub for commercial and government services. This section describes the City’s population projections, demographics information and employment characteristics.

The City’s population has grown at a slow, steady pace since 1980. The 2015 population totaled 45,802. From 1990 to 2015, the City grew at an average rate of 0.35 percent per year, with periods of faster or slower growth, well below the General Plan’s one percent growth maximum. The majority of the City’s future growth is projected to be located in the Margarita, Orcutt, and Airport specific plan areas.

Water demand in the City has not increased at a rate that follows the rate of population growth (see Population and Water Demand charts below). In the past 25 years, annual water demand has been as high as 6,416 acre-feet in 2007 and as low as 4,040 acre-feet in 1991. This has been influenced by many factors including annual rainfall totals, plumbing efficiencies such as low flow toilets, shower heads, and appliances, changes in landscaping and irrigation, economic climate, water rates, and a strong water conservation ethic.

<table>
<thead>
<tr>
<th>TABLE 1: San Luis Obispo Climate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard average ETo (in)</td>
</tr>
<tr>
<td>January</td>
</tr>
<tr>
<td>February</td>
</tr>
<tr>
<td>March</td>
</tr>
<tr>
<td>April</td>
</tr>
<tr>
<td>May</td>
</tr>
<tr>
<td>June</td>
</tr>
<tr>
<td>July</td>
</tr>
<tr>
<td>August</td>
</tr>
<tr>
<td>September</td>
</tr>
<tr>
<td>October</td>
</tr>
<tr>
<td>November</td>
</tr>
<tr>
<td>December</td>
</tr>
<tr>
<td>Annual</td>
</tr>
</tbody>
</table>

Source: DWR CIMIS Station #53
To be conservative in its water planning, the City uses the one percent population growth rate and 117 gpcd, the maximum per capita water use rate under SB X7-7, described further in Chapter 3. This approach to projecting future water demand ensures the City’s water needs will be accommodated. The General Plan Land Use Element, updated in 2014, included population projections from 2020 through 2035 and estimated that the City has an urban reserve capacity of 57,200 residents. Table 3 provides the City’s population projections.

### TABLE 2: City Population

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
<th>Urban Reserve Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>45,802</td>
<td>48,826</td>
<td>51,317</td>
<td>53,934</td>
<td>56,686</td>
<td>57,200</td>
</tr>
</tbody>
</table>

Source: City of San Luis Obispo, General Plan, Land Use Element, Table 3, 2014.
According to the 2010 Census, the City’s population age demographics are 14.2 percent under the age of 18, 33.6 percent from 18 to 24, 23.7 percent from 25 to 44, 16.5 percent from 45 to 64, and 12.1 percent who are 65 years of age and older. The median age is 26 years.

The City is the civic, economic and cultural hub of the Central Coast. With these major regional employers (Table 3), the City has an estimated daytime population of more than 70,000 persons. Public sector jobs account for a sizeable portion of the job market in the City. Service and retail jobs also comprise a large percentage of employers. In 2013-14, the median income for a household in the City was $59,628, up from $40,579 in 2009-10. According to the City’s 2014 Comprehensive Annual Financial Report, the top employers within and adjacent to the City are:

### TABLE 3: Top Employers

<table>
<thead>
<tr>
<th>#</th>
<th>Employer</th>
<th># of Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>California Polytechnic State University (Cal Poly)</td>
<td>3,055</td>
</tr>
<tr>
<td>2</td>
<td>County of San Luis Obispo</td>
<td>2,465</td>
</tr>
<tr>
<td>3</td>
<td>Pacific Gas and Electric</td>
<td>1,900</td>
</tr>
<tr>
<td>4</td>
<td>California Men’s Colony</td>
<td>1,540</td>
</tr>
<tr>
<td>5</td>
<td>Cal Poly Foundation</td>
<td>1,400</td>
</tr>
<tr>
<td>6</td>
<td>San Luis Coastal Unified School District</td>
<td>902</td>
</tr>
<tr>
<td>7</td>
<td>Mind Body</td>
<td>650</td>
</tr>
<tr>
<td>8</td>
<td>California Department of Transportation</td>
<td>544</td>
</tr>
<tr>
<td>9</td>
<td>Cuesta Community College</td>
<td>440</td>
</tr>
<tr>
<td>10</td>
<td>Community Action Partnership of San Luis County</td>
<td>410</td>
</tr>
</tbody>
</table>


As the top employer, Cal Poly maintains a student enrollment between 18,260 and 19,780 students with a projected enrollment at 20,912 students by the year 2020. While Cal Poly has its own water supply source, the City treats and distributes water to the University which is located just outside of City limits.

The City is also a popular tourist destination due to its proximity to beaches and open space areas, historic downtown, and its overall vitality. The City’s tourism is at its peak during the summer. However, Cal Poly is also out of session at this time, thus reducing the overall daily population served by the City during the summer months. In 2015, with the update to its Master Plan underway, Cal Poly indicated that it is considering the idea of year-round instruction by expanding summer classes.

### 2.3 WATER SYSTEM DESCRIPTION

The City utilizes surface water reservoirs to meet its current potable water demand. The Salinas Reservoir, located nine miles southeast of the community of Santa Margarita, has provided water to the City since 1944. The Whale Rock Reservoir, located one-half mile east of the town of Cayucos, has been a water source for the City since 1961. Water deliveries from Nacimiento Reservoir, located 14 miles northwest of the City of Paso Robles, to the City began in January 2011. All surface water supplies are considered to be of high quality. The City does not currently rely on local groundwater to serve long-term water supply needs, however it has relied heavily on groundwater during past droughts (such as 1986 to 1990) and could rely on this source in the future during water shortage emergencies.

The City is supplied recycled water from its Water Resource Recovery Facility (WRRF). In 2016, recycled water is utilized for landscape irrigation and for construction water (dust suppression, compaction, etc.). The City will be maximizing the production of recycled water with the upgrade of the WRRF scheduled to begin construction in 2018 and studies are underway to maximize the use of this resource. Recycled water is discussed further in Chapter 6. Figure 1 shows the location of the City’s reservoirs and conveyance pipelines.
This section describes the City’s existing potable water system, including transmission, treatment, and distribution systems. Additional information is provided on the City’s water sources in Chapter 3.

**Raw Water Transmission**

The raw water transmission facilities deliver water to the City’s Water Treatment Plant from the Salinas, Whale Rock, and Nacimiento Reservoirs. More detailed information on these raw water transmission facilities is provided in Chapter 4.

Over the past twenty-five years, surface water treatment and groundwater treatment standards and regulations have become more stringent. With the enactment of the Safe Drinking Water Act (SDWA) in 1974, Congress authorized the federal government to establish national drinking water regulations. Since that time, many amendments have been made to the SDWA which require additional monitoring and treatment which has resulted in increased operational costs. The following sections discuss the impacts of the current regulations on the City’s water treatment facilities and potential impacts of any foreseeable amendments to the current regulations.

**Water Treatment**

The City’s Water Treatment Plant (WTP) is located on Stenner Creek Road, northwest of the Cal Poly campus. The facility was constructed in 1964 to provide treatment of surface water from Salinas and Whale Rock Reservoirs. The WTP is a conventional plant that includes ozone disinfection, coagulation, flocculation, sedimentation, and filtration. The WTP was originally designed to treat up to eight million gallons per day (mgd). In 1977, the plant was upgraded to provide 11.5 mgd of treatment capacity but actually treated up to 12 mgd for limited periods during peak summertime water demands. In 1994, the WTP was upgraded to comply with new regulations and to increase the treatment capacity to 16.0 mgd. The WTP was again upgraded with construction completed in March 2008. This upgrade added additional onsite storage facilities, replaced an existing pump station, and replaced the sedimentation basin with a new ballasted flocculation process among other improvements. The addition of the Actiflo process increased the sedimentation process capacity from 8 mgd to 16 mgd. This process was needed to treat the anticipated water supply from the Nacimiento Reservoir. The Nacimiento Project went online and began making water deliveries to the WTP in January, 2011.

Since the existing WTP was constructed, the Safe Drinking Water Act (SDWA) was adopted and was significantly amended. The 1986 amendments were broad in scope and required implementation of new regulations by the U.S. Environmental Protection Agency (EPA). The SDWA also required the EPA to specify criteria under which filtration is required as a treatment technique for surface supplies. On June 29, 1989, the EPA issued the Surface Water Treatment Rule which defined the standards for surface water treatment and had specific compliance deadlines.

The purpose of the regulation is to protect the public, as much as feasible, from waterborne diseases. Waterborne diseases, most notably *Giardia lamblia*, *Cryptosporidium*, and *Legionella*, are most commonly transmitted by surface water contamination. For the City, the most significant issue is the regulation aimed at reducing the formation of disinfection by-products, specifically trihalomethanes (THMs), which are a group of compounds formed during disinfection by the reaction of chlorine with naturally occurring organics. While the City had consistently met the previous 100 micrograms per liter limit, there have been occasional instances in which the standard was exceeded due to the high organic content of Salinas Reservoir water during certain times of the year. Those new regulations required increased chlorine contact times which would cause the THM levels to exceed the regulations. The limit for THMs at that time was a system average of 80 micrograms per liter. The current regulations, Stage 2 of the Disinfectant By-Product Rule, went into effect in 2013 and changed to a locational running annual
average (LRAA) to determine compliance.
To comply with the standards for THMs, meet anticipated future water quality standards, and increase water treatment operational efficiency, the City upgraded the WTP in 1994 to use ozone as the primary disinfectant instead of chlorine. The use of ozone provides enhanced disinfection capability to meet federal and state requirements while reducing the levels of THMs. The use of ozone also helps produce water free of objectionable taste and odor associated with algae blooms at Salinas Reservoir and meets all current, as well as anticipated regulations.

The 1994 upgrade project also increased the capacity of the plant from 11.5 million gallons per day to 16.0 million gallons per day (with the exception of the sedimentation process). This was accomplished through increased filter efficiency and the ability to treat Whale Rock Reservoir water without using the sedimentation process (direct filtration). The expanded capacity is sufficient to meet projected water demand at build-out under the City’s Land Use Element of the General Plan updated most recently in 2014.

Groundwater

With the onset of the drought in 1986, resulting in decreasing surface water supplies, the City activated groundwater wells in 1989 to meet the City’s water demand. In the 2010 update of the Water and Wastewater Management Element of the General Plan, groundwater was eliminated from the City’s water supply calculation as a basis for meeting long-term water demands. The decision was based on the water quality and availability issues which deemed groundwater as a potentially unreliable source. The City will utilize groundwater in the future, as the resource is needed, and plans to use well-head treatment to ensure the water quality is appropriate for potable purposes.

Like surface water, groundwater must meet the standards set in the SDWA. Water quality analysis in 1989 indicated that advanced treatment was needed on the now decommissioned Dalidio and Auto Park Way Wells due to unacceptable levels of tetrachloroethylene (PCE). Carbon adsorption units were placed on each well to provide necessary treatment, and were granted approval for domestic consumption by the State of California, Department of Public Health (now the State Water Resources Control Board, Division of Drinking Water (DDW)).

In November 1992, nitrate levels in the Auto Park Way Well exceeded State standards, so the well was taken out of service. In April 2015, the City stopped utilizing the Pacific Beach Well on Los Osos Valley Road for potable water purposes due to more stringent regulations for hexavalent chromium. The Fire Station #4 Well had been offline due to remediation of soil contamination at the adjacent Shell service station and is also currently offline due to hexavalent chromium.

The 1996 Amendments to the SDWA required the EPA to develop regulations that require disinfection of ground water systems to protect the public health. In 2006, the Groundwater Rule was adopted to further protect against waterborne illness due to fecal and E. Coli contamination in public water systems that use groundwater supplies.

Possible Future Regulatory Changes

As analytical techniques allow for lower levels of regulated water contaminants to be detected and new contaminants are added to the regulatory list issued by the EPA and state regulatory agencies, there may be impacts on the City’s water treatment operations. While the WTP upgrade was designed to meet then current and anticipated future water treatment standards, additional future or new regulations may require additional modifications, depending on the action levels adopted by the federal and state regulatory agencies. The following are possible regulatory changes which may influence WTP operations:

- **Regulation of total organic carbon.** Could require optimizing enhanced coagulation processes, which may add a pH reduction system to the treatment process (i.e. acid feed, carbon dioxide feed, etc.).
- **Regulation of THM sub-species.** Chlorinated bromides would most likely be targeted, which would not necessarily be problematic unless the action level is extremely low.
Regulation of hypochlorites. Chlorates caused by the decomposition of hypochlorite solution may require coolers or insulation be installed on holding tanks to stabilize temperature inside the tanks. This is a requirement now being considered by the State.

Regulation of THMs via LRAA. THMs are now regulated on a LRAA instead of a system-wide average. This could require changing from hypochlorite to chloramines for final disinfection and/or adding aeration systems to storage tanks and reservoirs.

The effect of any of the potential regulations on the City's treatment operations is dependent on the action level adopted. More technical and complicated processes may require training or hiring of personnel skilled in the maintenance of sophisticated electronic equipment and with increased knowledge in telemetry and computer programming.

**Potable Water Distribution System**

The City’s potable water distribution system delivers water from the WTP to approximately 15,000 metered customers and over 2,000 fire hydrants via two storage reservoirs, five hydro-pneumatic tanks, eight pump stations, ten water tanks, and approximately 185 miles of water mains.

The water delivered from the WTP is split into two main distribution networks. The WTP has a major pump station (the Transfer Pump Station) that pumps water to the high pressure zones which provides service to the higher elevation areas in the City. The transfer pumps take approximately half of the water, increase the pressure, and then provide water to Stenner Canyon Reservoir (Reservoir #2), Cal Poly, and other portions of the City, generally north and east of the Union Pacific Railroad tracks. Water flows by gravity directly into the lower pressure zone from the WTP's onsite clear well tanks.

Water storage facilities are necessary to provide water during peak demand periods and emergency situations such as fires. The City has twelve water storage facilities, nine of which are steel storage tanks ranging in size from 0.04 to four million gallons and three concrete facilities with a capacity of 0.35 to 7.5 million gallons. The combined storage capacity is 26.22 million gallons. The holding capacity of the various facilities and tank locations throughout the City are shown in Figure 3.

The goal is to provide uninterrupted water flow at adequate pressures (between 40 pounds per square inch (psi) and 80 psi) to meet all fire and domestic flow requirements and to minimize system water loss due to leakage. This pressure range will meet the needs of most irrigation sprinklers and other uses, and provide adequate pressure for fire sprinkler systems. In order to accomplish this, the City’s Water Distribution staff has eight major work objectives. They are as follows:

1. Pump station and tank maintenance
2. Water main maintenance and repair
3. Valve exercise and repair
4. Water service repair and renewal
5. Fire hydrant maintenance and replacement
6. Cross connection control
7. Underground Service Alert (USA) markouts
8. Bacteriological sampling
FIGURE 3: Water Distribution Facility Locations

- Reservoir / Tank Locations
- Pump Station Locations
- Pressure Regulating Valve (PRV) Locations

Source: City of San Luis Obispo Utilities Department, 2015
Because of the geographic setting of the City, pressure zones are established in the distribution system to maintain these pressure ranges (see Figure 2). The City’s water distribution system is a complex system of 16 pressure zones and 18 pressure regulating valves. It is unlikely this distribution pattern will change, since the WTP will continue to be the principal source of treated water for the City.

Aging pipes must be replaced to avoid major service disruptions and leaks due to deterioration. Parts of the City’s water system are approaching or past their estimated lifespan with most of the pipes being made of cast and ductile iron. Other pipes are made of asbestos cement, or, since the mid-1970’s, polyvinyl chloride (PVC). Water pipes serve two basic functions:

1. Larger pipes or transmission mains (ranging in size from 12 to 30 inches), move large volumes of water from one portion of the City to another
2. Smaller pipes or distribution mains (ranging in size from four inches in the older portions of the City to 12 inches) distribute water within a local area and deliver it to each property in the City

Fire protection is an important service the City provides to its residents. The fire protection system is a network of over 2,000 public hydrants and approximately 200 private hydrants.

The engineering estimate for the life expectancy of these facilities is 50 years or more depending on pipe type. Complete replacement within the term of life expectancy would require that the City replace an average of two percent of the system infrastructure each year which is the City’s adopted goal. Pipelines are prioritized for replacement in the City’s 2016 Potable Water Distribution System Operations Master Plan.

Operation and Maintenance

In order to retain a reliable water distribution system, preventative maintenance is performed by the City’s Water Distribution operators. Preventative maintenance is necessary to minimize water service disruption and prolong system service life.

The City’s comprehensive mainline valve exercise program is beneficial to ensure proper operation of valves and minimizes disruptions to water customers during an emergency shutdown. The program assists in identifying problem areas such as broken valves, broken operating nuts, buried gatewells, and misaligned access sleeves. Identified problem areas are scheduled for repair or replacement which minimizes future distribution problems and ensures availability in the event of fire. In addition, a valve exercise program assures that fire hydrants can be isolated for maintenance and repair. The program has a goal of exercising 1,000 of the system’s estimated 5,000 valves per year, allowing for all valves in the system to be exercised every five years.

Since electrical and mechanical pumping equipment consists of moving parts that are subject to wear, a comprehensive preventative maintenance program is required to prolong the useful life and avoid costly emergency equipment breakdowns. Weekly inspections of the City’s pump station are performed. Preventive and corrective maintenance is performed as needed.

The City’s water storage tanks are an important component of the water distribution system. As a result of the storage facilities, the system’s flow and pressures are improved and stabilized to better serve the customers within a storage tank’s zone. Additionally, these supplies serve as a reserve for emergencies such as fire suppression and power outages. Regular inspections and preventative maintenance are necessary to protect the City’s investment in these facilities. This includes regularly-scheduled inspections and cleaning of probes and relays, paint and protective coatings, facility security systems, maintenance of access roads and sites, and monitoring of cathodic protection systems.
The service line (from the water main to the customer water meter) repair and replacement program has been a major priority for the City due to the high likelihood of failure of previously installed polybutylene pipe and ongoing concerns with the longevity and durability of galvanized pipe. The City's water service lines currently consist of mainly copper and polyethylene pipe, but small amounts of polybutylene and galvanized pipe still exist in the system. The City actively removes and replaces polybutylene and galvanized materials as they are discovered through routine maintenance and CIP projects. The majority of the City's water lines have been upgraded to copper and polyethylene material due to the longevity and durability of these two types of materials.

Pressure reducing valves (PRVs) are necessary to maintain acceptable pressure levels in both low lying and higher elevation areas of the City. These valves reduce plumbing failures and system leakage in areas that would otherwise experience high pressure. The City has 18 PRVs that are inspected and tested annually, and rebuilt periodically as part of a PRV maintenance program.

To ensure that fire hydrants operate correctly when needed, testing, maintenance, and repair is performed on an annual basis. It is the responsibility of the Water Distribution staff to perform all maintenance, repairs, and hydrant replacement as needed. Hydrant exercising and flushing is performed by the City in order to proactively identify hydrants that require maintenance.

Prior to placing a newly constructed water line into service, procedures are in place for disinfection, sampling, and testing consistent with guidelines provided by American Water Works Association. The City's Water Distribution and Water Quality Laboratory staff provide the bacteriological sampling and testing. These procedures assure that all new water lines are free of waterborne pathogens before they are placed in service, protecting the health and safety of water users.

All City-related Underground Service Alerts (USA) mark outs (potable water, wastewater, recycled water, storm drains, fiber optics, and street lights) are consolidated under a single position in the Water Distribution section of the Utilities Department. Consolidation streamlined the process and increased staffing efficiencies. The management of the Underground Utility Locator is the responsibility of the Water Distribution Supervisor.

The City’s distribution system is a “D4” system based on rating criteria that classifies the complexity of the system. The State has mandated certification for water distribution operators (minimum of a Grade D1). The City requires water distribution operators to attain Grade D3 certification. Continuing education is mandatory for periodic certification renewals.

**Contract Meter Reading**

With the desire to consolidate the meter reading routes into a five-day period at the beginning of each month for consistent billing purposes, the City started utilizing a contractor to read the approximately 15,000 meters in early 2015.
2.4 Required UWMP Standardized Tables:

<table>
<thead>
<tr>
<th>Population Served</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
<th>2040(opt)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>45,802</td>
<td>48,826</td>
<td>51,317</td>
<td>53,934</td>
<td>56,686</td>
<td>N/A</td>
</tr>
</tbody>
</table>

NOTES: Table 3-1 R (Retail).
SOURCE: City of San Luis Obispo, General Plan, Land Use Element, Table 3, 2014.
Chapter 3: Current and Projected Water Demand

This chapter includes information on historical potable water demand in the City, current use, and projections of future potable water demand. Projections are based on information in the City’s General Plan Land Use Element updated in 2014.

3.1 WATER USE BY SECTOR

Existing water use in the City includes single-family and multi-family residential water users, commercial, institutional and industrial water users (collectively “CII”), and dedicated irrigation services. Water system loss and unbilled authorized consumption are also recorded by the City and are covered in detail in section 3.3. At this time the City does not provide potable or Title 22 recycled water for use for agricultural purposes, groundwater recharge, conjunctive use, saline water intrusion barriers, wetland or wildlife habitat, or sales/transfers/exchanges to other agencies.

The projected deliveries were developed using the City's General Plan Land Use Element, updated in 2014, population estimates and 117 gpcd as shown in Table 4. Please note that this number does not include recycled water use.

**TABLE 4: Current and Projected Water Use by Sector**

<table>
<thead>
<tr>
<th>Year</th>
<th>Water Use AFY</th>
<th>Single Family</th>
<th>Multi-family</th>
<th>Commercial, Industrial, and Institutional</th>
<th>Dedicated Irrigation</th>
<th>System Water Loss</th>
<th>Unbilled Authorized Consumption</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>Water Use</td>
<td>1.837</td>
<td>1,019</td>
<td>1,142</td>
<td>299</td>
<td>363</td>
<td>62</td>
<td>4,722</td>
</tr>
<tr>
<td></td>
<td>AFY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td>Water Use</td>
<td>2,489</td>
<td>1,381</td>
<td>1,548</td>
<td>404</td>
<td>493</td>
<td>84</td>
<td>6,399</td>
</tr>
<tr>
<td></td>
<td>AFY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2025</td>
<td>Water Use</td>
<td>2,616</td>
<td>1,451</td>
<td>1,627</td>
<td>425</td>
<td>518</td>
<td>88</td>
<td>6,725</td>
</tr>
<tr>
<td></td>
<td>AFY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2030</td>
<td>Water Use</td>
<td>2,750</td>
<td>1,525</td>
<td>1,710</td>
<td>447</td>
<td>544</td>
<td>93</td>
<td>7,069</td>
</tr>
<tr>
<td></td>
<td>AFY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2035</td>
<td>Water Use</td>
<td>2,890</td>
<td>1,603</td>
<td>1,797</td>
<td>470</td>
<td>572</td>
<td>97</td>
<td>7,429</td>
</tr>
<tr>
<td></td>
<td>AFY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NOTES:
1. Department of Water Resources, Tables 4-1 & 4-2.
2. Projected water demand for 2020 to 2035 is based on 117 gpcd.
3. Population growth is projected at one percent per year, per the City's Land Use Element, Table 3, 2014.
4. Projections do not include increases in recycled water demand. Additional information on future recycled water demand is provided in Chapter 6.

Source: City of San Luis Obispo Utilities Department, 2016.

3.2 DEMAND SECTOR DEFINITIONS

Potable water demand in the City is comprised of several sectors, consisting of the following:

- **Single-family Residential**: A single-family dwelling unit. A lot with a free-standing building containing one dwelling unit that may include a detached secondary dwelling unit.
- **Multi-family Residential**: Multiple dwelling units contained within one building or several buildings within one complex.
- **Landscape**: Water connections supplying water solely for landscape irrigation. Such landscapes may be associated with multi-family, commercial, industrial, or institutional/government sites, but are considered a separate water use sector if the connection is solely for landscape irrigation.
- **Commercial**: A water user that provides or distributes a product or service. CWC 10608.12 (d).
• **Industrial**: A water user that is primarily a manufacturer or processor of materials as defined by the North American Industry Classifications System (NAICS) code sectors 31 to 33, inclusive, or an entity that is a water user primarily engaged in research and development. CWC 10608.12(h).

• **Institutional**: A water user dedicated to public service. This type of user includes, among other users, higher education institutions, schools, courts, churches, hospitals, government facilities, and nonprofit research institutions. CWC 10608.12(i).

• **Distribution System Losses**: Reporting of system losses is required by the CWC in 2015 UWMPs. Examples of system losses can be seen in Table 5.

• **Unbilled, Authorized Consumption**: water used for firefighting, line flushing, and other authorized but unbilled uses.

The City compiles commercial, industrial, and institutional accounts in one category known as “CII.”

### 3.3 WATER LOSS AND UNBILLIED AUTHORIZED CONSUMPTION TYPES

Water losses can be the result of a variety of issues such as water line leaks, meter inaccuracies, and data handling errors. This is not to be confused with unbilled authorized consumption which accounts for firefighting, mainline flushing, fire flow testing, and other authorized uses of water that are not billed by the City. In 2009, the City began utilizing the American Water Works Association’s (AWWA) Water Audit and Water Balance software to develop a methodology for tracking and reducing non-revenue water and water loss. Water loss for 2015 and projected future water loss can be seen in Table 4. A sample of common water loss and unbilled authorized consumption types can be seen in Table 5.

<table>
<thead>
<tr>
<th>Examples of Water Loss &amp; Unbilled Authorized Consumption Causes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Water Loss</strong></td>
</tr>
<tr>
<td><strong>Unbilled Authorized Consumption</strong></td>
</tr>
</tbody>
</table>

### 3.4 ESTIMATING FUTURE WATER SAVINGS

As water savings from codes, standards, ordinances, and transportation and land use plans drive reduction in water demand within the City, CWC 10631 (e) (4) (B) (ii) requires that it is noted in the Urban Water Management Plan that 2020, 2025, 2030, and 2035 water use forecasts do not reflect any representation of water savings from codes, standards, ordinances, or transportation and land use plans.

### 3.5 LOW INCOME HOUSING

The water use projections provided in Table 4 include the projected water use for all future single-family and multi-family housing needed for lower income households, as defined in Section 50079.5 of the Health and Safety Code and the City’s 2015 Housing Element, as required by CWC 10631.1.

Table 6 shows quantity and category of lower income housing units as identified in the Housing Element and estimated water use for each housing type.
TABLE 6: Water Demand for Lower Income Housing Units

<table>
<thead>
<tr>
<th>Income Category</th>
<th>Single-Family Units</th>
<th>Multi-family Units</th>
<th>Total Units</th>
<th>Estimated Water Use (in acre feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extremely Low</td>
<td>0</td>
<td>142</td>
<td>142</td>
<td>25.56</td>
</tr>
<tr>
<td>Very Low</td>
<td>0</td>
<td>143</td>
<td>143</td>
<td>25.74</td>
</tr>
<tr>
<td>Low</td>
<td>72</td>
<td>107</td>
<td>179</td>
<td>40.86</td>
</tr>
<tr>
<td>Total</td>
<td>72</td>
<td>392</td>
<td>464</td>
<td>92.16</td>
</tr>
</tbody>
</table>

Notes:
Estimated water use was calculated using the following conservative water demand rates:
Single-Family Units: 0.3 AFY/Unit
Multi-Family Units: 0.18 AFY/Unit

Source: City of San Luis Obispo, Housing Element, Table 3, Regional Housing Needs Allocation, City of San Luis Obispo, 2014-2019.

3.6 BASELINES AND TARGETS FOR WATER USE REDUCTION BY 2020

The Water Conservation Act of 2009 (SB X7-7) was incorporated into Division 6 of the CWC in 2009. According to the CWC, urban retail water suppliers must include in their urban water management plan the baseline daily per capita water use, along with the basis for determining the estimate, including references to the supporting data. The legislation specifically calls for using the methodologies and criteria developed by the DWR and contained in the guidance document Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use to determine compliance as required in the years 2015 and 2020. The legislation directs urban water suppliers to adopt one of the four outlined options or Target Methods in the legislation to determine their urban water use targets.

As the City has invested in and implemented water conservation programs since 1988, the baseline periods outlined in the SB X7-7 used to create water use targets in 2015 and 2020 are not achievable using Target Method 1, a flat 20 percent reduction from the baseline period. After reviewing and analyzing the considerable resources required to perform Target Methods 2 and 4, the City chose Target Method 3. This method uses the state hydrologic region target as set forth in SB X7-7. This method represents the local climate and geography, it is important to note that the City lies completely within Central Coast Region (Region 3). The Central Coast Region's 2020 target, expressed in gpcd, is the lowest in the state. Central Coast region goals can be compared with other regions in Table 7.

3.7 Updating Calculations from 2010 UWMP

In accordance with CWC 10608.20 (g), and per the recommendation of DWR, the City examined its 2020 Urban Water Use Target and will continue to utilize Method 3 (Hydrologic Region Goals); the City will not change its Target Method.
Per DWR’s required use of 2010 U.S. Census data, and to correct for discrepancies between DOF’s projected populations for 2010, and actual census population data for 2010, the City updated the baseline population calculations for the 2015 Urban Water Management Plan. The population corrections have made slight changes to the 10-year average baseline GPCD, and the five-year average baseline gpcd, but have not changed the City’s 2015 Interim, or 2020 Urban Water Use Reduction Goals as defined in Method 3. The 2015 Interim Goal and 2020 Goal still stand at 120 gpcd and 117 gpcd respectively as noted in Table 12.

A new requirement in the 2015 UWMP is completion and submission of the SB X7-7 Standardized Tables. These tables compile in-depth information about SB X7-7 and provide proof of compliance with the Water Conservation Act of 2009. A completed list of these standardized tables is provided at the end of this chapter.

### 3.8 Baseline Periods

In 2010 UWMP the City defined both ten-year (Baseline gpcd) and five-year (Target Confirmation) baseline periods; these periods remain unchanged from the 2010 UWMP and are used to establish the 2015 interim, and 2020 Target Goals, along with baseline period per capita figures for water use reduction. Table 8 defines the 10-year baseline period from 1997-2006 and the five-year baseline period from 2004-2008. The methodology used to establish ten-year and five-year baseline periods is included below.

As defined by **CWC 10608.12 (b)**, “base daily per capita water use” is defined as:

(1) The urban retail water supplier’s estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous 10-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.

Or

(2) For an urban water supplier that meets at least 10 percent of its 2008 measured retail water demand through recycled water that is delivered within the service area of urban water supplier or its urban wholesale water supplier, the urban water supplier may extend the calculation described in paragraph (1) up to an additional five years to a maximum continuous period ending no earlier than December 31, 2004, and no later than December 31, 2010.

Through analysis of the quantity of total water deliveries made up of recycled water in 2008, it was discovered that the City did not meet the ten percent threshold required to use a 15-year baseline period, leading the City to follow CWC 10608.12 (b) (1) guidance to use a ten-year baseline period. The City’s ten-year baseline period of 1997 to 2006 and corresponding populations, annual gross water use, and daily per capita water use (gpcd) calculations provided by DWR can be viewed in SB X7-7 Table 1.

In accordance with CWC 10608.12 (b) the City calculated its five-year baseline average period water use. Ranging from 2004-2008, the five-year time frame was selected in accordance with **Methodology 3: Base Daily Per Capita Water Use**.
TABLE 8: Baseline Period Ranges

<table>
<thead>
<tr>
<th>Baseline Period</th>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>10- to 15-year baseline period</td>
<td>2008 total water deliveries</td>
<td>6,359</td>
<td>Acre Feet</td>
</tr>
<tr>
<td></td>
<td>2008 total volume of delivered recycled water</td>
<td>90</td>
<td>Acre Feet</td>
</tr>
<tr>
<td></td>
<td>2008 recycled water as a percent of total deliveries</td>
<td>1.41</td>
<td>Percent</td>
</tr>
<tr>
<td></td>
<td>Number of years in baseline period (^1)</td>
<td>10</td>
<td>Years</td>
</tr>
<tr>
<td></td>
<td>Year beginning baseline period range</td>
<td>1997</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Year ending baseline period range (^2)</td>
<td>2006</td>
<td></td>
</tr>
<tr>
<td>5-year baseline period</td>
<td>Number of years in baseline period</td>
<td>5</td>
<td>Years</td>
</tr>
<tr>
<td></td>
<td>Year beginning baseline period range</td>
<td>2004</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Year ending baseline period range (^3)</td>
<td>2008</td>
<td></td>
</tr>
</tbody>
</table>

\(^1\) If the 2008 recycled water percent is less than ten percent, the first baseline period is a continuous ten-year period. If the amount of recycled water delivered in 2008 is ten percent or greater, the first baseline period is a continuous ten- to 15-year period.

\(^2\) The ending year must be between December 31, 2004 and December 31, 2010.

\(^3\) The ending year must be between December 31, 2007 and December 31, 2010.

NOTE: SB X7-7 Table 1.

3.9 Service Area Population

For the 2015 UWMP, the City’s service area boundaries have been found to correspond by 95 percent or more with the city limits. This correspondence allows the City to use Department of Finance population estimates as defined in DWR’s Urban Water Management Guidebook. These population estimates have been updated from the 2010 UWMP to reflect differences in population between the Department of Finance projections and the 2010 Census. Population data for each of the baseline years can be found in Table 10.

3.10 Gross Water Use

As defined by CWC 10608.12 (g), “Gross Water Use” means the total volume of water, whether treated or untreated, entering the distribution system of an urban water supplier, excluding all of the following:

1. Recycled water that is delivered within the service area of an urban water supplier or its urban water wholesale water supplier
2. The net volume of water the urban retail water supplier places into long term storage
3. The volume of water the urban retail water supplier conveys for use by another urban water supplier
4. The volume of water delivered for agricultural use, except as otherwise provided in subdivision (f) of Section 10608.24.

The City’s gross water use is exclusively comprised of water entering the distribution system from four sources: Salinas Reservoir, Whale Rock Reservoir, Nacimiento Reservoir, and groundwater. Per Methodology 1: Gross Water of the methodologies document, recycled water delivered within the service area is excluded from the calculation of gross water. Water suppliers are not required to report their recycled water use, nor demonstrate any reduction in recycled water use for the purposes of SB X7-7. For detailed information on volume of water that entered the distribution during the baseline periods and in 2015, please refer to Table 9.
### TABLE 9: Annual Gross Water Use

<table>
<thead>
<tr>
<th>Baseline Year</th>
<th>Volume Into Distribution System</th>
<th>Deductions</th>
<th>Annual Gross Water Use</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Exported Water</td>
<td>Change in Dist. System Storage (+/-)</td>
</tr>
<tr>
<td>Year 1</td>
<td>1997</td>
<td>6219.76</td>
<td>0</td>
</tr>
<tr>
<td>Year 2</td>
<td>1998</td>
<td>5852.94</td>
<td>0</td>
</tr>
<tr>
<td>Year 3</td>
<td>1999</td>
<td>6172.13</td>
<td>0</td>
</tr>
<tr>
<td>Year 4</td>
<td>2000</td>
<td>6121.19</td>
<td>0</td>
</tr>
<tr>
<td>Year 5</td>
<td>2001</td>
<td>5885.52</td>
<td>0</td>
</tr>
<tr>
<td>Year 6</td>
<td>2002</td>
<td>6031.44</td>
<td>0</td>
</tr>
<tr>
<td>Year 7</td>
<td>2003</td>
<td>5968.75</td>
<td>0</td>
</tr>
<tr>
<td>Year 8</td>
<td>2004</td>
<td>6238.95</td>
<td>0</td>
</tr>
<tr>
<td>Year 9</td>
<td>2005</td>
<td>6098.43</td>
<td>0</td>
</tr>
<tr>
<td>Year 10</td>
<td>2006</td>
<td>5990.47</td>
<td>0</td>
</tr>
</tbody>
</table>

10 - 15 year baseline average gross water use: 6,058

#### 5 Year Baseline - Gross Water Use

| Year 1 | 2004 | 6,239 | 0 | 0 | 0 | 0 | 0 | 6,239 |
| Year 2 | 2005 | 6,098 | 0 | 0 | 0 | 0 | 0 | 6,098 |
| Year 3 | 2006 | 5,990 | 0 | 0 | 0 | 0 | 0 | 5,990 |
| Year 4 | 2007 | 6,416 | 0 | 0 | 0 | 0 | 0 | 6,416 |
| Year 5 | 2008 | 6,269 | 0 | 0 | 0 | 0 | 0 | 6,269 |

5 year baseline average gross water use: 6,203

#### 2015 Compliance Year - Gross Water Use

| 2015 | 4,721 | 0 | 0 | 0 | 0 | 0 | 4,721 |

NOTE: Volume into distribution: Salinas Reservoir, Whale Rock Reservoir, Nacimiento Reservoir, and groundwater.

### 3.11 Baseline Per Capita Water Use

Daily Per Capita Water Use was calculated for the ten-year, five-year, and 2015 compliance year periods (see Table 10). The ten-year average baseline per capita water use was calculated at 123 gpcd while the five-year average baseline per capita water use totaled 124 gpcd. The 2015 compliance year figure of 92 gpcd is extremely low due to the prolonged drought and corresponding conservation efforts. The City believes this number was driven to such a low level in part due to the Governor’s 2015 emergency drought declaration.
3.12  2015 and 2020 Targets
Per CWC 10608.20 (e), water retailers must include both an urban water use target, and an interim urban water use target in their Urban Water Management Plan. These targets are often referred to as the 2015 interim target and the 2020 target.

As detailed in section 3.6, the City will be using Target Method 3 to comply with SB X7-7. As noted in Table 7, the Central Coast Hydrologic Region must reduce the regional goal of 123 gpcd by five percent, effectively establishing a 117 gpcd goal for the City.

As a requirement of CWC 10608.22, an urban water supplier’s per capita daily water use reduction shall be no less than five percent base per capita water use as defined in the five-year baseline average. This calculation, and compliance is confirmed Table 11. The Central Coast Region target goal of 117 gpcd requires a six percent reduction in per capita water use, thus satisfying the requirement for at least a five percent reduction.

The 2015 interim urban water use target is established by calculating the value halfway between the ten-year baseline gpcd (123 gpcd) and the confirmed target of 117 gpcd listed in Table 12. This value of 120 gpcd is the City’s 2015 interim target.

All information and DWR tables used to develop baselines and the resulting targets for 2015 and 2020 can be viewed at the end of this chapter. The summarized information in Table 14 is provided at the recommendation of DWR for quick verification of compliance with the Water Conservation Act of 2009.
### TABLE 11: Confirmed 2020 Targets

<table>
<thead>
<tr>
<th>Baseline Period</th>
<th>Maximum 2020 Target*</th>
<th>Calculated 2020 Target</th>
<th>Confirmed 2020 Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 Year Baseline GPCD</td>
<td>124</td>
<td>118</td>
<td>117</td>
</tr>
<tr>
<td>10-15 year Baseline GPCD</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Notes:</strong> 117 GPCD is from Target Method 3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Maximum 2020 Target is 95% of the 5 Year Baseline GPCD

### TABLE 12: 2015 Interim Target

<table>
<thead>
<tr>
<th>Confirmed 2020 Target</th>
<th>10-15 year Baseline GPCD</th>
<th>2015 Interim Target GPCD</th>
</tr>
</thead>
<tbody>
<tr>
<td>117</td>
<td>123</td>
<td>120</td>
</tr>
</tbody>
</table>

### TABLE 13: Baselines and Targets Summary

<table>
<thead>
<tr>
<th>Baseline Period</th>
<th>Start Year</th>
<th>End Year</th>
<th>Average Baseline GPCD*</th>
<th>2015 Interim Target *</th>
<th>Confirmed 2020 Target*</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 year</td>
<td>1997</td>
<td>2006</td>
<td>123</td>
<td>120</td>
<td>117</td>
</tr>
<tr>
<td>5 Year</td>
<td>2004</td>
<td>2008</td>
<td>124</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*All values are in Gallons per Capita per Day (GPCD)

### 3.13 Compliance Daily Per Capita Water Use (GPCD)

In 2015, the SB X7-7 interim reduction target of 120 GPCD was met and surpassed by the City. 2015 potable water usage and gpcd figures were significantly reduced due to conservation efforts, prolonged drought, and Governor Brown’s April, 2015 drought declaration, requiring a statewide 25 percent reduction in potable water use.
TABLE 14: 2015 SB X7-7 Compliance

<table>
<thead>
<tr>
<th>Actual 2015 GPCD</th>
<th>2015 Interim Target GPCD</th>
<th>Optional Adjustments to 2015 GPCD</th>
<th>Did Supplier Achieve Targeted Reduction for 2015?</th>
</tr>
</thead>
<tbody>
<tr>
<td>92</td>
<td>120</td>
<td>Extraordinary Events</td>
<td>Economic Adjustment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

*All values are in Gallons per Capita per Day (GPCD)*

In accordance with statewide reduction efforts and Executive Order B-29-15, the City was required to reduce residential gallons per capita daily (RGPCD) consumption by 12 percent from 2013 usage levels. Due to a long history of successful conservation strategies, along with strong community support, the City surpassed both its drought reduction goals and its SB X7-7 interim water use reduction goal of 120 gpcd.

Actual 2015 per capita water demand is provided in Figure 4, along with per capita water demand from 2005 (122 gpcd) to 2015 (92 gpcd). Due to the increased conservation efforts and Governor Brown’s statewide emergency drought declaration, City staff believes based on historic use, 2010 to 2014 water demand may be a more accurate representation of the City’s future post-drought water demand than demand during 2015. Table 15 provides five-year, ten-year, and pre-drought daily per capita averages.

TABLE 15: Average GPCD

<table>
<thead>
<tr>
<th>Timeframe</th>
<th>GPCD</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-Year Average (2006-2015)</td>
<td>112</td>
</tr>
<tr>
<td>5-Year Average (2011-2015)</td>
<td>104</td>
</tr>
<tr>
<td>Pre-drought Average (2006-2011)</td>
<td>117</td>
</tr>
</tbody>
</table>

Figure 4: 2005 to 2015 Annual per Capita Water Demand (in Gallons)
### Demands for Potable and Raw Water - Actual

<table>
<thead>
<tr>
<th>Use Type</th>
<th>Additional Description</th>
<th>Level of Treatment When Delivered</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Family</td>
<td></td>
<td>Drinking Water</td>
<td>1,837</td>
</tr>
<tr>
<td>Multi-Family</td>
<td></td>
<td>Drinking Water</td>
<td>1,019</td>
</tr>
<tr>
<td>Landscape</td>
<td>Does not include recycled water</td>
<td>Drinking Water</td>
<td>299</td>
</tr>
<tr>
<td>Other</td>
<td>CII</td>
<td>Drinking Water</td>
<td>1,142</td>
</tr>
<tr>
<td>Losses</td>
<td></td>
<td>Drinking Water</td>
<td>363</td>
</tr>
<tr>
<td>Other</td>
<td>Unbilled Authorized</td>
<td>Drinking Water</td>
<td>62</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
<td><strong>4,722</strong></td>
</tr>
</tbody>
</table>

**NOTES:** Other "CII" contains commercial, industrial, and institutional account types

UWMP Table 4-1 R (Retail).

### Demands for Potable and Raw Water - Projected

<table>
<thead>
<tr>
<th>Use Type</th>
<th>Additional Description</th>
<th>Projected Water Use</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2020</td>
</tr>
<tr>
<td>Single Family</td>
<td></td>
<td>2,376</td>
</tr>
<tr>
<td>Multi-Family</td>
<td></td>
<td>1,318</td>
</tr>
<tr>
<td>Landscape</td>
<td>Does not include RW</td>
<td>386</td>
</tr>
<tr>
<td>Other</td>
<td>CII</td>
<td>1,478</td>
</tr>
<tr>
<td>Losses</td>
<td></td>
<td>470</td>
</tr>
<tr>
<td>Other</td>
<td>Unbilled Authorized</td>
<td>80</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>6,108</strong></td>
</tr>
</tbody>
</table>

**NOTES:** UWMP Table 4-2 R (Retail).
### Total Water Demands

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Potable and Raw Water</strong>&lt;br&gt;From Tables 4-1 and 4-2</td>
<td>4,722</td>
<td>6,108</td>
<td>6,421</td>
<td>6,747</td>
<td>7,093</td>
</tr>
<tr>
<td><strong>Recycled Water Demand</strong>&lt;br&gt;From Table 6-4</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>TOTAL WATER DEMAND</strong>&lt;br&gt;</td>
<td>4,722</td>
<td>6,108</td>
<td>6,421</td>
<td>6,747</td>
<td>7,093</td>
</tr>
</tbody>
</table>

**NOTES:** UWMP Table 4 R (Retail).<br>Recycled water is not included here as the City’s recycled water deliveries did not total 10 percent as required for reporting purposes to clearly distinguish recycled water and potable water demand.

### 12 Month Water Loss Audit Reporting

<table>
<thead>
<tr>
<th>Reporting Period Start Date (mm/yyyy)</th>
<th>Volume of Water Loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>01/2015</td>
<td>363.432</td>
</tr>
</tbody>
</table>

**NOTES:** UWMP Table 4-4 R (Retail).

### Inclusion in Water Use Projections

<table>
<thead>
<tr>
<th></th>
<th>Are Future Water Savings Included in Projections?</th>
<th>Are Lower Income Residential Demands Included in Projections?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**NOTES:** UWMP Table 4-5 R (Retail).
3.15  **SENATE BILL X7-7 Standardized Tables:**

---

**SB X7-7 Table 0: Units of Measure Used in UWMP***

<table>
<thead>
<tr>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acre Feet</td>
</tr>
</tbody>
</table>

*The unit of measure must be consistent with Table 2-3*

---

**SB X7-7 Table-1: Baseline Period Ranges**

<table>
<thead>
<tr>
<th>Baseline</th>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>10- to 15-year baseline period</td>
<td>2008 total water deliveries</td>
<td>6,359</td>
<td>Acre Feet</td>
</tr>
<tr>
<td></td>
<td>2008 total volume of delivered recycled water</td>
<td>90</td>
<td>Acre Feet</td>
</tr>
<tr>
<td></td>
<td>2008 recycled water as a percent of total deliveries</td>
<td>1.42%</td>
<td>Percent</td>
</tr>
<tr>
<td></td>
<td>Number of years in baseline period</td>
<td>10</td>
<td>Years</td>
</tr>
<tr>
<td></td>
<td>Year beginning baseline period range</td>
<td>1997</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Year ending baseline period range</td>
<td>2006</td>
<td></td>
</tr>
<tr>
<td>5-year baseline period</td>
<td>Number of years in baseline period</td>
<td>5</td>
<td>Years</td>
</tr>
<tr>
<td></td>
<td>Year beginning baseline period range</td>
<td>2004</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Year ending baseline period range</td>
<td>2008</td>
<td></td>
</tr>
</tbody>
</table>

1. If the 2008 recycled water percent is less than 10 percent, then the first baseline period is a continuous 10-year period. If the amount of recycled water delivered in 2008 is 10 percent or greater, the first baseline period is a continuous 10- to 15-year period.
2. The Water Code requires that the baseline period is between 10 and 15 years. However, DWR recognizes that some water suppliers may not have the minimum 10 years of baseline data.
3. The ending year must be between December 31, 2004 and December 31, 2010.
4. The ending year must be between December 31, 2007 and December 31, 2010.
### SB X7-7 Table 2: Method for Population Estimates

<table>
<thead>
<tr>
<th>Method Used to Determine Population</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Department of Finance (DOF)</strong></td>
</tr>
<tr>
<td><strong>2. Persons-per-Connection Method</strong></td>
</tr>
<tr>
<td><strong>3. DWR Population Tool</strong></td>
</tr>
<tr>
<td><strong>4. Other</strong></td>
</tr>
</tbody>
</table>

### SB X7-7 Table 3: Service Area Population

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>10 to 15 Year Baseline Population</strong></td>
<td></td>
</tr>
<tr>
<td>Year 1 1997</td>
<td>42,983</td>
</tr>
<tr>
<td>Year 2 1998</td>
<td>43,421</td>
</tr>
<tr>
<td>Year 3 1999</td>
<td>43,766</td>
</tr>
<tr>
<td>Year 4 2000</td>
<td>44,179</td>
</tr>
<tr>
<td>Year 5 2001</td>
<td>44,293</td>
</tr>
<tr>
<td>Year 6 2002</td>
<td>44,406</td>
</tr>
<tr>
<td>Year 7 2003</td>
<td>44,293</td>
</tr>
<tr>
<td>Year 8 2004</td>
<td>44,271</td>
</tr>
<tr>
<td>Year 9 2005</td>
<td>44,630</td>
</tr>
<tr>
<td>Year 10 2006</td>
<td>44,483</td>
</tr>
<tr>
<td><strong>5 Year Baseline Population</strong></td>
<td></td>
</tr>
<tr>
<td>Year 1 2004</td>
<td>44,271</td>
</tr>
<tr>
<td>Year 2 2005</td>
<td>44,630</td>
</tr>
<tr>
<td>Year 3 2006</td>
<td>44,483</td>
</tr>
<tr>
<td>Year 4 2007</td>
<td>44,438</td>
</tr>
<tr>
<td>Year 5 2008</td>
<td>44,650</td>
</tr>
<tr>
<td><strong>2015 Compliance Year Population</strong></td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>45,802</td>
</tr>
</tbody>
</table>
### SB X7-7 Table 4: Annual Gross Water Use *

<table>
<thead>
<tr>
<th>Baseline Year</th>
<th>Volume Into Distribution System</th>
<th>Exported Water</th>
<th>Change in Dist. System Storage (+/-)</th>
<th>Indirect Recycled Water</th>
<th>Water Delivered for Agricultural Use</th>
<th>Process Water</th>
<th>Annual Gross Water Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 to 15 Year Baseline - Gross Water Use</td>
<td><strong>Baseline Year</strong></td>
<td><strong>Fm SB X7-7 Table 3</strong></td>
<td>Fm SB X7-7 Table 3</td>
<td>Fm SB X7-7 Table 3</td>
<td>Fm SB X7-7 Table 3</td>
<td>Fm SB X7-7 Table 3</td>
<td>Fm SB X7-7 Table 3</td>
</tr>
<tr>
<td>Year 1</td>
<td>1997</td>
<td>6,220</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>6,220</td>
<td></td>
</tr>
<tr>
<td>Year 2</td>
<td>1998</td>
<td>5,853</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>5,853</td>
<td></td>
</tr>
<tr>
<td>Year 3</td>
<td>1999</td>
<td>6,172</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>6,172</td>
<td></td>
</tr>
<tr>
<td>Year 4</td>
<td>2000</td>
<td>6,121</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>6,121</td>
<td></td>
</tr>
<tr>
<td>Year 5</td>
<td>2001</td>
<td>5,886</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>5,886</td>
<td></td>
</tr>
<tr>
<td>Year 6</td>
<td>2002</td>
<td>6,031</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>6,031</td>
<td></td>
</tr>
<tr>
<td>Year 7</td>
<td>2003</td>
<td>5,969</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>5,969</td>
<td></td>
</tr>
<tr>
<td>Year 8</td>
<td>2004</td>
<td>6,239</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>6,239</td>
<td></td>
</tr>
<tr>
<td>Year 9</td>
<td>2005</td>
<td>6,098</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>6,098</td>
<td></td>
</tr>
<tr>
<td>Year 10</td>
<td>2006</td>
<td>5,990</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>5,990</td>
<td></td>
</tr>
<tr>
<td>10 - 15 year baseline average gross water use</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>6,058</strong></td>
</tr>
<tr>
<td>5 Year Baseline - Gross Water Use</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>6,203</strong></td>
</tr>
<tr>
<td>Year 1</td>
<td>2004</td>
<td>6,239</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>6,239</td>
<td></td>
</tr>
<tr>
<td>Year 2</td>
<td>2005</td>
<td>6,098</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>6,098</td>
<td></td>
</tr>
<tr>
<td>Year 3</td>
<td>2006</td>
<td>5,990</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>5,990</td>
<td></td>
</tr>
<tr>
<td>Year 4</td>
<td>2007</td>
<td>6,416</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>6,416</td>
<td></td>
</tr>
<tr>
<td>Year 5</td>
<td>2008</td>
<td>6,269</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>6,269</td>
<td></td>
</tr>
<tr>
<td>5 year baseline average gross water use</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>6,203</strong></td>
</tr>
<tr>
<td>2015 Compliance Year - Gross Water Use</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>4,721</strong></td>
</tr>
<tr>
<td>2015</td>
<td>4,721</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td><strong>4,721</strong></td>
<td></td>
</tr>
</tbody>
</table>

* NOTE that the units of measure must remain consistent throughout the UWMP, as reported in Table 2-3
<table>
<thead>
<tr>
<th>Name of Source</th>
<th>Salinas Reservoir</th>
</tr>
</thead>
<tbody>
<tr>
<td>This water source is:</td>
<td></td>
</tr>
<tr>
<td>☑️</td>
<td>The supplier's own water source</td>
</tr>
<tr>
<td></td>
<td>A purchased or imported source</td>
</tr>
</tbody>
</table>

**SB X7-7 Table 4-A: Volume Entering the Distribution System(s)**

Complete one table for each source.

<table>
<thead>
<tr>
<th>Baseline Year</th>
<th>Volume Entering Distribution System</th>
<th>Meter Error Adjustment* (Optional +/-)</th>
<th>Corrected Volume Entering Distribution System</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>10 to 15 Year Baseline - Water into Distribution System</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 1</td>
<td>1997</td>
<td>4186.75</td>
<td>4,187</td>
</tr>
<tr>
<td>Year 2</td>
<td>1998</td>
<td>5038.24</td>
<td>5,038</td>
</tr>
<tr>
<td>Year 3</td>
<td>1999</td>
<td>4951.54</td>
<td>4,952</td>
</tr>
<tr>
<td>Year 4</td>
<td>2000</td>
<td>4863.9</td>
<td>4,864</td>
</tr>
<tr>
<td>Year 5</td>
<td>2001</td>
<td>3255.14</td>
<td>3,255</td>
</tr>
<tr>
<td>Year 6</td>
<td>2002</td>
<td>3169.55</td>
<td>3,170</td>
</tr>
<tr>
<td>Year 7</td>
<td>2003</td>
<td>3730.5</td>
<td>3,731</td>
</tr>
<tr>
<td>Year 8</td>
<td>2004</td>
<td>3063.1</td>
<td>3,063</td>
</tr>
<tr>
<td>Year 9</td>
<td>2005</td>
<td>1083.37</td>
<td>1,083</td>
</tr>
<tr>
<td>Year 10</td>
<td>2006</td>
<td>1659.35</td>
<td>1,659</td>
</tr>
<tr>
<td><strong>5 Year Baseline - Water into Distribution System</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 1</td>
<td>2004</td>
<td>3063.1</td>
<td>3,063</td>
</tr>
<tr>
<td>Year 2</td>
<td>2005</td>
<td>1083.37</td>
<td>1,083</td>
</tr>
<tr>
<td>Year 3</td>
<td>2006</td>
<td>1659.35</td>
<td>1,659</td>
</tr>
<tr>
<td>Year 4</td>
<td>2007</td>
<td>1638.78</td>
<td>1,639</td>
</tr>
<tr>
<td>Year 5</td>
<td>2008</td>
<td>2437.43</td>
<td>2,437</td>
</tr>
<tr>
<td><strong>2015 Compliance Year - Water into Distribution System</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>492</td>
<td>492</td>
<td></td>
</tr>
</tbody>
</table>

* *Meter Error Adjustment* - See guidance in Methodology 1, Step 3 of Methodologies Document
<table>
<thead>
<tr>
<th>Name of Source</th>
<th>Whale Rock Reservoir</th>
</tr>
</thead>
<tbody>
<tr>
<td>This water source is:</td>
<td></td>
</tr>
<tr>
<td>✓</td>
<td>The supplier's own water source</td>
</tr>
<tr>
<td></td>
<td>A purchased or imported source</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Baseline Year</th>
<th>Volume Entering Distribution System</th>
<th>Meter Error Adjustment* Optional (+/-)</th>
<th>Corrected Volume Entering Distribution System</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fm SB X7-7 Table 3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 10 to 15 Year Baseline - Water into Distribution System

<table>
<thead>
<tr>
<th>Year</th>
<th>Volume Entering Distribution System</th>
<th>Corrected Volume Entering Distribution System</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td>1732.84</td>
<td>1,733</td>
</tr>
<tr>
<td>1998</td>
<td>525.48</td>
<td>525</td>
</tr>
<tr>
<td>1999</td>
<td>1061.13</td>
<td>1,061</td>
</tr>
<tr>
<td>2000</td>
<td>991.47</td>
<td>991</td>
</tr>
<tr>
<td>2001</td>
<td>2383.39</td>
<td>2,383</td>
</tr>
<tr>
<td>2002</td>
<td>2693.78</td>
<td>2,694</td>
</tr>
<tr>
<td>2003</td>
<td>2097.79</td>
<td>2,098</td>
</tr>
<tr>
<td>2004</td>
<td>3036.21</td>
<td>3,036</td>
</tr>
<tr>
<td>2005</td>
<td>4867.53</td>
<td>4,868</td>
</tr>
<tr>
<td>2006</td>
<td>4198.09</td>
<td>4,198</td>
</tr>
</tbody>
</table>

### 5 Year Baseline - Water into Distribution System

<table>
<thead>
<tr>
<th>Year</th>
<th>Volume Entering Distribution System</th>
<th>Corrected Volume Entering Distribution System</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>3036.21</td>
<td>3,036</td>
</tr>
<tr>
<td>2005</td>
<td>4867.53</td>
<td>4,868</td>
</tr>
<tr>
<td>2006</td>
<td>4198.09</td>
<td>4,198</td>
</tr>
<tr>
<td>2007</td>
<td>4676.77</td>
<td>4,677</td>
</tr>
<tr>
<td>2008</td>
<td>3744.27</td>
<td>3,744</td>
</tr>
</tbody>
</table>

### 2015 Compliance Year - Water into Distribution System

<table>
<thead>
<tr>
<th>Year</th>
<th>Volume Entering Distribution System</th>
<th>Corrected Volume Entering Distribution System</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>1,743</td>
<td>1,743</td>
</tr>
</tbody>
</table>

* Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document
<table>
<thead>
<tr>
<th>Baseline Year</th>
<th>Volume Entering Distribution System</th>
<th>Meter Error Adjustment* Optional (+/-)</th>
<th>Corrected Volume Entering Distribution System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td>1997</td>
<td>300.17</td>
<td>300</td>
</tr>
<tr>
<td>Year 2</td>
<td>1998</td>
<td>289.21</td>
<td>289</td>
</tr>
<tr>
<td>Year 3</td>
<td>1999</td>
<td>159.46</td>
<td>159</td>
</tr>
<tr>
<td>Year 4</td>
<td>2000</td>
<td>265.83</td>
<td>266</td>
</tr>
<tr>
<td>Year 5</td>
<td>2001</td>
<td>246.98</td>
<td>247</td>
</tr>
<tr>
<td>Year 6</td>
<td>2002</td>
<td>168.11</td>
<td>168</td>
</tr>
<tr>
<td>Year 7</td>
<td>2003</td>
<td>140.46</td>
<td>140</td>
</tr>
<tr>
<td>Year 8</td>
<td>2004</td>
<td>139.63</td>
<td>140</td>
</tr>
<tr>
<td>Year 9</td>
<td>2005</td>
<td>147.52</td>
<td>148</td>
</tr>
<tr>
<td>Year 10</td>
<td>2006</td>
<td>133.04</td>
<td>133</td>
</tr>
</tbody>
</table>

5 Year Baseline - Water into Distribution System

| Year 1        | 2004                                | 139.63                                 | 140                                           |
| Year 2        | 2005                                | 147.52                                 | 148                                           |
| Year 3        | 2006                                | 133.04                                 | 133                                           |
| Year 4        | 2007                                | 100.75                                 | 101                                           |
| Year 5        | 2008                                | 86.88                                  | 87                                            |

2015 Compliance Year - Water into Distribution System

| 2015         | 43                                  | 43                                    |

* Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document
# SB X7-7 Table 4-A: Volume Entering the Distribution System(s)
Complete one table for each source.

<table>
<thead>
<tr>
<th>Name of Source</th>
<th>Nacimiento Reservoir</th>
</tr>
</thead>
<tbody>
<tr>
<td>This water source is:</td>
<td></td>
</tr>
<tr>
<td>☑</td>
<td>A purchased or imported source</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Baseline Year</th>
<th>Volume Entering Distribution System</th>
<th>Meter Error Adjustment* Optional (+/-)</th>
<th>Corrected Volume Entering Distribution System</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 to 15 Year Baseline - Water into Distribution System</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 1</td>
<td>1997</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Year 2</td>
<td>1998</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Year 3</td>
<td>1999</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Year 4</td>
<td>2000</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Year 5</td>
<td>2001</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Year 6</td>
<td>2002</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Year 7</td>
<td>2003</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Year 8</td>
<td>2004</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Year 9</td>
<td>2005</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Year 10</td>
<td>2006</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>5 Year Baseline - Water into Distribution System</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 1</td>
<td>2004</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Year 2</td>
<td>2005</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Year 3</td>
<td>2006</td>
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</tr>
<tr>
<td>Year 4</td>
<td>2007</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Year 5</td>
<td>2008</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>2015 Compliance Year - Water into Distribution System</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>2,442</td>
<td>2,442</td>
<td></td>
</tr>
</tbody>
</table>

* Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document
### SB X7-7 Table 5: Gallons Per Capita Per Day (GPCD)

<table>
<thead>
<tr>
<th>Baseline Year</th>
<th>Service Area Population</th>
<th>Annual Gross Water Use</th>
<th>Daily Per Capita Water Use (GPCD)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fm SB X7-7 Table 3</td>
<td>Fm SB X7-7 Table 4</td>
<td></td>
</tr>
</tbody>
</table>

**10 to 15 Year Baseline GPCD**

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Annual Gross Water Use</th>
<th>Daily Per Capita Water Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>42,983</td>
<td>6,220</td>
<td>129</td>
</tr>
<tr>
<td>2</td>
<td>43,421</td>
<td>5,853</td>
<td>120</td>
</tr>
<tr>
<td>3</td>
<td>43,766</td>
<td>6,172</td>
<td>126</td>
</tr>
<tr>
<td>4</td>
<td>44,179</td>
<td>6,121</td>
<td>124</td>
</tr>
<tr>
<td>5</td>
<td>44,293</td>
<td>5,886</td>
<td>119</td>
</tr>
<tr>
<td>6</td>
<td>44,406</td>
<td>6,031</td>
<td>121</td>
</tr>
<tr>
<td>7</td>
<td>44,293</td>
<td>5,969</td>
<td>120</td>
</tr>
<tr>
<td>8</td>
<td>44,271</td>
<td>6,239</td>
<td>126</td>
</tr>
<tr>
<td>9</td>
<td>44,630</td>
<td>6,098</td>
<td>122</td>
</tr>
<tr>
<td>10</td>
<td>44,483</td>
<td>5,990</td>
<td>120</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>10-15 Year Average Baseline GPCD</strong> 123</td>
</tr>
</tbody>
</table>

**5 Year Baseline GPCD**

<table>
<thead>
<tr>
<th>Baseline Year</th>
<th>Service Area Population</th>
<th>Gross Water Use</th>
<th>Daily Per Capita Water Use</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fm SB X7-7 Table 3</td>
<td>Fm SB X7-7 Table 4</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Gross Water Use</th>
<th>Daily Per Capita Water Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>44,271</td>
<td>6,239</td>
<td>126</td>
</tr>
<tr>
<td>2</td>
<td>44,630</td>
<td>6,098</td>
<td>122</td>
</tr>
<tr>
<td>3</td>
<td>44,483</td>
<td>5,990</td>
<td>120</td>
</tr>
<tr>
<td>4</td>
<td>44,438</td>
<td>6,416</td>
<td>129</td>
</tr>
<tr>
<td>5</td>
<td>44,650</td>
<td>6,269</td>
<td>125</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>5 Year Average Baseline GPCD</strong> 124</td>
</tr>
</tbody>
</table>

**2015 Compliance Year GPCD**

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Gross Water Use</th>
<th>Daily Per Capita Water Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>45,802</td>
<td>4,721</td>
<td>92</td>
</tr>
</tbody>
</table>
### SB X7-7 Table 6: Gallons per Capita per Day

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>10-15 Year Baseline</td>
<td>123</td>
</tr>
<tr>
<td>5 Year Baseline</td>
<td>124</td>
</tr>
<tr>
<td>2015 Compliance Year</td>
<td>92</td>
</tr>
</tbody>
</table>

### SB X7-7 Table 7: 2020 Target Method

<table>
<thead>
<tr>
<th>Target Method</th>
<th>Supporting Documentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Method 1</td>
<td>SB X7-7 Table 7A</td>
</tr>
<tr>
<td>Method 2</td>
<td>SB X7-7 Tables 7B, 7C, and 7D</td>
</tr>
<tr>
<td>Method 3</td>
<td>SB X7-7 Table 7-E</td>
</tr>
<tr>
<td>Method 4</td>
<td>Method 4 Calculator</td>
</tr>
</tbody>
</table>

NOTES: Central Coast Hydrologic Region

### SB X7-7 Table 7-A: Target Method 1

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>10-15 Year Baseline</td>
<td>123</td>
</tr>
<tr>
<td>2020 Target GPCD</td>
<td>98</td>
</tr>
</tbody>
</table>
### SB X7-7 Table 7-E: Target Method 3

<table>
<thead>
<tr>
<th>Agency May Select More Than One as Applicable</th>
<th>Percentage of Service Area in This Hydrological Region</th>
<th>Hydrologic Region</th>
<th>&quot;2020 Plan&quot; Regional Targets</th>
<th>Method 3 Regional Targets (95%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>North Coast</td>
<td>137</td>
<td>130</td>
</tr>
<tr>
<td></td>
<td></td>
<td>North Lahontan</td>
<td>173</td>
<td>164</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sacramento River</td>
<td>176</td>
<td>167</td>
</tr>
<tr>
<td></td>
<td></td>
<td>San Francisco Bay</td>
<td>131</td>
<td>124</td>
</tr>
<tr>
<td></td>
<td></td>
<td>San Joaquin River</td>
<td>174</td>
<td>165</td>
</tr>
<tr>
<td>☑ 100%</td>
<td></td>
<td>Central Coast</td>
<td>123</td>
<td>117</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tulare Lake</td>
<td>188</td>
<td>179</td>
</tr>
<tr>
<td></td>
<td></td>
<td>South Lahontan</td>
<td>170</td>
<td>162</td>
</tr>
<tr>
<td></td>
<td></td>
<td>South Coast</td>
<td>149</td>
<td>142</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Colorado River</td>
<td>211</td>
<td>200</td>
</tr>
</tbody>
</table>

**Target** *(If more than one region is selected, this value is calculated.)*

117

### SB X7-7 Table 7-F: Confirm Minimum Reduction for 2020 Target

<table>
<thead>
<tr>
<th>5 Year Baseline GPCD From SB X7-7 Table 5</th>
<th>Maximum 2020 Target¹</th>
<th>Calculated 2020 Target²</th>
<th>Confirmed 2020 Target²</th>
</tr>
</thead>
<tbody>
<tr>
<td>124</td>
<td>118</td>
<td>117</td>
<td>117</td>
</tr>
</tbody>
</table>

¹Maximum 2020 Target is 95% of the 5 Year Baseline GPCD except for suppliers at or below 100 GPCD.

²2020 Target is calculated based on the selected Target Method, see SB X7-7 Table 7 and corresponding tables for agency’s calculated target.

NOTES: 117 gpcd is from Target Method 3
### SB X7-7 Table 8: 2015 Interim Target GPCD

<table>
<thead>
<tr>
<th>Confirmed 2020 Target Fm SB X7-7 Table 7-F</th>
<th>10-15 year Baseline GPCD Fm SB X7-7 Table 5</th>
<th>2015 Interim Target GPCD</th>
</tr>
</thead>
<tbody>
<tr>
<td>117</td>
<td>123</td>
<td>120</td>
</tr>
</tbody>
</table>

### SB X7-7 Table 9: 2015 Compliance

<table>
<thead>
<tr>
<th>Actual 2015 GPCD</th>
<th>2015 Interim Target GPCD</th>
<th>Optional Adjustments (in GPCD)</th>
<th>2015 GPCD (Adjusted if applicable)</th>
<th>Did Supplier Achieve Targeted Reduction for 2015?</th>
</tr>
</thead>
<tbody>
<tr>
<td>92</td>
<td>120</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

- Extraordinary Events
- Weather Normalization
- Economic Adjustment
- TOTAL Adjustments
- Adjusted 2015 GPCD
- 2015 GPCD
- Did Supplier Achieve Targeted Reduction for 2015?

Enter "0" if Adjustment Not Used
Chapter 4: Water Sources

The City is the sole water purveyor within the city limits. This allows the City to maintain uniformity of water service and distribution standards, and to be consistent in developing and implementing water policy. As the sole water purveyor, the City maintains control over water quality, distribution, and service to users of the system, as well as ensuring consistency with the General Plan policies and goals.

The City’s General Plan Water and Wastewater Management Element (WWME), was originally adopted in 1987. The WWME identifies multiple water sources to meet the City’s projected short and long-term water demands. Having several sources of water avoids dependence on any one source that may not be available during a drought or other water supply reduction or emergency. There is generally greater reliability and flexibility if sources are of different types (such as surface water, recycled water, and groundwater) and if the sources of one type are in different locations (such as reservoirs in different watersheds). Consistent with this concept, the City obtains water from multiple sources: Salinas Reservoir (Santa Margarita Lake), Whale Rock Reservoir, Nacimiento Reservoir, and recycled water from the City’s Water Resource Recovery Facility (WRRF). Groundwater has also been utilized in the past and is considered an available supplemental water supply. The following sections discuss each of the City’s water sources.

4.1 SALINAS RESERVOIR

The Salinas Reservoir (also known as Santa Margarita Lake) is located on the upper Salinas River, approximately nine miles southeast of the community of Santa Margarita. The project was originally built by the War Department to ensure an adequate water supply for Camp San Luis Obispo, as well as the City of San Luis Obispo. The dam and appurtenances were declared surplus by the War Department on April 14, 1947 and the U.S. Army Corps of Engineers assumed responsibility for the facilities. On July 11, 1947, the Corps entered into an agreement with the San Luis Obispo County Flood Control and Water Conservation District (District) for the operation and maintenance of the dam and related facilities. The City has an agreement with the Corps for the water from the reservoir.

Operation and Distribution

Salinas Reservoir is formed by a concrete arched dam. Immediately following construction, the reservoir had an estimated storage capacity of 26,000 acre-feet, surface area of 793 acres, and a drainage area of 112 square miles. As a result of siltation since the original construction, the reservoir capacity has been reduced.

Water is conveyed from Salinas Reservoir through 48,700 feet (9.2 miles) of 24-inch diameter reinforced concrete pipe to a three million gallon regulating reservoir at Santa Margarita booster pump station near the northerly base of Cuesta Grade adjacent to Highway 101. The pipeline is designed to flow by gravity from the Reservoir to the regulating reservoir when the lake level is above the elevation of 1,267 feet. A booster pump station at the base of the dam, consisting of two horizontal centrifugal pumps, is capable of maintaining the rated flow of 12.4 cubic feet per second (cfs) when the water surface elevation falls below 1,267 feet. Three electrically-driven horizontal centrifugal pumps at the Santa Margarita booster station pump water through 6,810 feet of 24-inch diameter reinforced concrete pipe to the entrance portal of the Cuesta Tunnel, which runs 5,327 feet through the mountains near Cuesta Grade. From the outlet portal of the tunnel, water is conveyed through an 18-inch diameter steel pipeline a distance of 5,133 feet to the City's turnout point. From the turnout, an 18-inch diameter pipe runs 4,180 feet to the site of Reservoir #2.
4.2 WHALE ROCK RESERVOIR

Whale Rock Reservoir is located on Old Creek approximately one-half mile east of the community of Cayucos. The project was planned, designed, and constructed under the supervision of the State Department of Water Resources. Construction took place between October 1958 and April 1961. The reservoir is jointly owned by the City, the California Men's Colony, and the California Polytechnic State University at San Luis Obispo. These three agencies form the Whale Rock Commission which is responsible for operational policy and administration of the reservoir. Day-to-day operation is provided by the City. The City owns 55.05 percent of the water storage rights at the reservoir. The remaining water storage rights are apportioned between the two State agencies with Cal Poly owning 33.71 percent and the California Men’s Colony owning 11.24 percent.

Operation and Distribution

Whale Rock Reservoir is formed by an earthen dam and was able to store an estimated 40,662 acre-feet of water at the time of construction. The project facilities consist of a 30-inch pipeline, two pumping stations, 2.1 miles of trails and a fishing access facility, maintenance facility and offices, and a structure used as a private residence.

City staff is responsible for ongoing maintenance and operation of the reservoir, including the inlet and outlet structures, reservoir structural instrumentation, access roads, daily reservoir level readings and climatological data, reservoir patrol and security, pipelines and pumping stations, water meters, cathodic protection systems, and other associated duties. Staff also monitors public fishing access to the lake during trout season (April to November).

The conveyance system delivers water from the reservoir to the Whale Rock Commission member agencies located between the reservoir and the City. Outlets from the pipeline exist for water deliveries to Chorro Reservoir and water treatment plant (operated by the California Men's Colony), Cal Poly State University, the Cayucos water treatment facility and the City's Water Treatment Plant. In addition, water can be delivered to the Dairy Creek Golf Course under terms of an agreement between the California Men's Colony and the County of San Luis Obispo.

The Whale Rock pipeline is approximately 17 miles long, connecting the reservoir to the member agencies, and terminates at the City's water treatment plant. The design capacity of the pipeline is 18.94 cubic feet per second (approximately 8,500 gallons per minute). The line consists of modified prestressed concrete cylinder pipe at most locations. Cement mortar lined steel pipe is used at creek crossings and junctions. The pipeline has surge protection consisting of eight-inch, globe type, diaphragm-actuated pressure relief valves which protect the line from excessive pressures. The cathodic protection system consists of sacrificial anodes and test stations located in areas subject to galvanic corrosion. Previous inspections made during routine maintenance and repairs indicate the pipeline to be in good condition. A pipeline condition analysis project will be conducted in the near future to identify possible pipeline deficiencies and maintenance activities designed to ensure reliable water delivery.
Two pump stations transmit the water along the pipeline to member agencies. The first pump station is located in Cayucos at Chaney Way (elevation 44 feet). The second station is located near Camp San Luis Obispo, approximately six miles southeast of Morro Bay (elevation 181 feet). Each station has five 200 horsepower pumps which are capable of delivering various flow rates requested by member agencies. Upgrades to both pump stations, which included the addition of two pumps at each station, were completed in August 1993. Six pumps and motors were replaced in 2004.

**Operating Agreements**

Several agreements establish policies for the operation of the Whale Rock system and actions of the member agencies. A brief description of the existing agreements follows:

A) Agreement for the construction and operation of the Whale Rock Project, 1957, set forth the project's capital cost distribution to the member agencies.

B) A supplemental operating agreement, 1960, established the Whale Rock Commission and apportioned the operating costs.

C) Downstream water rights agreement (original 1958 agreement was amended and replaced with a new agreement in April 1996) established water entitlements for adjacent and downstream water users. The downstream water users (Cayucos Area Water Organization or CAWO) affected by this agreement consist of three public water purveyors and the cemetery. In addition to the agencies, water entitlements were identified for separate downstream land owners.

D) A decision and order by the Fish and Game Commission of the State of California, October 24, 1964, required the Whale Rock Commission to stock the reservoir with 17,500 rainbow trout (between six and eight inches long) each year. The State Department of Fish and Game has directed that no fish be planted in the reservoir to protect the existing fish population in the reservoir (landlocked steelhead).

E) Superior Court decision #36101, 1977, required the Whale Rock Commission to allow public entry to the reservoir for fishing. In 1981, construction was completed on access trails and sanitary facilities at the reservoir, and public fishing began at the lake. Entitlements are as follows:

```
<table>
<thead>
<tr>
<th>Downstream Water Users</th>
<th>Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cayucos Area Water Organization (&quot;CAWO&quot;)</td>
<td>600 acre-feet</td>
</tr>
<tr>
<td>Paso Robles Beach Water Association</td>
<td>222</td>
</tr>
<tr>
<td>Morro Rock Mutual Water Company</td>
<td>170</td>
</tr>
<tr>
<td>County Water District #10A</td>
<td>190</td>
</tr>
<tr>
<td>Cayucos-Morro Bay Cemetery District</td>
<td>18</td>
</tr>
<tr>
<td>Mainini</td>
<td>50</td>
</tr>
<tr>
<td>Ogle</td>
<td>14</td>
</tr>
<tr>
<td><strong>Total Downstream Entitlement:</strong></td>
<td><strong>664 acre-feet</strong></td>
</tr>
</tbody>
</table>
```

Source: City of San Luis Obispo Utilities Department, 2016.

F) An agreement for water allocation and operational policy between the agencies forming the Whale Rock Commission. The agreement established the accounting procedures to allow each agency to carry over excess or deficit water each year. The operating policies were amended in 1996 to allow agencies to utilize their water supplies in the reservoir as needed by their agency.
G) An agreement between the Whale Rock Commission and the California Men's Colony, 1990, to establish maintenance and operation criteria for the Chorro Booster pumps. The Chorro Booster pumps were installed by the Commission on the California Men's Colony turnout from the Whale Rock line to reduce system pressures required to provide full flow to the California Men's Colony water treatment plant. Pump station maintenance, per the agreement, is the responsibility of the California Men's Colony.

H) An agreement between the Whale Rock Commission and the County of San Luis Obispo for connection to the Whale Rock pipeline, 1995, allowed a pipeline connection to deliver water to the Dairy Creek Golf Course. Typically, the golf course uses reclaimed water from the California Men's Colony Wastewater Treatment Plant. Water from Whale Rock Reservoir can be delivered when reclaimed water is not available under the terms of the agreement.

I) A consent to common use agreement, 1996, between the Whale Rock Commission and the County of San Luis Obispo. The agreement allowed the installation of the State Water pipeline at seven locations within the existing Whale Rock pipeline easement.

J) An agreement, 2006, for exchange of water between the City of San Luis Obispo and the San Luis Obispo County Service Area No. 10A. The agreement allows for the exchange of up to 160 acre feet per year of Nacimiento water for water from Whale Rock Reservoir. County Service Area 10A currently only has an entitlement of 40 acre feet from the Nacimiento Project.

4.3 NACIMIENTO RESERVOIR

In 1959, the San Luis Obispo Flood Control and Watershed Protection District entered into an agreement with Monterey County Flood Control and Water Conservation District (now Monterey County Water Resources Agency) to secure rights to 17,500 acre-feet of water per year from Nacimiento Reservoir. Nacimiento Reservoir is located entirely within San Luis Obispo County, California (County), and was built by Monterey County Flood Control and Water Conservation District who continues to control reservoir ownership and operations. The reservoir has a storage capacity of 377,900 acre-feet and serves the purpose of abating seawater intrusion in the groundwater aquifers of the Salinas River Valley. The Nacimiento Reservoir also provides flood protection and is a source of water supply for groundwater recharge for the Salinas Valley. 1,750 AFY of the County’s entitlement have been designated for uses around the lake, leaving 15,750 AFY for allocation to other areas within the County of San Luis Obispo.

The “dependable yield” from Nacimiento Reservoir is the contractual amount of water that the City has rights to from Nacimiento Reservoir. The original amount contracted for was 3,380 acre-feet per year. Engineering studies, environmental impact reports, dependable yield analyses, and preliminary design reports were undertaken in an effort to meet the various water needs within the County. In 2004, the County requested interested agencies to approve the contractual agreements for participation in the Nacimiento Project. The four initial project participants included the cities of San Luis Obispo and Paso Robles, the Atascadero Mutual Water Company, and the Templeton Community Services District. All of these agencies executed participation agreements with San Luis Obispo County for entitlements of water which totaled 9,630 acre feet. On June 29, 2004, the City Council authorized participation in the Nacimiento Water Project for the delivery of the original 3,380 acre-feet of water. In 2004, the County Service Area 10A in Cayucos became a project participant (25 AFY).

The County began construction in 2007 on a 45-mile pipeline project to deliver water from the Nacimiento Reservoir to participating agencies and cities. The facilities consist of a multi-port intake structure, three pump stations, three storage tanks, 45 miles of pipeline, four turnouts, a control center, and a Supervisory Control and Data Acquisition (SCADA) and Project control system. The Project budget was $176-million, including design, construction, construction management,
environmental permitting, and right-of-way. Pipeline construction and related water delivery facilities were completed in the fall of 2010 with water deliveries to the City beginning in January of 2011.

In March 2016, the City Council approved the addition of 2,102 afy from Nacimiento Reservoir to the City’s secondary water supply. This addition brought the City’s total Nacimiento Reservoir Allocation to 5,482 afy. Secondary water supplies are used to meet short-term losses to the City’s water supply due to events such as drought, pipeline maintenance, and repair of infrastructure. With uncertainty of future climatic conditions, regulation and aging infrastructure, the additional supply of Nacimiento water to the City’s portfolio reduces pressure on use of water supplies in the Whale Rock and Salinas reservoirs. It would serve to extend these stored supplies during future critical water shortage periods.

### 4.4 GROUNDWATER

The principal source of groundwater for the City is the San Luis Obispo Valley Groundwater Basin. The basin is fifteen square miles and is drained by San Luis Obispo Creek. It extends from the northern limits of the City and continues southerly along the alignment of the creek to just south of Buckley Road. In the Los Osos Valley area, the basin extends four miles west to the Los Osos Basin, which includes the community of Los Osos/Baywood Park.

The City’s major source of water was groundwater and local creeks until 1944 when the City began to use water from Salinas Reservoir. In 1943, the City pumped 1,380 acre-feet of groundwater. Groundwater was used again during the summer of 1948, when 440 acre-feet was pumped. From that point on until 1989, most groundwater in the City was used by agriculture and very little was used for domestic consumption. As a result of the drought beginning in 1986 and decreasing surface water supplies, the City activated groundwater wells in 1989 to meet the City's water demand. In 1990, at the height of the drought, the City had seven potable wells which accounted for approximately 50 percent of the water supplied during that period.
Current groundwater use includes one non-potable well and two irrigation wells. The City's municipal groundwater well is offline. The Corp Yard well was established during the drought of 1987-91 to serve as an alternative source of water for construction-related activities prior to the City's recycled water program. Over the years, the well, which was minimally monitored, was used by both San Luis Obispo citizens and properties from outside the City for various purposes ranging from landscape irrigation to water for livestock. Because of the current extreme drought conditions, many property owners from outside the City limits have become reliant on the well for domestic non-potable water uses such as flushing toilets. The City placed limitations on the use of the Corp Yard well in 2015 and it is only available for use under a valid permit issued by the City. Two wells are still in use for irrigation at the City's golf course.

<table>
<thead>
<tr>
<th>Well Name</th>
<th>Location</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pacific Beach #1</td>
<td>11950 Los Osos Valley Road</td>
<td>Potable, Offline</td>
</tr>
<tr>
<td>Corp Yard</td>
<td>25 Prado Road</td>
<td>Non-potable</td>
</tr>
<tr>
<td>Laguna Golf Course #1</td>
<td>11175 Los Osos Valley Road</td>
<td>Irrigation</td>
</tr>
<tr>
<td>Laguna Golf Course #2</td>
<td>11175 Los Osos Valley Road</td>
<td>Irrigation</td>
</tr>
</tbody>
</table>

Source: City of San Luis Obispo Utilities Department, 2016.

Consistent with Policy A 3.2.3 from the City's General Plan Water and Wastewater Management Element, the City does not rely on groundwater to meet long-term water demand. In 2015, the City relied on groundwater to supply 43 acre-feet of potable water. Table 17 shows the City's groundwater production for 2011 through 2015. The City will continue to use groundwater for domestic purposes, though as this source is only being used minimally at present, Table 19 does not identify any City groundwater production in the future. These production amounts do not include agricultural and private groundwater pumping by others.

The Sustainable Groundwater Management Act (SGMA) is a statewide policy that empowers local agencies to adopt groundwater management plans that relate to the needs and resources of their communities. In the future, the City sees groundwater continuing to play an important and useful role in the balancing of its overall water supply portfolio. As of May 2016, preliminary studies are underway but the quantity of groundwater available is unknown at this time.

No groundwater management plan has been prepared for the basin; however, the basin has been defined to be in overdraft and is listed as a medium priority basin under SGMA. Associated with this listing is the requirement to form a Groundwater Sustainability Agency by mid-2017 and create a Groundwater Sustainability Plan by 2022.

<table>
<thead>
<tr>
<th>Basin Name</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>San Luis Obispo Valley</td>
<td>100.08</td>
<td>92.68</td>
<td>76.66</td>
<td>125.58</td>
<td>43.46</td>
</tr>
</tbody>
</table>

NOTES:
1. Water volumes are in acre-feet per year.
2. Department of Water Resources, Table 6-1.

Source: City of San Luis Obispo Utilities Department, 2016.
4.5 WATER SUPPLY SUMMARY

The following tables provide information for each source of water utilized by the City in 2015. The City utilized water from its multi-source supply in a coordinated manner. Conceptually, the City will use its contractual water supply from Nacimiento Reservoir first, with Whale Rock and Salinas used as needed to meet the City’s overall potable water demand. In 2016, this contractual water supply was increased from 3,380 acre-feet to 5,482 acre-feet annually, with the additional 2,102 acre-feet as a secondary water supply for use during water shortages. In the year projected by this UWMP, the City assumes it will continue to use these water supplies in this coordinated manner. Recycled water was used at over 40 metered locations for landscape irrigation and construction water uses.

**TABLE 18: 2015 Actual Water Supplies**

<table>
<thead>
<tr>
<th>Water Supply Sources</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water purchased from:</td>
<td></td>
</tr>
<tr>
<td>SLO County Flood Control and Water Conservation District</td>
<td>2,677</td>
</tr>
<tr>
<td>(Nacimiento Reservoir)</td>
<td></td>
</tr>
<tr>
<td>Supplier-produced groundwater</td>
<td>43</td>
</tr>
<tr>
<td>Supplier-produced surface water (Salinas and Whale Rock Reservoirs)</td>
<td>2,000</td>
</tr>
<tr>
<td>Recycled Water</td>
<td>187</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4,908</strong></td>
</tr>
</tbody>
</table>

**NOTES:**
1. Water volumes are in acre-feet per year, and rounded to the nearest acre-foot.
2. Department of Water Resources, Table 6-8.

**Source:** City of San Luis Obispo Utilities Department, 2016.

**TABLE 19: Actual and Projected Water Supplies**

<table>
<thead>
<tr>
<th>Water Supply Sources</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water purchased from:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SLO County Flood Control and Water Conservation District</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Nacimiento Reservoir) All</td>
<td>5,482</td>
<td>5,482</td>
<td>5,482</td>
<td>5,482</td>
</tr>
<tr>
<td>Supplier-produced groundwater</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Supplier-produced surface water</td>
<td>626</td>
<td>939</td>
<td>1,265</td>
<td>1,611</td>
</tr>
<tr>
<td>Recycled Water</td>
<td>250</td>
<td>300</td>
<td>350</td>
<td>400</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>6,358</strong></td>
<td><strong>6,721</strong></td>
<td><strong>7,097</strong></td>
<td><strong>7,493</strong></td>
</tr>
<tr>
<td>Projected Population:</td>
<td>48,826</td>
<td>51,317</td>
<td>53,934</td>
<td>56,686</td>
</tr>
</tbody>
</table>

**NOTES:**
1. Water volumes are projected using population projections from Table 2.
2. Water volumes are in acre-feet per year.
3. Department of Water Resources, Table 6-8 and 6-9.

**Source:** City of San Luis Obispo Utilities Department, 2016.

4.6 TRANSFERS AND EXCHANGE OPPORTUNITIES

The City of Morro Bay and the Whale Rock Commission (which the City of San Luis Obispo is a member agency) executed an agreement in June of 2000 which provides for Mutual Aid between the agencies during disruption of water deliveries or lack of available water supplies. The agreement provides a general framework for exchanging water between agencies in the event of emergencies or other water disruptions. The agreement is voluntary based on each agency’s ability to assist at any point in the future.
The City is also a member of the California Water/Wastewater Agency Response Network (CalWARN). This organization functions in coordination with the State Office of Emergency Services (OES) to support and promote statewide emergency preparedness, disaster response, and mutual assistance matters for public and private water and wastewater utilities.

The San Luis Obispo County Service Area No. 10 (Cayucos) and the City have a water exchange agreement which was executed in October of 2006. The agreement allows for an exchange of Whale Rock Reservoir water for an equal amount of Nacimiento Lake water. The agreement allows for a future maximum exchange amount of up to 160 afy. The County Service Area No. 10A is a participant in the Nacimiento Project for a maximum entitlement of 40 afy and the Bella Vista Mobile Home Park, also a Nacimiento Project participant, may receive a maximum of 10 afy. Therefore, the table below reflects the current maximum exchange amount of 50 acre feet per year.

**TABLE 20: Transfer and Exchange Opportunities**

<table>
<thead>
<tr>
<th>Transfer Agency</th>
<th>Transfer or Exchange</th>
<th>Short-term or long-term</th>
<th>Proposed Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Morro Bay (emergency supply)</td>
<td>Transfer</td>
<td>Short-Term</td>
<td>unknown</td>
</tr>
<tr>
<td>San Luis Obispo County Service Area No.10</td>
<td>Exchange</td>
<td>Long-Term</td>
<td>50</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>50</strong></td>
</tr>
</tbody>
</table>

**NOTES:**
1. Water volumes are in acre-feet per year.

**Source:** City of San Luis Obispo Utilities Department, 2016.

4.7 **FUTURE WATER PROJECTS**

In 2004, the City entered into an agreement with San Luis Obispo County to participate in the Nacimiento Pipeline Project. Water deliveries from the Nacimiento Reservoir began in January 2011. According to the City’s water supply accounting policies, the City’s water supply will satisfy the need of existing and future residents and businesses as identified in the City’s General Plan adopted in 2014. The City Council elected to take the full allocation of Nacimiento in March 2016 adding an additional 2,102 afy to the City’s water supply portfolio to ensure water supply resiliency.

The City is studying the expansion of its current potable groundwater program.

As described further in Chapter 5, the design phase for the upgrade of the WRRF is underway in 2016 to accommodate General Plan buildout and maximize recycled water production. The upgrade will enable the City to pursue potable reuse in the future.

4.8 **DESALINATED WATER OPPORTUNITIES**

Desalination is a viable technology which is not rainfall dependent. Desalination activities can have significant negative environmental impacts and significant energy requirements which drive up the cost of desalinated water. The major disadvantages of desalination are the cost, potential for environmental impacts, and significant energy demand. Desalination is currently being used or considered for use by multiple local agencies and could potentially be a water supply consideration in the future if the City’s current supplies prove to be inadequate or insufficiently resilient. Desalination is not being pursued by the City at this time although future advances in desalination technology may create opportunities to utilize this resource.
## 4.9 Required UWMP Standardized Tables:

### Retail: Groundwater Volume Pumped

<table>
<thead>
<tr>
<th>Groundwater Type</th>
<th>Location or Basin Name</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alluvial Basin</td>
<td>San Luis Obispo Valley</td>
<td>100.08</td>
<td>92.68</td>
<td>76.66</td>
<td>125.58</td>
<td>43.46</td>
</tr>
</tbody>
</table>

**TOTAL**: 100 93 77 126 43

NOTES: Table 6-1 R.

### Retail: Water Supplies — Actual

<table>
<thead>
<tr>
<th>Water Supply</th>
<th>Additional Detail on Water Supply</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Actual Volume</td>
</tr>
<tr>
<td>Surface water</td>
<td>Nacimiento Reservoir</td>
<td>2,677</td>
</tr>
<tr>
<td>Surface water</td>
<td>Whale Rock Reservoir</td>
<td>1,461</td>
</tr>
<tr>
<td>Surface water</td>
<td>Salinas Reservoir</td>
<td>539</td>
</tr>
<tr>
<td>Groundwater</td>
<td>San Luis Basin</td>
<td>43</td>
</tr>
<tr>
<td>Recycled Water</td>
<td>City of San Luis Obispo WRRF</td>
<td>187</td>
</tr>
</tbody>
</table>

**Total**: 4,908

NOTES: Table 6-8 R.

### Water Supplies — Projected

<table>
<thead>
<tr>
<th>Water Supply</th>
<th>Additional Detail on Water Supply</th>
<th>Projected Water Supply</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2020</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reasonably Available Volume</td>
</tr>
<tr>
<td>Surface water</td>
<td>Nacimiento Reservoir</td>
<td>5,482</td>
</tr>
<tr>
<td>Surface water</td>
<td>Salinas Reservoir and Whale Rock Reservoir</td>
<td>6,940</td>
</tr>
<tr>
<td>Recycled Water</td>
<td>City of San Luis Obispo WRRF</td>
<td>200</td>
</tr>
</tbody>
</table>

**Total**: 12,622 | 12,672 | 12,722 | 12,772

NOTES: Table 6-9 R (Retail).
Chapter 5: Recycled Water

This chapter was prepared to fulfill the requirements of Section 10633 (a-g) of California Water Code Division 6, Article 2, Part 2.6 regarding the City’s recycled water supply. As defined in Water Code Section 13050(n),

“Recycled Water” means water which as, a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur and is therefore considered a valuable resource.

The City produces and distributes recycled water consistent with the regulatory requirements described below and therefore meets the minimum requirements to be classified as recycled water in this UWMP. These regulations, as set forth in Title 22, Division 4 of the California Code of Regulations, Wastewater Recycling Criteria (Title 22) and the conditions and requirements contained in the City’s National Pollutant Discharge Elimination System (NPDES) Permit Number R3-2003-081 prescribed by the RWQCB, establish specific criteria for treatment, distribution, and application of recycled water within the state. The RWQCB and Division of Drinking Water (DDW) have a memorandum of understanding in which DDW agrees the RWQCB will be the implementing agency responsible for permitting recycled water programs. The RWQCB Master Permit for Recycled Water is the guiding document for most of the City's requirements. In accordance with the Master Permit (WDR Order No. 03-2003-081, October 24, 2003), the City complies with the following:

1. Meter the total quantity of reclaimed water distributed daily,
2. Monitor and record chlorine residual concentration at a point after the final chlorine contact basin,
3. Provide guidance to recycled water users including a user manual and other guidance as needed,
4. Provide instruction to all City field staff to report incidents of unauthorized daytime irrigation activity or runoff,
5. Cooperate with County Environmental Department of Health Services to ensure backflow devices are present, tested and repaired or replaced if found defective,
6. Inspect the operation of reuse sites,
7. Perform cross connection testing,
8. Conduct site supervisor training and quarterly interviews to verify system operation, and
9. Quarterly review of monthly meter readings with follow-up on change in patterns of use.

The City also complies with minimum daily average discharge requirements from the WRRF to San Luis Obispo Creek for protection of downstream biological resources as required by National Oceanic Atmospheric Association, National Marine Fisheries Service (NOAA NMFS).

5.1 WASTEWATER COLLECTION, TREATMENT, AND DISPOSAL

The City’s wastewater collection system serves residential, commercial and industrial customers within the city limits. The City also provides service to Cal Poly and the County of San Luis Obispo Airport. The City's WRRF is located on Prado Road, adjacent to U.S. 101 in the southern portion of the City. The design flow rate at the WRRF is 5.1 million gallons per day (MGD), with a 2015 average daily flow of 2.74 MGD. The WRRF discharges to San Luis Obispo Creek.

The City’s Water Reuse Project, which included improvements at the WRRF and the construction of eight miles of recycled water distribution system, was completed in October of 2006. The recycled water pump station was designed to provide up to 1,750 gallons per minute (gpm) of recycled water at a pressure of approximately 130 pounds per square inch (psi). Maximum design capacity is approximately 2.5 MGD.
The distribution system was designed to serve the City with one pressure zone. Recycled water storage is provided by one-600,000 gallon underground storage tank located at the WRRF. The existing recycled water pump station was designed to accommodate future expansion with space for two additional pumps at the WRRF.

The recycled water distribution system extends to the east and west from the WRRF in the southern portion of the City (See Figure 5). The distribution system was designed to supply irrigation water to several existing City parks, the City’s Laguna Lake Golf Course, a middle school, Caltrans landscape medians, and four future development areas. Recycled water is provided to Caltrans from a metered connection near the WRRF, which is adjacent to U.S. Highway 101. Caltrans utilizes recycled water to irrigate landscape areas along the entire highway corridor through the City, which was previously supplied with potable water. Annual usage for 2011 through 2015 is provided in Table 21.

The City’s WRRF produced over 3,000 acre-feet of disinfected tertiary-treated effluent in 2015. The City is required to maintain a minimum average daily release, year-round, of treated effluent to San Luis Obispo Creek at a rate of 2.5 cubic feet per second (cfs), or approximately 1.6 mgd to provide a flow volume adequate to support habitat for anadromous fish species within San Luis Obispo Creek. This rate totals a minimum of 1,807 acre feet per year of creek discharge. The City monitors the release of effluent through an effluent meter at the WRRF. The balance, approximately 1,250 acre feet in 2015, makes up the City’s available recycled water resource (See Table 22).

The design phase for the upgrade of the WRRF to accommodate buildout under the City’s General Plan and maximize recycled water production is underway in 2016. When the WRRF is expanded in the future it will have an estimated treatment capacity of 5.4 mgd. The upgrade will enable the City to consider potable reuse in the future. Potable reuse is discussed more in section 5.7 of this Chapter.

### 5.2 CURRENT RECYCLED WATER USE

In 2015, recycled water was delivered to over 40 metered locations in the City for landscape irrigation. Additional sites will continue to be connected to the recycled water distribution system with new development in the City. Other notable recycled water demand figures:

- **Average Daily Demand** in July, August and September 2015 was over 292,000 gallons.
- **Peak Daily Demand** was over 534,000 gallons on June 17, 2015.
- **Peak Monthly Demand** was over 9.3 million gallons during August 2015.

The City began issuing annual construction water permits in July 2009. During the 2015-16 fiscal year over 40 construction water permits were sold. Permit holders have access to an unlimited supply of recycled water for dust control and compaction on construction sites in the City. The City has metered wharf head hydrant filling stations on the recycled water distribution system, at the City’s Corporation Yard and within the WRRF.
FIGURE 5: Water Reuse Master Plan Area & Distribution System

Source: City of San Luis Obispo Utilities Department, 2016.
TABLE 22: 2015 Influent Flow and Recycled Water Availability

<table>
<thead>
<tr>
<th>Average Influent Flow to WRF (MGD)</th>
<th>Treated Effluent Produced (AFY)</th>
<th>Minimum Average Daily Creek Release (MGD)</th>
<th>Minimum Annual Creek Release (AFY)</th>
<th>Average Daily Recycled Water Availability (MGD)</th>
<th>Annual Recycled Water Availability (AFY)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015 Average Flow</td>
<td>2.74</td>
<td>3,066</td>
<td>1.6129</td>
<td>1.807</td>
<td>1.13</td>
</tr>
<tr>
<td>Future Flow at WRRF Design Capacity</td>
<td>5.4</td>
<td>5,966</td>
<td>1.6129</td>
<td>1.807</td>
<td>3.79</td>
</tr>
</tbody>
</table>

NOTES:
1. 2015 data was derived from WRRF average monthly influent data. Future annual recycled water volume is based on the design capacity of the WRRF of 5.4 mgd in the design phase in 2016.

Source: City of San Luis Obispo Utilities Department, 2016.

5.3 FUTURE SYSTEM EXPANSION

This section discusses the City’s 2004 Water Reuse Master Plan (2004 Master Plan) including the potential for future expansion of the City’s recycled water system, and projected recycled water usage in 2020, 2025 and 2030, and 2035. The City's 2004 Master Plan included the following goals:

1. Increase the City’s safe annual yield by utilizing recycled water for non-potable purposes, thereby offsetting the use of potable water.
2. Develop a dependable water supply to meet a portion of the City’s non-potable demand.
3. Efficiently manage the City’s water resources.
4. Provide non-potable water to meet future non-potable demand.

At that time, the City estimated that demand existed for approximately 1,000 acre-feet of recycled water annually including a 380 AFY groundwater exchange program, serving recycled water for landscape irrigation to the Orcutt, Margarita, and Airport Specific Plan areas, as well as retrofits of existing irrigation systems to use recycled water.

A number of factors have changed since the adoption of the 2004 Master Plan related to water demand and wastewater generation. Per capita water demand is down from 126 gallons per capita per day (gpcd) in 2004 to 92 gpcd in 2015. The average daily and monthly influent flows to the WRRF have also decreased since the 2004 Master Plan reported the average flow as 4.5 mgd (a 2003 figure) to 2.74 mgd in 2015. This average daily flow is further lowered during the summer months while the student population associated with Cal Poly is away (mid-June to mid-September), thus reducing the available recycled water supply during the peak irrigation season.

The 2004 Master Plan included a 380 AFY groundwater exchange program whereby the City’s recycled water supply would be exchanged for a potable ground water supply that was used to irrigate agricultural land outside the City limits. This included both Dalidio Groundwater Exchange and South Higuera Groundwater Exchange. Since that time, the City elected not to pursue a groundwater exchange program due to the significant operating cost of utilizing groundwater supplies. Water deliveries under this program, which was 38 percent of the projected 1,000 AFY recycled water demand identified in the 2004 Master Plan, was intended to be delivered off-peak from landscape irrigation deliveries.

Projected recycled water use for 2020 through 2035 is provided in Table 23. Table 24 revisits estimates made in the 2010 UWMP for 2015 and actual 2015 recycled water deliveries.

The City is updating the 2004 Master Plan to address changed conditions experienced since 2004. The update will provide the City the opportunity to model the expansion of the recycled water distribution system, update future recycled water users, and planned system expansion.
### TABLE 23: Potential Future Recycled Water Use

<table>
<thead>
<tr>
<th>Beneficial Use Type</th>
<th>General Description of 2015 Uses</th>
<th>Level of Treatment</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landscape irrigation (excludes golf courses)</td>
<td>Irrigation at parks, school, medians, etc.</td>
<td>Tertiary</td>
<td>128</td>
<td>135</td>
<td>175</td>
<td>200</td>
<td>235</td>
</tr>
<tr>
<td>Golf course irrigation</td>
<td>Laguna Lake Golf Course</td>
<td>Tertiary</td>
<td>17</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Commercial use</td>
<td>Irrigation at commercial sites</td>
<td>Tertiary</td>
<td>27</td>
<td>30</td>
<td>35</td>
<td>60</td>
<td>75</td>
</tr>
<tr>
<td>Other: Construction Water</td>
<td>Construction Water Permit program</td>
<td>Tertiary</td>
<td>15</td>
<td>20</td>
<td>25</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td>187</td>
<td>200</td>
<td>250</td>
<td>300</td>
<td>350</td>
</tr>
</tbody>
</table>

**NOTES:**
1. Water volumes are in acre-feet per year.
2. Department of Water Resources, Table 6-4.
3. Projected recycled water usage for 2020 to 2035 is based on the City’s knowledge of planned projects identified in the City’s General Plan Land Use Element to be served with recycled water (including the Margarita Area, Orcutt Area, Airport Area, Avila Ranch Area, San Luis Ranch Area, and Madonna on LOVR).

**Source:** City of San Luis Obispo Utilities Department, 2016.

### TABLE 24: 2010 UWMP Recycled Water Use Projection Compared to 2015 Actual Deliveries

<table>
<thead>
<tr>
<th>Use Type</th>
<th>2010 Projection for 2015</th>
<th>2015 Actual Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural irrigation</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Landscape irrigation (excludes golf courses)</td>
<td>100</td>
<td>128</td>
</tr>
<tr>
<td>Golf course irrigation</td>
<td>20</td>
<td>17</td>
</tr>
<tr>
<td>Commercial use</td>
<td>80</td>
<td>27</td>
</tr>
<tr>
<td>Other: Construction Water</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>200</td>
<td>187</td>
</tr>
</tbody>
</table>

**NOTES:**
2. Includes parks, schools, medians and streetscape, and common area landscape with residential Home Owners Associations.
3. Includes commercial building landscaping.
4. Water volumes are in acre-feet per year.
5. Department of Water Resources, Table 6-5.

**Source:** City of San Luis Obispo Utilities Department, 2016.

### 5.4 RECYCLED WATER PROGRAM INCENTIVES

For approximately five years (2005 to 2010), the City’s Capital Improvement Plan identified $250,000 annually for expansion of the recycled water distribution system and user site modifications of existing irrigation systems necessary to utilize recycled water. The Master Plan included this strategy for expanding the use of recycled water in the near term. The strategy was to fund level expenditures each year and add new users from the existing distribution system. Although this funding is not in place for the current Financial Plan due to other priorities in the Water Fund, system expansion will continue in the future until such point that no additional sites are available or are deemed not cost beneficial to retrofit. At that point, the Council could decide to proceed with additional expansion of the system.
The City adopted a mandatory use ordinance for recycled water in 2004. The policy, codified in the Municipal Code as Chapter 13.24, allows the City to require the use of recycled water on parcels when considered feasible. The code language is as follows:

13.24.010 Statement of Policy
When in the judgment of the city, reclaimed water service can be feasibly provided to a particular parcel for particular uses, the utilities director shall require the use of reclaimed water in lieu of potable water for those uses. As used herein, the term “feasible” means reclaimed water is available for delivery to the property in compliance with all applicable federal, state, and local laws, ordinances and regulations and such reclaimed water can be delivered to the property at an overall cost to the user which does not exceed the overall cost of potable water service (Ord. 1403 § 1, 2001).

The mandatory use ordinance is an important element of the City’s recycled water program. The ordinance eliminates the need to provide true financial incentive or economic motivation to small volume users, which are ultimately expected to make up a significant portion of the City’s overall recycled water demand. Funding mechanisms or incentives may be required to achieve user site retrofits of existing irrigation systems.

In 2016, the metered rate charged for recycled water is 90 percent of the potable water rate. A permit to utilize recycled water for construction is available for an annual fee. These costs will be reviewed by the City in a rate study in 2016.

5.5 SEASONAL SURPLUS
The City has identified a “seasonal surplus” of recycled water available in excess of required discharge to the creek (1.6129 million gallons per day or mgd as required by the National Oceanic and Atmospheric Association, National Marine Fisheries Service) and recycled water for landscape irrigation. The primary use of recycled water in the City is for landscape irrigation with 76 percent of the City’s recycled water demand occurring from May through October. During 2015, 187 acre feet of recycled water was used for landscape irrigation and construction water. As only a limited amount of landscape irrigation takes place from November to April (seasonal off-peak period), more than 2 mgd of recycled water is available during the seasonal off-peak period. Related to this seasonal surplus, the following goal and program was added to the General Plan, Water and Wastewater Management Element in 2010:

Goal A7.1.2 Maximize the use of the City’s available recycled water supply for approved uses.

Program A 7.3.4 Consider the potential to deliver available recycled water supplies to customers outside the city limits, including analysis of policy issues, technical concerns, and cost recovery, provided it is found to be consistent with the General Plan.

With the update to the General Plan, Land Use Element in 2014 the following policy was added:

1.13.2. Recycled Water
Provision of recycled water outside of City limits may only be considered in compliance with Water and Wastewater Element Policy A 7.3.4 and the following findings:

A. Non-potable/recycled water is necessary to support continued agricultural operations.
B. Provision of non-potable/recycled water will not be used to increase development potential of property being served.
C. Non-potable/recycled water will not be further treated to make it potable.
D. Prior to provision of non-potable/recycled water, the property to be served will record a conservation, open space, Williamson Act, or other easement instrument to maintain the area being served in agriculture and open space while recycled water is being provided.
5.6 POTABLE REUSE

The design phase for the upgrade of the WRRF is underway in 2016 to accommodate General Plan buildout and maximize recycled water production. The upgrade will enable the City to consider potable reuse, part of a One Water concept, in the future.

Direct potable reuse is the planned introduction of recycled water either directly into a public water system, as defined in Section 116275 of the Health and Safety Code, or into a raw water supply immediately upstream of a water treatment plant. Direct potable reuse is a practice which is not currently occurring in California; however, the feasibility of implementing direct potable reuse is currently being reviewed by an expert panel supported by the DDW. The panel will provide recommendations to the DDW by December 2016 to:

- Advise DDW on public health issues and scientific and technical matters regarding the feasibility of developing uniform water recycling criteria for direct potable reuse.
- Assess what, if any, additional areas of research are needed to be able to establish uniform water recycling criteria for direct potable reuse.

TABLE 25: Methods to Expand Recycled Water Use

<table>
<thead>
<tr>
<th>Name of Action</th>
<th>Description</th>
<th>Planned Implementation Year</th>
<th>Expected Increase in Recycled Water Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mandatory Use</td>
<td>Ordinance adopted</td>
<td>2004</td>
<td>300</td>
</tr>
<tr>
<td>Sale of Seasonal Surplus</td>
<td>Under study</td>
<td>Unknown</td>
<td>Unknown</td>
</tr>
<tr>
<td>Potable Reuse</td>
<td>Under study</td>
<td>Unknown</td>
<td>Unknown</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td>300</td>
</tr>
</tbody>
</table>
Indirect potable reuse occurs when tertiary or advanced treated wastewater augments drinking water resources. The two types of indirect potable reuse are:

- Indirect potable reuse for groundwater recharge - where recycled water recharges a groundwater basin and groundwater is later extracted from the basin.
- Surface water augmentation – where recycled water is added into a surface water reservoir used as a source of domestic drinking water supply.

Indirect potable use does not actually occur until the water is subsequently pumped from the ground or withdrawn from the reservoir, treated, and added to the drinking water distribution system.

Indirect potable reuse through groundwater recharge has occurred in California since 1962. Title 22, Division 4, Chapter 3, Article 5.1 (CCR §60320 et seq) describes the permitting and monitoring process required to obtain a RWQCB permit for groundwater recharge. Indirect potable reuse through surface water augmentation is not currently permitted in California, but regulations are being drafted and are expected to be completed by December 31, 2016. Like groundwater recharge with recycled water, surface water augmentation will only occur with a permit and monitoring requirements from a RWQCB.
5.7 **Required UWMP Standardized Tables:**

### Wastewater Collected Within Service Area in 2015

<table>
<thead>
<tr>
<th>Wastewater Collection</th>
<th>Recipient of Collected Wastewater</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of Wastewater Collection Agency</td>
<td>Wastewater Volume Metered or Estimated?</td>
</tr>
<tr>
<td>City of San Luis Obispo</td>
<td>Metered</td>
</tr>
</tbody>
</table>

**Total Wastewater Collected from Service Area in 2015:** 3,066

**NOTES:** Table 6-2 R.

### Wastewater Treatment and Discharge Within Service Area in 2015

<table>
<thead>
<tr>
<th>Wastewater Treatment Plant Name</th>
<th>Discharge Location Name or Identifier</th>
<th>Discharge Location Description</th>
<th>Wastewater Discharge ID Number (optional)</th>
<th>Method of Disposal</th>
<th>Does This Plant Treat Wastewater Generated Outside the Service Area?</th>
<th>Treatment Level</th>
<th>2015 volumes</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of San Luis Obispo Water Resource Recovery Facility</td>
<td>San Luis Obispo Creek</td>
<td>Creek outfall</td>
<td>R3-2014-0033</td>
<td>River or creek outfall</td>
<td>Yes</td>
<td>Tertiary</td>
<td>Wastewater Treated: 3,066 Discharged Treated Wastewater: 2,878 Recycled Within Service Area: 187 Recycled Outside of Service Area: 0</td>
</tr>
</tbody>
</table>

**Total:** 3,066 2,878 187 0

**NOTES:** Table 6-3 R.

### Wastewater Treatment and Discharge Within Service Area in 2015

<table>
<thead>
<tr>
<th>Beneficial Use Type</th>
<th>General Description of 2015 Uses</th>
<th>Level of Treatment</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural irrigation</td>
<td>None</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Landscape irrigation (excludes golf courses)</td>
<td>Irrigation at parks, school, medians, etc.</td>
<td>Tertiary</td>
<td>128</td>
<td>135</td>
<td>175</td>
<td>200</td>
<td>235</td>
</tr>
<tr>
<td>Golf course irrigation</td>
<td>Laguna Lake Golf Course</td>
<td>Tertiary</td>
<td>17</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Commercial use</td>
<td>Irrigation at commercial sites</td>
<td>Tertiary</td>
<td>27</td>
<td>30</td>
<td>35</td>
<td>60</td>
<td>75</td>
</tr>
<tr>
<td>Other: Construction Water</td>
<td>Construction Water Permit program</td>
<td>Tertiary</td>
<td>15</td>
<td>20</td>
<td>25</td>
<td>25</td>
<td>25</td>
</tr>
</tbody>
</table>

**Total:** 187 200 250 300 350

**NOTES:** Table 6-4 R.
### 2010 UWMP Recycled Water Use Projection Compared to 2015 Actual

<table>
<thead>
<tr>
<th>Use Type</th>
<th>2010 Projection for 2015</th>
<th>2015 actual use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural irrigation</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Landscape irrigation (excludes golf courses)</td>
<td>100</td>
<td>128</td>
</tr>
<tr>
<td>Golf course irrigation</td>
<td>20</td>
<td>17</td>
</tr>
<tr>
<td>Commercial use</td>
<td>80</td>
<td>27</td>
</tr>
<tr>
<td>Other: Construction Water</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>200</strong></td>
<td><strong>187</strong></td>
</tr>
</tbody>
</table>

NOTES: Table 6-5 R.

### Retail: Methods to Expand Future Recycled Water Use

<table>
<thead>
<tr>
<th>Name of Action</th>
<th>Description</th>
<th>Planned Implementation Year</th>
<th>Expected Increase in Recycled Water Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mandatory Use</td>
<td>Ordinance adopted</td>
<td>2004</td>
<td>300</td>
</tr>
<tr>
<td>Sale of Seasonal Surplus</td>
<td>Under study</td>
<td>Unknown</td>
<td>Unknown</td>
</tr>
<tr>
<td>Potable Reuse</td>
<td>Under study</td>
<td>Unknown</td>
<td>Unknown</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>300</strong></td>
</tr>
</tbody>
</table>

NOTES: Table 6-6 R.

### Expected Future Water Supply Projects or Programs

- No expected future water supply projects or programs that provide a quantifiable increase to the agency's water supply. Supplier will not complete the table below.
- Some or all of the supplier's future water supply projects or programs are not compatible with this table and are described in a narrative format.

NOTES: Table 6-7 R.
Chapter 6: Water Supply Reliability

This chapter discusses the City's water supply reliability and presents the projected supplies available during a single dry water year and during multiple-dry water years. As directed by DWR, this chapter was prepared based on what is known by the City at the time the UWMP was prepared. Actions that would be undertaken during a short-term water supply emergency, such as drought or a catastrophic supply interruption, are addressed in the Water Shortage Contingency Plan included in Chapter 8.

The City uses multiple water sources to meet projected short and long-term water demands and implements water efficiency and demand management measures to balance the long-term reliability. Having several sources of water avoids dependence on any one source that may not be available during a drought or other water supply reduction or emergency. There is generally greater reliability and flexibility if sources are of different types (such as surface water, recycled water, and groundwater) and if the sources of one type are in different locations (such as reservoirs in different watersheds). Consistent with this concept, the City obtains water from multiple sources: Salinas Reservoir (Santa Margarita Lake), Whale Rock Reservoir, Nacimiento Reservoir, and recycled water from the City's Water Resource Recovery Facility (WRRF). Groundwater has also been utilized in the past and is considered an available supplemental water supply. The City does not import water from outside the local region. All components are necessary to maximize the available water resources.

As a signatory of the California Urban Water Conservation Council's (CUWCC) Memorandum of Understanding for Urban Water Conservation since 1991, the City has completed the implementation of all the Best Management Practices (BMPs) for water retailers. A full discussion of the City’s water demand management measures are included in Chapter 7.

6.1 SALINAS AND WHALE ROCK RESERVOIRS

For Salinas and Whale Rock Reservoirs, the City uses a computer model to simulate the operation of these two water supply sources over a historical period to determine “safe annual yield” or the quantity of water which can be withdrawn every year to accommodate City water demand.

Salinas Reservoir and Whale Rock Reservoir are in geographically and climatologically distinct watersheds. Salinas Reservoir has a higher evaporation rate and larger watershed than Whale Rock Reservoir, but smaller storage capacity – about 60 percent of the storage capacity of Whale Rock Reservoir. Whale Rock Reservoir has a smaller watershed, as compared to Salinas Reservoir, but greater storage capacity. Whale Rock experiences a lower evaporation rate as it is close to ocean. Coordinated operation of the two reservoirs results in maximization of safe annual yield. This approach increases the long-term water supply from these two sources.

The City’s safe annual yield from the coordinated operation of Salinas and Whale Rock Reservoirs is 6,940 acre feet. As required by General Plan, Water and Wastewater Management Element, policy A3.3.2:

The City will update the safe annual yield computer model for Salinas and Whale Rock Reservoirs following severe drought periods to determine if any changes are necessary to the safe annual yield amount.

After the current drought has a “bookend” the safe annual yield of the reservoirs will be recalculated. Related changes to safe annual yield will be incorporated into planning scenarios.

6.2 RECYCLED WATER

With a 2015 average influent flow of 2.74 million gallons per day, the City’s WRRF produces over 3,000 acre-feet of disinfected tertiary-treated effluent per year. A minimum of 1,807 acre-feet is discharged to San Luis Obispo Creek annually to provide satisfactory habitat and flow volume for fish species.
(steelhead trout) within the Creek environment. The balance makes up the City's available recycled water resource which is available for approved uses.

A consistent flow of wastewater to the WRRF enables the City to produce a volume of recycled water that exceeds identified seasonal demand for landscape irrigation. Recycled water is considered a reliable water supply. Information on recycled water is provided in Chapter 5.

6.3 NACIMIENTO RESERVOIR

In 2002, the San Luis Obispo County Flood Control and Water Conservation District (District) retained the services of Boyle Engineering Corporation to assess the ability of the Nacimiento Reservoir to reliably provide the District's entitlement of 17,500 acre feet per year to the District contractors. As part of the analysis, the study took into account the agreement with the Monterey County Water Resources Agency (MCWRA), which owns and operates the Nacimiento Reservoir facilities, that stipulates that the District entitlement through operational procedures will be “preserved” in the reservoir due to MCWRA being contractually obligated to maintain a “minimum pool” for the benefit of the District. This enables the District to maintain deliveries to the participating agencies even when reservoir levels are low, meaning that unless the water storage capacity drops below the “dead pool” of the reservoir, the District’s entitlement will always be available. The study took into account the following factors:

- Short-term power outages
- Delivery facility failure
- Energy costs
- Drought
- Contamination of supply
- Environmental restrictions

Upon completion of the analysis relating to drought conditions, the study summarized that even though there have been several periods of drought, both short-term and long-term, the total annual entitlement for the District could be delivered.

During the worst case drought on record (2012 to 2014), Nacimiento Reservoir continues to be a resilient water supply capable of providing a consistent and reliable source of water for San Luis Obispo County which includes the City’s contracted amount of 5,482 acre feet per year.

**Interlake Tunnel Project**

An Interlake Tunnel Project has been proposed by Monterey County to create a connection between Lake Nacimiento and Lake San Antonio. The goal of the project is to redirect water to fill the excess capacity typically available in Lake San Antonio. While the Interlake Tunnel Project has the potential to increase water storage up to 60,000 afy in Lake San Antonio, it is unclear if the diversion from Lake Nacimiento would result in any changes in reliability to water availability of the County’s 17,500 afy entitlement. The City will be closely monitoring the project to ensure its water rights are protected.

6.4 GROUNDWATER

Consistent with Policy A 3.2.3 from the City’s General Plan, Water and Wastewater Management Element, the City will continue to use groundwater for domestic purposes when available. As described in Chapter 4, groundwater may be available to the City as a supplemental supply during a water shortage emergency. In 2016, The City is planning capital improvements to enhance the City’s ability to extract, treat, and utilize groundwater to meet a portion of the City’s potable water demand.
The San Luis Obispo Valley Basin has been defined to be in overdraft and is listed as a medium priority basin under SGMA. Associated with this listing is the requirement to form a Groundwater Sustainability Agency by mid-2017 and create a Groundwater Sustainability Plan by 2022.

6.5 WATER QUALITY
A summary of the water quality from the City’s various water sources is provided in Table 26. The City has no known water quality constraints that would make a water source unavailable for potable water use. The City’s 2015 Annual Water Quality Report is provided in Appendix V.

<table>
<thead>
<tr>
<th>Water Source</th>
<th>Water Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nacimiento Reservoir Drinking Water</td>
<td></td>
</tr>
<tr>
<td>Salinas Reservoir Drinking Water</td>
<td></td>
</tr>
<tr>
<td>Whale Rock Reservoir Drinking Water</td>
<td></td>
</tr>
<tr>
<td>Groundwater Drinking Water</td>
<td></td>
</tr>
<tr>
<td>Recycled Water Title 22, Tertiary Treated Recycled Water</td>
<td></td>
</tr>
</tbody>
</table>

Source: City of San Luis Obispo Utilities Department, 2016.

6.6 WATER SUPPLY RELIABILITY ANALYSIS
A regulatory requirement of the UWMP is to perform a water supply reliability analysis applying different worst case drought years according to stringent guidelines set forth in the UWMP plan documentation. The following tables provide data on the reliability of the City’s water supply during normal, single-dry, and multiple-dry water years. The City is confident in the reliability of its multi-source water supply portfolio.

Table 27 lists the years which correlate to the guidelines for the specific water year type and are based on rainfall information dating back to the year 1870. The City’s average water year was determined to be 1943 as rainfall totals most closely compared to the City’s average rainfall total. The City’s single dry water year was determined to be 2013 as the rainfall total in 2013 was the lowest on record. The City’s multiple dry year scenario was determined to be 2012 to 2014 as the combined rainfall total for those three years was the lowest on record.

<table>
<thead>
<tr>
<th>Water Year Type</th>
<th>Base Year(s)</th>
<th>Volume Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Water Year</td>
<td>1943</td>
<td>12,622</td>
</tr>
<tr>
<td>Single-Dry Water Year</td>
<td>2013</td>
<td>12,622</td>
</tr>
<tr>
<td>Multiple-Dry Water Years, 1st year</td>
<td>2012</td>
<td>12,622</td>
</tr>
<tr>
<td>Multiple-Dry Water Years, 2nd year</td>
<td>2013</td>
<td>12,622</td>
</tr>
<tr>
<td>Multiple-Dry Water Years, 3rd year</td>
<td>2014</td>
<td>12,622</td>
</tr>
</tbody>
</table>

Notes
1. Department of Water Resources, Table 7-1.
2. Units are in acre-feet per year.
3. Volume available includes the City’s contractual supply to Nacimiento Reservoir, Safe Annual Yield from Salinas and Whale Rock Reservoirs, and recycled water.

Source: City of San Luis Obispo Utilities Department, 2016.
The City makes projections of future water demand using a conservative per capita potable water use rate of 117 gpcd which is the City’s SB X7-7 target. Table 28 summarizes the results of that analysis which, based on the City’s available water supplies and estimates of future water demand, indicates the City’s water resources are reliable during extended drought periods.

**TABLE 28: Supply and Demand Comparison**

<table>
<thead>
<tr>
<th>Normal Year</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply totals</td>
<td>12,622</td>
<td>12,672</td>
<td>12,722</td>
<td>12,772</td>
</tr>
<tr>
<td>Demand totals</td>
<td>6,599</td>
<td>6,975</td>
<td>7,369</td>
<td>7,779</td>
</tr>
<tr>
<td>Difference</td>
<td>6,023</td>
<td>5,697</td>
<td>5,353</td>
<td>4,993</td>
</tr>
</tbody>
</table>

**NOTES**

1. Department of Water Resources, Table 7-2.
2. Units are in acre-feet per year.
3. Supply total includes the City’s contractual supply to Nacimiento Reservoir, Safe Annual Yield from Salinas and Whale Rock Reservoirs, and recycled water use which will increase over time.

**Source:** City of San Luis Obispo Utilities Department, 2016.

Table 29 and Table 30 summarize the City’s water supplies in a single dry year and a multiple dry year scenario.

**TABLE 29: Single Dry Year Supply and Demand Comparison**

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply totals</td>
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<td>6,023</td>
<td>5,697</td>
<td>5,353</td>
<td>4,993</td>
</tr>
</tbody>
</table>

**NOTES**

1. Units are in acre-feet per year.
2. Department of Water Resources, Table 7-3.
3. Demand totals are projected using 117 gpcd.

**Source:** City of San Luis Obispo Utilities Department
# TABLE 30: Multiple Dry Year Supply and Demand Comparison

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First year</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supply totals</td>
<td>12,622</td>
<td>12,622</td>
<td>12,622</td>
<td>12,622</td>
</tr>
<tr>
<td>Demand totals</td>
<td>6,314</td>
<td>6,001</td>
<td>5,675</td>
<td>5,329</td>
</tr>
<tr>
<td>Difference</td>
<td>6,308</td>
<td>6,621</td>
<td>6,947</td>
<td>7,293</td>
</tr>
<tr>
<td><strong>Second year</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supply totals</td>
<td>12,622</td>
<td>12,622</td>
<td>12,622</td>
<td>12,622</td>
</tr>
<tr>
<td>Demand totals</td>
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</tr>
<tr>
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<td>6,308</td>
<td>6,621</td>
<td>6,947</td>
<td>7,293</td>
</tr>
<tr>
<td><strong>Third year</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supply totals</td>
<td>12,622</td>
<td>12,622</td>
<td>12,622</td>
<td>12,622</td>
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<td>6,621</td>
<td>6,947</td>
<td>7,293</td>
</tr>
</tbody>
</table>

**NOTES**
1. Department of Water Resources, Table 7-4.
2. The urban water targets determined in this UWMP were considered when developing the 2020 water demands included in this table.

**Source:** City of San Luis Obispo Utilities Department

The City's General Plan, Water and Wastewater Management Element, identifies policies that create a **Reliability Reserve** and **Secondary Water Supply** in an effort to reduce the impacts of a water shortage on the community. The **Reliability Reserve**, found in the City's Charter, provides a buffer for future unforeseen or unpredictable long-term impacts to the City's available water resources such as loss of yield from an existing water supply source and impacts due to climate change. The City's secondary water supply is the amount needed to meet peak water demand periods or short-term loss of City water supply sources. The City's **Secondary Water Supply** is identified as any water supply resources above those needed to meet the primary water supply and reliability reserve.

### 6.7 Required UWMP Standardized Tables:

<table>
<thead>
<tr>
<th>Basis of Water Year Data</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Year Type</strong></td>
<td>Base Year</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Year</td>
<td>1943</td>
<td>12,622</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Single-Dry Year</td>
<td>2013</td>
<td>12,622</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple-Dry Years 1st Year</td>
<td>2012</td>
<td>12,622</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple-Dry Years 2nd Year</td>
<td>2013</td>
<td>12,622</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple-Dry Years 3rd Year</td>
<td>2014</td>
<td>12,622</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTES:** Table 7-1(R)
## Normal Year Supply and Demand Comparison

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
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<td>4,993</td>
</tr>
</tbody>
</table>

NOTES: Table 7-2(R)

## Single Dry Year Supply and Demand Comparison

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
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<td>5,697</td>
<td>5,353</td>
<td>4,993</td>
</tr>
</tbody>
</table>

NOTES: Table 7-3(R)

## Multiple Dry Years Supply and Demand Comparison

### First year

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
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<td>5,353</td>
<td>4,993</td>
</tr>
</tbody>
</table>

### Second year

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
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</thead>
<tbody>
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<td>5,353</td>
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</tbody>
</table>

### Third year

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
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<tr>
<td>Difference</td>
<td>6,023</td>
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</tr>
</tbody>
</table>

NOTES: Table 7-4(R)
Chapter 7: Water Conservation & Demand Management Measures

7.1  HISTORY

Water conservation is an integral part of the City’s overall water management strategy and was first referenced as a part of the water management policies in 1973. In 1985, the City adopted the Annual Water Operational Plan policy that established water conservation as a means of extending water supplies during projected water shortages. Many technological and philosophical changes have occurred since that time, proving that water conservation can be used for both a short-term corrective measure, for immediate water supply shortages, and as a long-term solution to water supply reliability.

The City’s long-term water conservation plan is embedded in California Urban Water Conservation Council’s Memorandum of Understanding (MOU) regarding water conservation and the implementation of the Best Management Practices (BMPs). In September 1991, the City Council approved the signing of the MOU and has approved, through the City’s financial planning process, the implementation of the BMPs since that time.

Table 31 lists the CUWCC’s BMPs and implementation status which are consistent with the Demand Management Measure (DMM) provisions in the Urban Water Management Planning Act. As signatory to the MOU and reporting member of the California Urban Water Conservation Council (CUWCC), the City has submitted the necessary documentation to the CUWCC and has received certification stating the City has met coverage requirements for the Foundational BMPs and gallons per capita consumption option therefore meeting the compliance criteria in the Act and CWC 10631 (i) regarding the Demand Management Measures. Brief summaries of the City’s Demand Management Measures have been provided below to provide additional detail about the City’s water conservation program. The City’s CUWCC coverage reports and other information regarding the status of the implementation of each measure are detailed in Appendix VI.

7.2  WATER CONSERVATION PROGRAM HIGHLIGHTS

The Utilities Department’s Utilities Services section implements the City’s core water conservation programs. Examples of successful program activities are:

1. Enforcement of all water conservation related municipal codes
2. Monthly site inspections of properties with suspected leaks and inefficient uses of water
3. Enforcement of the toilet retrofit upon sale program
4. Facilitation of the Department’s school education contract
5. Implementation of the Department’s public outreach and communication programs
6. Monitoring of citywide per capita water demand
7. Water use surveys, audits and inspections
8. Implementation of conservation rebate and giveaway programs
9. Management of the City’s recycled water program

Through the City’s water conservation programs and policies, potable water use has been reduced from 182 gpcd in 1987 to 92 gpcd in 2015, well below its SBX7-7 interim goal of 120 gpcd and its compliance year goal of 117 gpcd. With the continuation of the demand management measures listed below, the City anticipates continuous compliance with both the CUWCC’s MOU and all state conservation mandates in 2020 and well into the future.
TABLE 31. Water Demand Management Measures

Demand Management Measures and California Urban Water Conservation Council BMPs

<table>
<thead>
<tr>
<th>CUWCC BMP Organization and Names (2009 MOU)</th>
<th>UWMP DMMs</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type</strong></td>
<td><strong>Category</strong></td>
<td><strong>BMP #</strong></td>
</tr>
<tr>
<td>Foundational</td>
<td>Utility Operations Programs</td>
<td>1.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.4</td>
</tr>
<tr>
<td>Education Programs</td>
<td></td>
<td>2.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.2</td>
</tr>
</tbody>
</table>

NOTES:
Source: City of San Luis Obispo Utilities Department, 2016.

7.3 WATER WASTE PREVENTION ORDINANCES

According to the DWR 2015 UWMP Guidebook, a water waste ordinance that explicitly states the waste of water is to be prohibited must be adopted. In an effort to promote the responsible use of water and minimize water waste, the City’s water waste prohibitions are included in Chapter 13.07 of the City’s Municipal Code, which defines water waste as follow:


A. No person shall cause any water delivered by the city water system to flow away from property owned, occupied or controlled by such person in any gutter, ditch or in any other manner over the surface of the ground, so as to constitute water waste runoff.

B. “Water waste runoff” means water flowing away from property and which is caused by excessive application(s) of water beyond reasonable or practical flow rates, water volumes or duration of application. (Ord. 1089 § 1 (part), 1987)

In accordance with City Municipal Code 13.07.030, when deemed necessary in the judgment of the City Council to conserve water during critical water periods, the City Council may also by resolution declare an emergency condition and do any or all of the following which in its judgment is deemed advisable after publication of notice thereof in a newspaper of general circulation distributed in the city or after reasonable notice thereof is otherwise given by the city to users:

1. Limit irrigation within the City water service area to specified hours, or prohibit irrigation entirely within the service area or any portion or portions thereof;
2. Limit all customers inside the City water service area to specified maximum usages of water for each category of users;
3. Implement other water conservation measures as deemed appropriate.

7.4 METERING

In accordance with the 2015 UWMP guidebook and CWC 527 (a) (1), the City has metered all of its services connections. Having all service connections metered encourages water conservation by effectively billing customers for the quantity of water consumed, forming a relationship between water consumed and total cost of the water bill.

Meter replacement programs exist for all customer classes in order to replace aged meters with newer meters that register water more efficiently, ensuring that all water consumed by customers is billed for and accounted for by the City to the extent feasible. Water meters are replaced based on age of meter and also as defective or under-registering meter types are discovered. These replacements ensure that accurate consumption data is delivered to both the customer and the utility.

7.5 CONSERVATION PRICING

According to the DWR 2015 UWMP Guidebook, retail water agencies need to describe the pricing structure that is used by the water agency. Conservation pricing is designed to discourage wasteful water habits and encourage conservation. CUWCC BMP 1.4 (Appendix VI) identifies a water rate structure that is no more than 30 percent flat charge as encouraging and supporting conservation habits. As shown in Appendix VI, the City’s water rate structure meets the requirements of the UWMP and CUWCC as a rate that encourages conservation.

7.6 PUBLIC EDUCATION AND OUTREACH

The City has used public education and outreach as a mechanism for decreasing water use in the City and for promoting water conservation since the 1970s. The City’s public outreach and education programs currently include the following:

1. Quarterly Resource Newsletter
2. Social media use (Facebook, Twitter, Instagram)
3. Billing inserts
4. Streaming videos
5. Direct mail
6. High use mailers
7. Drought/conservation portal on City website
8. Funding for SLO Waterwise Landscaping website
9. Various newspaper articles
10. Monthly KCBX public radio drought updates
11. Booth at biannual SLO Home Show
12. Booth at yearly SLO Preparedness Expo
13. Booth at Thursday downtown Farmers Market (26 times a year)
14. Host of Community Water Forum
15. School education programs (K-12)
16. Annual meetings with local home owners associations

The City’s public education and outreach programs are continually adapting to ensure that the messaging stays effective and relevant.

7.7 PROGRAMS TO ASSESS AND MANAGE DISTRIBUTION SYSTEM REAL LOSS

The City has been conducting annual AWWA water loss audits since 2009. Water loss statistics identified from the AWWA water audits can be viewed in detail in Chapter 3 and Appendix IV.
In order to reduce water loss, the City conducts service line replacement projects based on service line age and condition, along with extensive programs to replace defective polybutylene service lines that have been identified to have a high likelihood of failure. Water meter replacement programs exist to replace meters based on age, consequence of failure, and likelihood of failure. Along with these maintenance programs, the City also implements a valve exercising program that ensures water mains can be isolated during repairs to minimize the amount of water lost during water main breaks and repairs. During 2014 and 2015 the City finished a water master plan which identifies and prioritizes future maintenance and capital improvement projects which will reduce future water loss due to infrastructure failure.

7.8 WATER CONSERVATION PROGRAM COORDINATION AND STAFFING SUPPORT

The Utilities Services section of the Utilities Department manages and implements water conservation programs for the City. This section consists of a manager who coordinates the conservation programs, three full time Utilities Services Technicians, and temporary staffing as needed. Many support services such as the school education program and elements of the public outreach program are provided by contract to ensure the City meets its conservation goals and promotes responsible water use.

7.9 OTHER DEMAND MANAGEMENT MEASURES

For over five years the City has implemented cost-effective programs that will increase water efficiency citywide. The City has voluntarily implemented the following DMMs and plans to continue implementing all DMMs and BMPs into the future. The following is a description of these additional programs.

Water Audits

The Utilities Department's Utilities Services section offers free indoor and outdoor water audits to customers who have high water use or would like to reduce their water consumption. These audits provide information about irrigation reduction methods, proper toilet maintenance, low flow fixtures installation, and general information on methods for reducing water use. This service is often offered proactively to customers who have unexplained high use, water waste violations, or other instances where audits could provide potential water savings. Customers can request a free water audit on the City’s website.

Rebate Programs

In response to the Governor's Emergency Drought Declaration, the City Council authorized $100,000 in support of effective rebate programs in June 2015. $100 dollar rebates were provided for qualified toilet and washing machine replacements. Going forward, staff will be examining the expansion of these rebate programs to include other types water demand reductions.

Retrofit Upon Sale Program

The City's Retrofit Upon Sale Program requires the replacement of high flow toilets when a home has a change of ownership or major remodel. This program has existed since the early 1990’s and along with several other toilet replacement programs, has reduced the City’s long term water demand by an estimated 1,500 acre-feet per year. All properties that have been certified to have low flow toilets are shown via a user-friendly online mapping tool at slowater.org. This tool also provides the City with a database that can be used to help project the effectiveness of future toilet rebate, offset, and replacement programs.
Chapter 8: Water Shortage Contingency Plan

Developing and maintaining a multi-source water supply portfolio to increase resiliency against water shortages has been a City priority for many years. A water shortage occurs when water supplies are insufficient to support demand. A water shortage could occur due to drought, earthquake, infrastructure failure, or other emergency. Droughts occur with unpredictable frequency, intensity, and duration. The Department of Water Resources defines drought as “A deficiency of precipitation over an extended period of time resulting in a water shortage for some activity, group, or environmental sector.”

This Water Shortage Contingency Plan (WSCP) provides the foundation for a staged response to worsening water shortage conditions. A draft Water Conservation Ordinance, to update Chapter 13.07 of the City’s Municipal Code, is proposed to establish the regulations and procedures for implementing this Plan. The draft Water Conservation Ordinance is provided in Appendix VI.

8.1 WATER SHORTAGE DETERMINATION

The degree of the water supply shortage determines the necessary level of response from the City and customers. When determining a water shortage stage the City evaluates the following:

- Water demand across customer categories
- Water availability at each supply source
- Available water supply options including supplemental water supplies

The City utilizes a water projection model, testing both hypothetical and actual water demand scenarios, to analyze current water storage at each reservoir and to predict how long the water supplies are available. The model accounts for the total storage in the three reservoirs, in conjunction with other available resources, needed to meet the City’s water demand. The model uses historical hydrologic information based on the average for the worst drought period (2012 to 2014). Other data included in the model are:

- Water Entitlement (contractual or percentage)
- Current reservoir level
- Gallons per capita per day water demand
- Rainfall
- Temperature
- Evaporation
- Existing population
- Future population growth

Utilizing a water projection model as part of its water supply management enables the City to foresee whether a water supply shortage is anticipated in any given year, and the severity of a shortage based on the availability of the City’s different sources of supply and water demand trends. The City uses the model to study the potential impacts of climate change using increased temperature and evaporation rates, along with decreased precipitation.
8.2 WATER SHORTAGE RESPONSE
A water shortage response relies on the City’s ability to temporarily augment supply and/or reduce water demand. The City’s water shortage response would combine a variety of elements from outreach to enforcement, each increasing in intensity as the shortage persists. The City’s demand reduction targets focus on water use limits and prohibitions that will reduce non-essential use, such as imposition of restrictions on outdoor irrigation. Implementation of these restrictions is necessary to conserve the City’s water supply for the greatest public benefit regarding domestic use, sanitation and fire protection. This section reviews the general strategies the City will employ to mitigate the impacts of water shortage on the community.

Voluntary Reduction Measures
All customers may be asked to voluntarily reduce their water usage during a water shortage. The City may provide water conservation tips and suggestions through various public outreach methods, encourage and distribute conservation devices such as low flow shower heads and faucet aerators, discourage excessive outdoor watering, and encourage landscaping with drought tolerant plants. Voluntary reductions measures are described in more detail in Section 8.3

Mandatory Reduction Measures
The City may place mandatory reduction measures on certain uses, such as restricting outdoor watering to prescribed times and number of days per week beginning in the Watch Stage, with days and times for landscape watering further limited in later stages. Mandatory reduction measures may limit specific methods of irrigation (i.e., sprinkler ban).

The seasonal increase in water demand underscores the importance of implementing outdoor landscape-focused reduction programs. An average of approximately 50 percent of residential water use in San Luis Obispo is for landscape irrigation. Therefore, restrictions on outdoor water use are generally highly effective in reducing water demand. Outdoor uses are typically considered to be discretionary or nonessential for health and safety purposes, are highly visible and relatively easy to monitor, and often are a substantial component of water demand, particularly during the summer months when drought conditions are often most severe.

Prohibitions
Prohibitions will vary by drought stage, with the fundamental purpose of prohibiting non-essential uses not required for basic health and safety. During a declared water shortage, specific prohibitions would be described in a Water Shortage Ordinance adopted by the City Council. In the Critical Stage, all non-essential outdoor water use, except recycled water or grey water, may be prohibited.

The City will adopt regulations at the appropriate water shortage stage that require customers to take certain measures to promote water conservation, such as posting signage at various establishments, undergoing a water audit to maximize or demonstrate water conservation, and prescribing to customer-specific water budgets.

Supplemental Water Supply Options
During a water shortage emergency, the City may also utilize supplemental water supply options, or acquiring a new supply as warranted by the current situation. Currently, this might include requesting all 5,482 afy of the City’s Nacimiento Reservoir allocation. In the future, this may include utilizing more groundwater and/or utilizing highly treated wastewater in a potable reuse system. These water supply options may be less desirable during normal operations due to increased operation costs.

8.3 WATER SHORTAGE STAGES
The goals of the City’s Water Shortage Contingency Plan are to extend the City’s available water resources long enough to gain another winter rainfall period which could serve to add to reservoir storage. Extending available water resources through water demand reduction provides time for the City to bring on supplemental water supplies to meet demand. It is the City’s goal to implement water demand reduction programs that will achieve measurable water savings without affecting customers’ lifestyles. In the higher water shortage stages lifestyle and habit changes will be necessary.
This section identifies the measures that may be taken at each stage to achieve desired water use reduction levels. The purpose of establishing water shortage stages is to clearly define the severity of the shortage and establish appropriate targets for demand reductions. Defining these stages allows the City to respond to worsening conditions, with each stage “triggering” different actions. The multi-stage approach provides different levels of response for a water shortage event ranging from a ten percent supply deficiency up to a 50 percent or greater deficiency.

Table 32 provides a quick reference guide to the City’s Water Shortage Contingency Plan, though City Council may adopt variations of these stages, independent from the stage resulting from the use of the Water Projection Model, to strategically address the current water shortage situation. Each stage describes increasing levels of water demand reduction and water supply augmentation methods. As stated previously, during an actual water shortage emergency, other measures may be imposed.

### Water Shortage Response Stage: MONITOR

San Luis Obispo has made water conservation an integral part of the community’s culture and policy context for managing its water resources. The community has demonstrated a high commitment to reducing its water usage during water shortages. Although not a true declaration of a water shortage, the Water Shortage Contingency Plan’s Monitor Stage remains in place at all times along with voluntary conservation and implementation of the California Urban Water Conservation Council’s Best Management Practices. A complete description of the City’s water conservation program is included in Chapter 7.

This stage is focused on achieving voluntary compliance, as opposed to a mandatory demand reduction programs. To ensure the City is using water responsibly and remains in compliance with the SB X7-7 requirement to not exceed 117 gpcd, the City continually assesses available water supply levels, monitors customer water demand trends, conducts water loss audits, and evaluates potential supplemental supplies. The following are examples of measures that may be taken to facilitate water conservation consistent with CUWCC best management practices:

- Implement public outreach and communication programs (bill stuffers, social media, etc.)
- Participate in trade shows, home shows, and special community events
- Identify largest water users in each sector and offer complementary water audits
- Identify and notify customers of possible leaks and inefficient uses of water
- Encourage the use of drip irrigation and drought tolerant plants
- Implement school (K-12) education programs related to water conservation
- Enforce the toilet retrofit upon sale program
- 

Actions at the Monitor Stage would also include active enforcement of the City’s water waste prohibitions, such as those adopted by the Governor in 2016, from Chapter 13.07 of the City’s Municipal Code, which defines water waste as follow (See also Table 32):

A. No person shall cause any water delivered by the city water system to flow away from property owned, occupied or controlled by such person in any gutter, ditch or in any other manner over the surface of the ground, so as to constitute water waste runoff.
B. “Water waste runoff” means water flowing away from property and which is caused by excessive application(s) of water beyond reasonable or practical flow rates, water volumes or duration of application. (Ord. 1089 § 1 (part), 1987)
### TABLE 32: Water Shortage Response Stages
**Quick Reference Guide**

<table>
<thead>
<tr>
<th>STAGE</th>
<th>WATER SUPPLY STATUS¹</th>
<th>CITY ACTIONS</th>
<th>PER CAPITA GOAL (GPCD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitor</td>
<td>5+ years of available water supply</td>
<td>City maintains conservation messaging at levels that ensure compliance with SB X7-7 maximum of 117 gpcd.</td>
<td>117²</td>
</tr>
<tr>
<td>Watch</td>
<td>&lt; 5 years of available water supply</td>
<td>City increases conservation messaging. City examines available alternative water sources (groundwater, Nacimiento full allocation, etc.) and takes action based on current circumstances to meet demand. City may implement mandatory conservation measures to meet per capita reduction target.</td>
<td>107</td>
</tr>
<tr>
<td>Warning</td>
<td>&lt; 4 years of available water supply</td>
<td>City implements mandatory conservation measures including outdoor irrigation restrictions (examples: 3 or 2 days a week watering and only serving water upon request at restaurants) and consider a Water Offset Program for new connections.</td>
<td>95</td>
</tr>
<tr>
<td>Severe</td>
<td>&lt; 3 years of available water supply</td>
<td>City implements Water Allotment Program. Water Offset Program for new connections may be increased. Additional outdoor irrigation restrictions may be added (such as no spray irrigation). Outdoor irrigation may be prohibited for all uses. Cessation of all new connections may be considered.</td>
<td>90</td>
</tr>
<tr>
<td>Extreme</td>
<td>&lt; 2 years of available water supply</td>
<td>City continues to implement a Water Allotment Program with reduced levels. Water Offset Program for new connections may be increased. Outdoor irrigation may be prohibited for all uses. Cessation of all new connections may be considered.</td>
<td>85</td>
</tr>
<tr>
<td>Critical</td>
<td>&lt; 1 year of available water supply</td>
<td>City continues to implement a Water Allotment Program at further reduced levels (minimum for public health and safety). Outdoor irrigation prohibited for all uses. Water Offset Program to cease and no new connections permitted.</td>
<td>75</td>
</tr>
</tbody>
</table>

**NOTES:**
1. The City’s Water Supply Status is informed by the Water Projection Model and per Section 8.2 of Chapter 8.
2. The City’s per capita goal of 117 gpcd is the City’s SB X7-7 2020 Target, see Chapter 3.
3. Recycled water is not subject to demand reduction programs, water allocations or other drought response programs. The City’s recycled water program is described in further detail in Chapter 5.
Water Shortage Response Stage: WATCH

When the City's available water supply would provide less than five years of water, a recommendation would be made to the City Council that a water shortage be declared. The City Council would be asked to adopt a resolution declaring the City enter the Watch Stage and urge the public to reduce water use by approximately 8.5 percent from 117 gpcd to 107 gpcd.

During the “Watch” Stage, the demand management measures utilized during the Monitor Stage above will increase along with a continued focus on voluntary compliance. The City will also increase public outreach, implement system and operational changes, increase enforcement actions, and undertake other administrative actions. These program expansions and changes may include:

Water Demand Reduction Programs:
- Accelerate water audit programs for all customer classes
- Identify largest water users in each sector and contact for complementary water audits
- Increase water waste patrols
- Conduct water use surveys
- Implement rebate programs
- Consider the use of irrigation limitations

Public Outreach Programs:
- Issue a press release following Watch Stage declaration
- Include information in quarterly Resource Newsletter
- Update City website and create a page dedicated to information on details of WSCP Watch Stage
- Consider use of billing inserts to notify public of current situation and needs
- Coordinate with regional partners on messaging and outreach
- Develop outreach program for City staff to promote consistent messaging related to water supply and water conservation
- Increase outreach at public events such as Farmers Market, SLO Home Show, and home owners association board meetings
- Focus social media platforms on issues consistent with needed demand reductions

System and Operational Changes:
- Reduce water usage for main flushing and hydrant flushing
- Reduce distribution system pressure where feasible
- Increase leak detection, water meter testing, and water meter replacement
- Decrease allowable time for repairing leaks in distribution system
- Require use of non-potable water sources for all street sweeping and hydrocleaning
- Activate the Drought Taskforce

Enforcement Actions:
- Actively enforce water waste prohibitions
- Update online forms for reporting water waste and move forms to front page of website
- Continue to follow City's policy for code violations and issue Notices of Violation and Administrative Citations where deemed necessary

Other Administrative Actions:
- Begin drafting ordinance revisions and code changes that would go into effect in subsequent water shortage stages
- Plan for the funding and implementation of specific conservation programs launched in subsequent water shortage stages
• Review potential fiscal impacts of drought (i.e., increased water supply, operational, and capital costs); and demand reductions (reduced revenue)
• Prepare for implementation of next water shortage stage
• Identify and plan for the need for additional staff. In planning for additional staff, consideration should be given to funding, available office space, vehicles, training, and other needed supplies and support
• Consider need for drought surcharge to stabilize revenue
• Consider deferring previously scheduled capital projects as necessary to invest in acquisition of needed water supply sources and demand reductions
• Review available supplemental water supply options, such as increased use of groundwater, utilization of potable reuse, and implementation of a recycled water filling station

Water Shortage Response Stage: WARNING

When the City’s available water supply would provide less than four years of water, a recommendation would be made to the City Council to move to the next water shortage stage. The City Council could be asked to adopt a resolution declaring the City enter the Warning Stage and urge the public to reduce water use by an additional approximately 11 percent from 107 gpcd to 95 gpcd including mandatory conservation measures.

The water conservation measures described in the Monitor and Watch Stages above may increase during the Warning Stage, with an increased focus on limiting outdoor water uses. System and operational changes would remain in place. These increases and additions to programs may include:

Water Demand Reduction Programs:
• Continue implementation of and possible increase of all demand reduction programs listed in Watch Stage
• Limit outdoor watering to two or three days a week and only between the hours of 7:00 p.m. and 7:00 a.m.
• Defer landscape installations for new development or require development to install landscaping that provides a significant reduction in water demand (e.g. a minimum of 50%) as compared to a conventional drought tolerant landscaping during normal water years
• Require hotels/motels/inns to offer the option to opt out of laundry services
• Require restaurants to only serve water upon request
• Restrict use of decorative water features and fountains
• No watering within 48 hours of measureable rainfall
• No washing down of sidewalks, driveways, parking lots or other hardscape areas unless necessary to protect public health and safety
• No exterior washing of buildings, dwelling and other structures, except for pre-approved uses
• No vehicles washing except at commercial car washing facilities or by use of a bucket and/or hose equipped with a shut off nozzle

Public Outreach Programs:
• Continue implementation of and possible increase of all public outreach programs listed in Watch Stage
• Issue a press release following Warning Stage declaration
• Target outreach to customers with large landscapes regarding irrigation restrictions
• Use of billing inserts, postcards, and direct mail pieces to inform customers of new requirements and prohibitions
• Coordinate with local business groups such as the Chamber of Commerce and landscaping associations to help encourage conservation among commercial customers
• Coordinate with home owners associations, property rental agencies, and other local groups to help encourage conservation among residential customers

Increased Enforcement Actions:

• **First Violation:** Customer notification and education
  Customer will be notified by staff of the particular violation observed, and the demand reduction programs currently in place. The customer will be provided with needed resources to help them comply with requirements. Examples of notification include: door tags containing violation information, mailed letter, and/or personal phone call by staff

• **Second Violation:** Issuance of Notice of Violation
  Customer will be issued a written notice of violation (NOV), notifying the customer of specific violation, date and time the violation was observed, and consequences of subsequent violations

• **Subsequent Violations:** Customer may be issued a penalty/fine for violation

Other Administrative Actions:

• Continue implementation of and possible increase of all other administrative actions listed in Watch Stage
• Prepare utility billing system and bill format for water allocations and reductions listed in subsequent stages.
• Establish appeals committee for customers who exceed allotments in subsequent stages or receive fines from violating water waste prohibitions
• Increase utility billing training and support to address additional requirements of Warning Stage and future stages
• Begin preparing for Severe Stage

Implementation of a Water Demand Offset Program:
During the Warning Stage, the City may consider implementing a water demand offset program. Water demand offset programs are designed to require new development that causes increased water demand to offset such demand through conservation or acquisition/development of new supplies. The goal of an offset program is to ensure that a new development does not increase current and future water demands.

At the Warning stage the City may choose to implement a neutral offset program, requiring that new demands offset usage at a rate of 1:1. Future stages of the WSCP may suggest a more aggressive, “net positive” water demand offset program. A “net positive” water demand offset program would require a positive offset of a project’s water demand. An example of this would be a project required to offset its water demand at a ratio higher than 1:1, such as 1.5:1 or 2:1.

There are several types of offset programs in use across California and the United States. Examples of potential offset programs are listed below.

• Toilet replacements
• Smart irrigation controllers
• Onsite reuse systems
• Submetering
• In-lieu fee
• Irrigation system retrofits
• Waterless urinals
• Rainwater capture
Water Shortage Response Stage: SEVERE

When the City's available water supply would provide less than three years of water, a recommendation would be made to the City Council to move to the next water shortage stage. The City Council would be asked to adopt a resolution declaring the City enter the Severe Stage and urge the public to reduce water use by an additional approximately five percent from 95 gpcd to 90 gpcd.

At this water shortage response stage, the City would continue implementation of demand reduction, public outreach, and enforcement programs described in prior stages. System and operational changes would remain in place. At the Severe Stage, a water offset program may increase to a “net positive” program, such as 1.5:1 or 2:1 and the City may implement a water allotment program. The following allotment method may be used:

<table>
<thead>
<tr>
<th>Customer Classification</th>
<th>Severe Stage Allotment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Family Residential and</td>
<td>A per capita allotment of 64 gppd, verification of persons per household may be requested</td>
</tr>
<tr>
<td>Multi-family Residential</td>
<td></td>
</tr>
<tr>
<td>Commercial and Institutional</td>
<td>Baseline allocation or allocation based on percent reduction from normal usage</td>
</tr>
<tr>
<td>Landscape Meters</td>
<td>Allocation based on percent reduction from normal usage; the City could consider prohibiting outdoor irrigation</td>
</tr>
</tbody>
</table>

Excessive water use penalties may be imposed as outlined in the City’s Municipal Code.

At this stage, due to the limited water supplies that remain, the City could consider prohibiting outdoor irrigation and the cessation of new connections to the water distribution system.

Water Shortage Response Stage: EXTREME

When the City’s available water supply would provide less than two years of water, a recommendation would be made to the City Council to move to the next water shortage stage. The City Council would be asked to adopt a resolution declaring the City enter the Extreme Stage and urge the public to reduce water use by an additional approximately five percent from 90 gpcd to 85 gpcd.

At this water shortage response stage, the City would continue implementation of demand reduction, public outreach, and enforcement programs described in prior stages. System and operational changes would remain in place. At the Extreme Stage, a “net positive” water offset program may continue to be offered and outdoor irrigation may be prohibited. The following allotment method may be used:

<table>
<thead>
<tr>
<th>Customer Classification</th>
<th>Extreme Stage Allotment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Family Residential and</td>
<td>A per capita allotment of 56 gppd, verification of persons per household may be requested</td>
</tr>
<tr>
<td>Multi-family Residential</td>
<td></td>
</tr>
<tr>
<td>Commercial and Institutional</td>
<td>Baseline allocation or allocation based on percent reduction from normal usage</td>
</tr>
</tbody>
</table>

Excessive water use penalties may continue to be imposed as outlined in the City’s Municipal Code.

At this stage, due to the limited water supplies that remain, the City could consider the cessation of new connections to the water distribution system.
When the City’s available water supply would provide less than one year of water, a recommendation would be made to the City Council to move to the next water shortage stage. The City Council would be asked to adopt a resolution declaring the City enter the Critical Stage and urge the public to reduce water use by an additional approximately 12 percent from 85 gpcd to 75 gpcd.

At this water shortage response stage, the City would continue implementation of demand reduction, public outreach, and enforcement programs described in prior stages. System and operational changes would remain in place. At the Critical Stage, a water offset program may no longer be offered and outdoor irrigation may continue to be prohibited. The following allotment method may be used:

<table>
<thead>
<tr>
<th>Customer Classification</th>
<th>Critical Stage Allotment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Family Residential and Multi-family Residential</td>
<td>A per capita allotment of 48 gpcd, verification of persons per household may be requested</td>
</tr>
<tr>
<td>Commercial and Institutional</td>
<td>Baseline allocation or allocation based on percent reduction from normal usage</td>
</tr>
</tbody>
</table>

Excessive water use penalties may continue to be imposed as outlined in the City’s Municipal Code.

At this stage, due to the limited water supplies that remain, the City would consider the cessation of new connections to the water distribution system.

### 8.4 REVENUE AND EXPENDITURE IMPACTS

During a water shortage, revenues from water sales can be reduced but the City’s operations and maintenance costs would not reduce accordingly. In fact, during the these periods, the City’s operations budgets can increase due to the implementation of water demand reduction measures, public outreach, enforcement, groundwater exploration, water quality concerns, and other actions taken by the City during the crisis. The reduction in revenues resulting from decreased water use may result in the need to raise water rates during that period.

Under the City’s water rate structure, bills are based mainly on customer usage choices and resulting demand on the water systems. Water Fund revenue is collected from multiple sources, but approximately 90 percent of revenue is directly tied to water service charges including the base fee.

To minimize the need to raise rates during water shortages, the City has a policy that requires a minimum reserve of twenty percent of the Water Fund’s operating budget. While this is a minimum amount, the reserve amount is typically above this minimum policy level.

City staff provides ongoing tracking of revenues and evaluates the potential impacts associated with changes in water demand assumptions used in the Annual Water Fund Analysis. The City Council considers the water rates necessary to provide water service to the community on an annual basis and approves water rate changes as needed.

As part of the 2015-17 Financial Plan, the City included a base fee and tiered drought surcharge as water demand was projected to reduce by 12 percent as a result of State water use reduction mandates. The surcharge was proposed to offset the loss in revenue associated with the State order as the City was still responsible for the costs of the City’s multi-source water supply and debt payments. In addition to water supply, Water Fund revenue supports ongoing maintenance and operating programs needed to ensure
that the water treatment and delivery systems meet all federal and state water treatment regulations and are operated and maintained to provide safe and reliable service.

8.5 CATASTROPHIC WATER SUPPLY INTERRUPTION

The City has an Emergency Response Plan to cover a variety of potential disasters including: earthquakes, floods, wildland fires, etc. The Plan identifies resources available to the City from other agencies or private companies in the area. Additionally, the City of Morro Bay and the Whale Rock Commission (of which the City of San Luis Obispo is a member) executed an agreement in June of 2000 which provides for Mutual Aid between the agencies during disruption of water deliveries or lack of available water supplies. The agreement provides a general framework for exchanging water between agencies in the event of emergencies or other water disruptions. The agreement is voluntary based on each agency’s ability to assist at any point in the future.

In relation to providing water service, the City would utilize portable generators to minimize water disruptions during an extended power outage. These generators are maintained and available to the City at any time and are stored at the City Corporation Yard.

The City is a member of the Water Agency Response Network (WARN). WARN is a statewide organization of water agencies and companies that have entered into a mutual aid agreement to assist other water agencies during emergencies or other water related situations. The agreement provides the framework for providing assistance and provides a key contact to initiate a multiple agency response to a water emergency situation.

8.6 MINIMUM SUPPLY NEXT THREE YEARS

Consistent with section 6.6, Water Supply Reliability Analysis, in Chapter 6, the City’s multiple dry year scenario was determined to be 2012 to 2014 as the combined rainfall total for those three years was the lowest on record. Available water supplies during this period assume the City’s safe annual yield from Salinas and Whale Rock Reservoirs, contractual supply from Nacimiento Reservoir, and recycled water supply are available totaling 12,622 acre feet of available supply, as shown in Table 33.

As directed by DWR, this section was prepared based on what is known by the City at the time the UWMP was prepared. After the current drought has a “bookend” the safe annual yield of Salinas and Whale Rock reservoirs will be recalculated. Related changes to safe annual yield will be incorporated into planning scenarios.

<table>
<thead>
<tr>
<th>TABLE 33: Minimum Supply Next Three Years</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Available Water Supply</strong></td>
</tr>
<tr>
<td>2016</td>
</tr>
<tr>
<td>12,622</td>
</tr>
</tbody>
</table>

NOTES:
1. Department of Water Resources, Table 8-4.
2. Units are in acre-feet per year.
3. Volume available includes the City’s contractual supply to Nacimiento Reservoir, Safe Annual Yield from Salinas and Whale Rock Reservoirs, and recycled water.

Source: City of San Luis Obispo Utilities Department, 2016.
## 8.7 REQUIRED UWMP STANDARDIZED TABLES:

### Stages of Water Shortage Contingency Plan

<table>
<thead>
<tr>
<th>Stage</th>
<th>Percent Supply Reduction</th>
<th>Complete Both</th>
<th>Water Supply Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitor</td>
<td>0</td>
<td></td>
<td>City maintains conservation messaging at levels that ensure compliance with maximum 117 gallons per capita per day (gpcd).</td>
</tr>
<tr>
<td>Watch</td>
<td>10</td>
<td></td>
<td>City increases conservation messaging. City examines available alternative water sources (groundwater, Nacimiento full allocation, etc.) and takes action based on current circumstances to meet demand. City may implement mandatory conservation measures to meet per capita reduction target.</td>
</tr>
<tr>
<td>Warning</td>
<td>20</td>
<td></td>
<td>City implements mandatory conservation measures including outdoor irrigation restrictions (examples: 3 or 2 days a week watering and only serving water upon request at restaurants) and consider a Water Offset Program for new connections.</td>
</tr>
<tr>
<td>Severe</td>
<td>30</td>
<td></td>
<td>City implements Water Allotment Program. Water Offset Program for new connections may be increased. Additional outdoor irrigation restrictions may be added (such as no spray irrigation). Outdoor irrigation may be prohibited for all uses. Cessation of all new connections may be considered.</td>
</tr>
<tr>
<td>Extreme</td>
<td>40</td>
<td></td>
<td>City continues to implement a Water Allotment Program with reduced levels. Water Offset Program for new connections may be increased. Outdoor irrigation may be prohibited for all uses. Cessation of all new connections may be considered.</td>
</tr>
<tr>
<td>Critical</td>
<td>50</td>
<td></td>
<td>City continues to implement a Water Allotment Program at further reduced levels (minimum for public health and safety). Outdoor irrigation prohibited for all uses. Water Offset Program to cease and no new connections permitted.</td>
</tr>
</tbody>
</table>

1 One stage in the Water Shortage Contingency Plan must address a water shortage of 50%.

NOTES: Table 8-1 R.
## Restrictions and Prohibitions on End Uses

<table>
<thead>
<tr>
<th>Stage</th>
<th>Restrictions and Prohibitions on End Users</th>
<th>Penalty, Charge, or Other Enforcement?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitor</td>
<td>Landscape - Restrict or prohibit runoff from landscape irrigation</td>
<td>Yes</td>
</tr>
<tr>
<td>Monitor</td>
<td>Other - Customers must repair leaks, breaks, and malfunctions in a timely manner</td>
<td>Yes</td>
</tr>
<tr>
<td>Monitor</td>
<td>Other - Prohibit use of potable water for construction and dust control</td>
<td>Yes</td>
</tr>
<tr>
<td>Watch</td>
<td>Other - Require automatic shut of hoses</td>
<td>Yes</td>
</tr>
<tr>
<td>Warning</td>
<td>Landscape - Limit landscape irrigation to specific times</td>
<td>Yes</td>
</tr>
<tr>
<td>Warning</td>
<td>Landscape - Limit landscape irrigation to specific days</td>
<td>Yes</td>
</tr>
<tr>
<td>Warning</td>
<td>Water Features - Restrict water use for decorative water features, such as fountains</td>
<td>Yes</td>
</tr>
<tr>
<td>Warning</td>
<td>CII - Lodging establishment must offer opt out of linen service</td>
<td>Yes</td>
</tr>
<tr>
<td>Warning</td>
<td>CII - Restaurants may only serve water upon request</td>
<td>Yes</td>
</tr>
<tr>
<td>Warning</td>
<td>Water Features - Restrict water use for decorative water features, such as fountains</td>
<td>Yes</td>
</tr>
<tr>
<td>Critical</td>
<td>Landscape - Other landscape restriction or prohibition</td>
<td>Yes</td>
</tr>
</tbody>
</table>

NOTES: Table 8-2 (R).
### Stages of Water Shortage Contingency Plan - Consumption Reduction Methods

<table>
<thead>
<tr>
<th>Stage</th>
<th>Consumption Reduction Methods by Water Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>Expand Public Information Campaign</td>
</tr>
<tr>
<td>Watch</td>
<td>Offer Water Use Surveys</td>
</tr>
<tr>
<td>Watch</td>
<td>Provide Rebates on Plumbing Fixtures and Devices</td>
</tr>
<tr>
<td>Watch</td>
<td>Provide Rebates for Landscape Irrigation Efficiency</td>
</tr>
<tr>
<td>Watch</td>
<td>Decrease Line Flushing</td>
</tr>
</tbody>
</table>

NOTES: Table 8-3 R.

### Minimum Supply Next Three Years

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Available Water Supply</td>
<td>12,622</td>
<td>12,622</td>
<td>12,622</td>
</tr>
</tbody>
</table>

NOTES: Table 8-4 R.
Appendix I: Notification to Agencies, Public Hearing & Plan Adoption
March 25, 2016

Mr. Wade Horton
Public Works Director
County of San Luis Obispo
Department of Public Works
County Government Center, Room 207
San Luis Obispo, CA 93408

RE: City of San Luis Obispo, 2015 Urban Water Management Plan Update

Dear Mr. Horton:

The City of San Luis Obispo is in the process of updating its Urban Water Management Plan as required by California state law. There are two provisions in the law which requires the City to 1) notify the County at least 60 days prior to the public hearing to adopt the plan and 2) provide a wholesale agency which supplies water to the City with water use projections from that water supply for at least 20 year period. The County of San Luis Obispo is considered a wholesale agency based on the contractual agreements between the City of San Luis Obispo and the San Luis Obispo County Flood Control and Water Conservation District relative to deliveries of Nacimiento water supplies.

Per section 10642 of the Urban Water Management Planning Act (Act), a public hearing to adopt the Urban Water Management Plan has been scheduled for June 14, 2016 at 6:00 p.m. in the City Council chamber located 990 Palm Street. The text from the Act related to this requirement is as follows:

Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days prior to the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. The urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision (10621(b)),

The second provision of the law requires that the City provide to a wholesale water agency the projected amount of water the City will use from the wholesaler’s water supply in five year increments for at least 20 year period. The following table is the projected amount of water that the City will request from the County to the year 2035.

<table>
<thead>
<tr>
<th>Wholesale Source</th>
<th>Contracted Volume</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nacimiento Reservoir</td>
<td>5,482 AF</td>
<td>5,482 AF</td>
<td>5,482 AF</td>
<td>5,482 AF</td>
<td>5,482 AF</td>
</tr>
</tbody>
</table>
The text from the Act related to this requirement is as follows:

_Urban water suppliers that rely upon a wholesale agency for a source of water shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available. The wholesale agency shall provide information to the urban water supplier for inclusion in the urban water supplier's plan that identifies and quantifies, to the extent practicable, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water-year types in accordance with subdivision (c). An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (c) (10631(k))._

As indicated in this subsection, the County will need to respond to the City with information that verifies the County's intent to deliver the identified quantity of water in the table over the same planning period. Please send the County's response to this request to me at:

879 Morro Street
San Luis Obispo, CA. 93401

A reply by April 15, 2016 would be greatly appreciated. If you have any questions or would like to discuss further, please contact me at 781-7237.

Sincerely,

[Signature]

Aaron Floyd
Water Division Manager

Cc: File
Jennifer Metz
CALL TO ORDER: Mayor Jan Marx

ROLL CALL: Council Members John Ashbaugh, Carlyn Christianson, Dan Rivoire, Vice Mayor Dan Carpenter, and Mayor Jan Marx

BUSINESS ITEMS

1. **2016-17 WATER ENTERPRISE FUND REVIEW**

   **ACTION:** MOTION BY COUNCIL MEMBER ASHBAUGH, SECOND BY COUNCIL MEMBER CHRISTIANSON AND CARRIED 5-0 to:

   1. Review and accept the Fiscal Year 2016-17 Water Enterprise Fund report; and

   2. Conceptually approve the Fiscal Year 2016-17 Water Enterprise Fund budget, *as amended (correction to Table entitled “Changes in Financial Position – Water Fund”, as outlined in the Agenda Correspondence dated June 14, 2016)*, with final action with the adoption of the 2016-17 Financial Plan Supplement; and

   3. Approve the transfer of revenue collected for new development meters to the expenditure account for applicable meter purchases on a quarterly basis.

2. **FISCAL YEAR 2016-17 SEWER ENTERPRISE FUND REVIEW**

   **ACTION:** MOTION BY COUNCIL MEMBER ASHBAUGH, SECOND BY COUNCIL MEMBER RIVOIRE AND CARRIED 5-0 to

   1. Review and accept the Fiscal Year 2016-17 Sewer Enterprise Fund financials; and

   2. Conceptually approve the Fiscal Year 2016-17 Sewer Enterprise Fund budget, with final action with the adoption of the Fiscal Year 2016-17 Financial Plan Supplement.
3. **2016-17 TRANSIT ENTERPRISE FUND REVIEW**

**ACTION:** MOTION BY COUNCIL MEMBER ASHBAUGH, SECOND BY COUNCIL MEMBER CHRISTIANSON AND CARRIED 5-0 to:

1. Review and accept the Fiscal Year (FY) 2016-17 Transit Enterprise Fund Report; and

2. Conceptually approve the FY 2016-17 Transit Enterprise Fund budget, with the adoption of the 2015-17 Financial Plan Supplement; and

3. Approve a four-year contract, with First Transit, Inc. to operate and maintain the City’s Transit system, as amended (correct discrepancy in Section 23 “Changes” per staff recommendation outlined in Agenda Correspondence dated June 14, 2016) and authorize the Mayor to execute the same; and

4. Authorize the City Manager, or the City Manager’s designee, to execute a one-year agreement extension as amended with Cal Poly for continuation of the Subsidy Agreement for Free Fare ridership on SLO Transit; and

5. As part of Short Range Transit Plan consideration (August, 2016), bring forward final recommendations for service changes and capital improvement investments; and

6. Approve the appropriation of grant money, in the amount of $186,636, for the upgrade of the SLO Transit Automatic Vehicle Location system.

4. **FISCAL YEAR 2016-17 PARKING ENTERPRISE FUND REVIEW**

**ACTION:** MOTION BY COUNCIL MEMBER ASHBAUGH, SECOND BY VICE MAYOR CARPENTER, CARRIED 5-0 to:

1. Review and discuss the Fiscal Year (FY) 2016-17 Parking Fund Review; and

2. Conceptually approve the FY 2016-17 Parking Enterprise Fund Budget, with final actions with the adoption of the FY 2016-17 Financial Plan Supplement, as amended (amendments to the financial position table); and to direct staff to allocate $100,000 to the 2016-17 land use parking demand model; and

3. Adopt Resolution 10720 (2016 Series) entitled “A Resolution of the City Council of the City of San Luis Obispo, California approving an increase in Parking Citation Fines and Forfeitures for miscellaneous violations.”
5. **2014-15 CENTRAL SERVICE COST ALLOCATION PLANS AND COST OF SERVICE FEE STUDY**

**ACTION:** MOTION BY COUNCIL MEMBER ASHBAUGH, SECOND BY COUNCIL MEMBER CHRISTIANSON, CARRIED 5-0 to:

Simultaneous with the adoption of the 2015-17 Financial Plan:

1. Approve the 2014-15 Central Service Cost Allocation Plans dated May 2016; and
2. Approve the Cost of Service Study completed in December 2014 and updated in May 2016.

*Recessed at 5:36 p.m.*

| 6:00 PM | REGULAR MEETING | Council Chamber 990 Palm Street |

**CALL TO ORDER:** Mayor Jan Marx

**ROLL CALL:** Council Members John Ashbaugh, Carlyn Christianson, Dan Rivoire, Vice Mayor Dan Carpenter, and Mayor Jan Marx

**PLEDGE OF ALLEGIANCE:** Council Member Christianson

**INTRODUCTIONS**

6. **CHRIS MILLER, MANAGING DIRECTOR OF THE PERFORMING ARTS CENTER SAN LUIS OBISPO (PAC)**

City Manager Katie Lichtig introduced Chris Miller, who summarized key goals and objectives for his first six months with the PAC.

**APPOINTMENTS**

7. **SHORT-TERM APPOINTMENT TO THE HUMAN RELATIONS COMMISSION (HRC)**

**ACTION:** MOTION BY MAYOR MARX, SECOND BY COUNCIL MEMBER ASHBAUGH, CARRIED 5-0 to:
1. Approve a leave of absence for HRC Commissioner Maria Troy; and

2. Appoint Nancy Welts to the HRC for a short-term appointment of up to six (6) months effectively immediately.

**PUBLIC COMMENT PERIOD FOR ITEMS NOT ON THE AGENDA**

There were six speakers who spoke on items not on the agenda.

**CONSENT AGENDA**

A member of the public may request the Council to pull an item for discussion. Pulled items shall be heard at the close of the Consent Agenda unless a majority of the Council chooses another time. The public may comment on any and all items on the Consent Agenda within the three minute time limit.

**ACTION:** MOTION BY COUNCIL MEMBER CHRISTIANSON, SECOND BY COUNCILMEMBER RIVOIRE, CARRIED 5-0 TO APPROVE THE CONSENT CALENDAR AS FOLLOWS:

8. **WAIVE READING IN FULL OF ALL RESOLUTIONS AND ORDINANCES**

   WAIVED, 5-0

9. **MINUTES OF APRIL 5, 2016**

   APPROVED, 5-0

10. **ADDITION OF THE CONTRIBUTING HISTORIC PROPERTY LOCATED AT 1214 MILL STREET TO THE MASTER LIST OF HISTORIC RESOURCES AS “THE THERESA TORRES TRUE HOUSE”**

   ADOPTED RESOLUTION 10721 (2016 Series), entitled “A Resolution of the City Council of the City of San Luis Obispo, California, adding the property located at 1214 Mill Street to the Master List of Historic Resources, HIST-2842-2019”, 5-0,

11. **RESOLUTION AUTHORIZING THE COUNTY’S COLLECTION OF FIRE AND LIFE SAFETY INSPECTION FEES**

   ADOPTED RESOLUTION 10722 (2016 Series) entitled “A Resolution of the City Council of the City of San Luis Obispo, California authorizing the San Luis Obispo County Auditor to collect fees for 2016-17 Fire and Life Safety Inspections of multi-dwelling properties containing three or more dwelling units on the secured property tax roll pursuant to
California Government Code Section 54988”, 5-0

12. REVIEW AND ACCEPTANCE OF THE 2015 GENERAL PLAN ANNUAL REPORT (GENP-3108-2016)

 REPORT ACCEPTED, 5-0

13. SINSHEIMER PARK PLAYGROUND; SPECIFICATION NO. 90650

APPROVED THE FOLLOWING RECOMMENDATIONS, 5-0:

1. Plans and specifications for the Sinsheimer Park Playground Project (Project), Specification No. 90650; and

2. Authorize staff to advertise for construction bids and authorize the City Manager to award a contract if the lowest responsible bid is less than the Engineer’s Estimate of $529,700; and

3. Transfer of funds from the following accounts to the project’s construction phase account:
   a. $184,923 from the Play Equipment Replacement Master Account (91103)
   b. $322,023 from the Playground Equipment 13-14 Account (91246)
   c. $161,672 from the Santa Rosa Skate Park Account (90752)
   d. $62,889 from the Completed Projects General Fund Account

4. A California Multiple Award Schedule (CMAS) agreement purchase with Miracle Recreation Equipment Company in an amount not-to-exceed $165,000 for the purchase of play equipment for the Sinsheimer Park Playground project and authorize the Finance Director to execute a purchase order following the bid opening; and

5. A purchase with Columbia Cascade Company in an amount not to exceed $25,000 for the purchase of two embankment slides.

14. REQUEST FOR QUALIFICATIONS - LAND SURVEYING, ARCHITECTURE, CIVIL ENGINEERING, AND PROPERTY ACQUISITION

APPROVED THE FOLLOWING RECOMMENDATIONS, 5-0:

1. Request for Qualifications (RFQ) to provide:
   a. Land Surveying Services, Specification No. 50410.2016.LS
   b. Architecture Design Services, Specification No. 50410.2016.AD
   c. Civil Engineering Services, Specification No. 50410.2016.CE
   d. Property Acquisition Services, Specification No. 50410.2016.ROW; and

2. City Manager to execute agreements with selected consulting firms; and
3. Execute and amend Purchase Orders for individual consultant services contracts in an amount not-to-exceed the authorized project budget.

15. APPROVAL OF THE FINAL MAP FOR TRACT 2784, 625 TORO STREET (TR 176-05)

ADOPTED RESOLUTION NO. 10723 (2016 Series) entitled “A Resolution of the City Council of the City of San Luis Obispo, California, approving the Final Map for Tract 2784 (625 Toro Street, TR 176-05),” and authorized the Mayor to execute a Subdivision Agreement, 5-0

16. ADDITION OF THE PROPERTY AT 535 HIGUERA TO THE MASTER LIST OF HISTORIC RESOURCES AS “THE ROBERT POLLARD HOUSE”

ADOPTED RESOLUTION NO. 10724 (2016 Series) entitled “A Resolution of the City Council of the City of San Luis Obispo, California, adding the property at 535 Higuera Street to the Master List of Historic Resources as “The Robert Pollard House” (HIST-2793-2016),” 5-0

17. MICROSOFT OFFICE 365 UPGRADE

APPROVED THE FOLLOWING RECOMMENDATIONS, 5:0:

1. A purchase order for the purchase of Microsoft Office 365 Government Plan subscription licenses from Dell Computer Corporation in an amount not to exceed $140,500 per year for the next three years; and

2. Waiver of formal bids to cooperatively purchase Microsoft Office 365 licensing using the County of Riverside’s Microsoft Enterprise Agreement #01E73134 as allowed under 3.24.060 E. of the City of San Luis Obispo Municipal Code; and

3. Finance and Information Technology Director to approve future purchase orders for years two and three; and

4. A contact in the amount of $45,000 to Planet Technologies for the migration of City email to the Microsoft Government Cloud using GSA Contract # GS-35F-0360J.

18. CONTROL SYSTEMS FLEET EXPANSION, SPECIFICATION NO. 91458

APPROVED THE FOLLOWING RECOMMENDATIONS, 5-0:

1. Finance Director to expand the City Fleet by two vehicles; and

2. Finance Director to execute a purchase order to Toyota of San Luis Obispo in the amount of $67,178.06 for the purchase of two 2016 Toyota Crew Cab 4 x 4 pickups.
19. **URBAN FOREST CONTRACT SERVICES**

APPROVED THE FOLLOWING RECOMMENDATIONS, 5:0:

1. Request for Proposal for "Urban Forestry Contract Services;" and

2. Staff to advertise for proposals; and

3. City Manager to execute agreements with the selected contractor in an amount not-to-exceed the authorized budget.

20. **REQUEST FOR CONTINUED USE OF ON-CALL LIST FOR LEGAL SERVICES**

AUTHORIZED THE CITY ATTORNEY TO, 5-0:

1. Continued use of the current on-call list for contract legal support; and

2. Review and accept cost of living increase proposals from firms and attorneys on the current on-call list for contract legal support.

21. **ADOPTION OF THE 2015 URBAN WATER MANAGEMENT PLAN (UWMP) AND AMENDMENTS TO THE GENERAL PLAN, WATER AND WASTEWATER MANAGEMENT ELEMENT**

ACTION: MOTION BY COUNCIL MEMBER ASHBAUGH, SECOND BY MAYOR MARX AND CARRIED 5-0 to:

APPROVE AMENDMENTS TO “WATER SHORTAGE RESPONSE STAGES”, as outlined in Table 1 of the Staff Report (Stage Severe: Strike: “Additional outdoor irrigation restrictions may be added (such as no spray irrigation.” Add:“Water Offset Program for new connections may be increased. Outdoor irrigations may be prohibited or further restricted for all uses. Stage Extreme to include the same language.)

ACTION: MOTION BY COUNCIL MEMBER ASHBAUGH, SECOND BY COUNCIL MEMBER RIVOIRE AND CARRIED 5-0 TO ADOPT:

1. **RESOLUTION 10725 (2016 Series) entitled “A Resolution of the City Council of the City of San Luis Obispo, California approving amendments to the Water and Wastewater Management Element of the General Plan (GENP-3215-2016)” and authorizing Staff to make any necessary changes to make the UWMP internally consistent with changes to Table 1; and**
2. RESOLUTION 10726 (2016 Series) entitled “A Resolution of the City Council of the City of San Luis Obispo, California approving the 2015 Update to San Luis Obispo’s Urban Water Management Plan”.

BUSINESS ITEMS

22. ADOPTION OF 2016-2017 GANN LIMIT AND 2015-17 FINANCIAL PLAN SUPPLEMENTAL BUDGET

ACTION: MOTION BY COUNCIL MEMBER ASHBAUGH, SECOND MAYOR MARX BY AND CARRIED 3-2 (CHRISTIANSON AND RIVOIRE VOTING NO) to:

1. Adopted Resolution 10727 (2016 Series) entitled “A Resolution of the City Council of the City of San Luis Obispo, California adopting the Appropriations Limit for 2016-17,” in compliance with Article XIII B of the State Constitution, Gann Spending Limitation Initiative”; and

2. Received the 2015-17 Financial Plan Supplemental Budget Report, including Major City Goals and Other Important Objectives progress report and the Five Year Forecast update; and

3. Adopted Resolution 10728 (2016 Series) entitled “A Resolution of the City Council of the City of San Luis Obispo, California approving the 2015-17 Financial Plan Supplement, adopting the 2016-17 Budget, and amending the Fund Balance and Reserve Policy”, as amended (shift $900,000 from the proposed General Fund CIP Infrastructure Designation to the Parkland Development Fund for acquisition of parkland in the Broad Street area near Highway 101 and Foothill Boulevard) and authorizing Staff to make any other changes necessary to reflect Council direction.

COUNCIL LIAISON REPORTS
(Not to exceed 15 minutes) Council Members report on conferences or other City activities.
Time limit—3 minutes each.

None.
### COUNCIL COMMUNICATIONS

(Not to exceed 15 minutes) At this time, any Council Member or the City Manager may ask a question for clarification, make an announcement, or report briefly on his or her activities. In addition, subject to Council Policies and Procedures, they may provide a reference to staff or other resources for factual information, request staff to report back to the Council at a subsequent meeting concerning any matter, or take action to direct staff to place a matter of business on a future agenda. (Gov. Code Sec. 54954.2)

Council Members Ashbaugh, Christianson and Rivoire; and Mayor Marx provided travel disclosures.

### ADJOURNMENT

Meeting adjourned at 11:05 p.m.

The next Regular City Meeting is Tuesday, June 21, 2016 at 6:00 p.m. Regular City Council Meetings are scheduled for Tuesday, July 21, 2016 at 4:00 p.m. and 6:00 p.m., in the Council Chamber, respectively, 990 Palm Street, San Luis Obispo, California.
RESOLUTION NO. 10726 (2016 Series)

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SAN LUIS OBISPO, CALIFORNIA, ADOPTING THE REVISED URBAN WATER MANAGEMENT PLAN

WHEREAS, the California Legislature enacted Assembly Bill 797 during the 1983-1984 Regular Session, and as amended subsequently, which mandates that every supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre feet of water annually, prepare an Urban Water Management Plan (the “Plan”); and

WHEREAS, the City is an urban supplier of water providing water to approximately 15,000 customers; and

WHEREAS, the Plan shall be periodically reviewed at least once every five years, and that the City shall make any amendments or changes to its plan which are indicated by the review; and

WHEREAS, the Plan must be adopted, after public review and hearing, and filed with the California Department of Water Resources within thirty days of adoption; and

WHEREAS, the City has therefore prepared for public review a draft Urban Water Management Plan, and a properly noticed public hearing regarding the Plan was held by the City Council on June 14, 2016.

NOW, THEREFORE, BE IT RESOLVED, by the Council of the City of San Luis Obispo that the Urban Water Management Plan, consisting of text with tables, figures and appendices presented to the Council on June 14, 2016, on file in the City Clerk’s Office, is hereby adopted and staff is hereby authorized to make any necessary changes to make the Urban Water Management Plan internally consistent with changes to Table 1.

BE IT FURTHER RESOLVED that the Utilities Director is hereby directed to distribute the Urban Water Management Plan to the California State Library, the County of San Luis Obispo and make available for public review as prescribed by state law.

Upon motion of Council Member Ashbaugh, seconded by Council Member Rivoire, and on the following roll call vote:

AYES: Council Members Ashbaugh, Christianson and Rivoire,
Vice Mayor Carpenter and Mayor Marx

NOES: None

ABSENT: None
The foregoing resolution was adopted this 14th day of June 2016.

Mayor Jan Marx

ATTEST:

Lee Price, MMC
Interim City Clerk

APPROVED AS TO FORM:

J. Christine Dietrick
City Attorney

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of the City of San Luis Obispo, California, this 27th day of June 2016.

Lee Price, MMC
Interim City Clerk
Water Resources Status Report

2011

Prepared by:
Gary Henderson, Water Division Manager
Ron Munds, Utilities Conservation Manager
Jennifer Metz, Utilities Project Manager
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City of San Luis Obispo

2011 Water Resources Status Report

The 2011 Water Resources Status Report for the City of San Luis Obispo was prepared by the Utilities Department to provide the City Council and community members with an update on the status of existing water resources. It also serves as an update on water supply projects being implemented to meet the community’s future needs.

The report covers four main areas:

I. Existing Water Supply Status
II. Multi-Source Water Supply
III. Water Demand Management
IV. Projected Water Supply Situation

The report evaluates the existing water supply situation for the City, identifies the amount of water currently available to serve new development, and discusses issues relative to existing policies and water projects and programs being pursued.

1. EXISTING WATER SUPPLY STATUS

The City currently utilizes five sources of water supply to meet the community’s water demand: Salinas Reservoir (also referred to as Santa Margarita Lake), Whale Rock Reservoir, Nacimiento Reservoir, groundwater, and recycled water from the City’s Water Reclamation Facility. The City’s newest water supply from Nacimiento Reservoir began delivering water to the City’s water treatment plant in January of 2011.

Table 1: Area Rainfall

<table>
<thead>
<tr>
<th>Location</th>
<th>2010/11 1</th>
<th>Average</th>
<th>% of Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of SLO – Reservoir #1</td>
<td>31.5”</td>
<td>22.4”</td>
<td>141%</td>
</tr>
<tr>
<td>Whale Rock Reservoir</td>
<td>29.71”</td>
<td>19.7”</td>
<td>150%</td>
</tr>
<tr>
<td>Salinas Reservoir</td>
<td>35.01”</td>
<td>21.4”</td>
<td>164%</td>
</tr>
</tbody>
</table>

1. Rainfall through June 30, 2011

For the 2010-11 rainfall year (October 1 through September 30), rainfall for the City was significantly above normal as reflected in Table 1. As of June 30, 2011, Salinas and Whale Rock Reservoirs were at 97.9 percent and 81.0 percent of total capacity respectively.

For the 2010 calendar year, the water demand for the City was provided from four sources as shown in Table 2. The total water demand (based on water production figures) for all City uses in 2010 was 5,489 acre feet which was approximately 10.5 percent lower than the total water use for 2009.
The total amount of City water use shown in Table 2 does not include domestic water delivered to Cal Poly State University. This use is separately accounted for from the University’s available water supply from Whale Rock Reservoir.

As of June 30, 2011, the City’s available water storage in Salinas Reservoir (above minimum pool, see definitions at end of report) was 21,334 acre feet. The City’s share of the Whale Rock storage (above minimum pool) was 14,425 acre feet. The combined total water storage available to meet City water needs from these two sources was 35,760 acre feet. This equates to 83 percent of maximum available storage.

Based on the available water storage in both reservoirs, estimated water from Nacimiento Reservoir, estimated groundwater production, estimated recycled water deliveries, and assuming the return of drought conditions as experienced during the late 1980s, the City has approximately eleven years of water supply.

This estimate is based on data derived from the City’s computerized reservoir storage model and is shown in Figure 5 (Figures are provided at the end of report). The model assumes additional conservation measures, consistent with the City’s Water Shortage Contingency Plan, are implemented when supplies are estimated to last three years or less. The various stages of conservation are indicated in Figure 5 and are discussed in more detail in the City’s Water Shortage Contingency Plan. The Water Shortage Contingency Plan is an appendix to the Urban Water Management Plan that was updated and adopted in June of 2011.

**Water Consumption**

The total City water use for 2010 was approximately 10.5 percent lower than the use for 2009. Table 3 shows the population estimates from 2001 through 2010 as well as the total City water use and corresponding per capita use rate. The past ten-year average per capita water use was 121.6 gallons per person per day (gpcd). Based on the policies contained in the Water and Wastewater Management Element of the General Plan, the City uses the ten-year average per capita water use to project the required water needed to serve the build-out population as identified in the Land Use Element of the General Plan.
Chart 1 shows the water use between different customer classes for 2010 which is consistent with previous years (landscape irrigation is only that water use specific to dedicated landscape meters).

While the per capita water use increased following the end of the 1986-91 drought and the end of mandatory conservation measures in 1992, the use rate has somewhat stabilized as shown in Table 3. The 2010 per capita water use was approximately 109 gpcd, which was a significant decrease from the 2009 use of 122 gpcd. There are likely a number of factors that led to this past year’s drop in water use including significant rainfall and recessionary impacts (vacancy rates, etc.).

Table 3: Population Estimates, Water Use & Rainfall

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Total Water Use (acre feet)</th>
<th>Per Capita (gpcd)</th>
<th>Rainfall1 (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>44,347</td>
<td>5,886</td>
<td>119</td>
<td>24.53</td>
</tr>
<tr>
<td>2002</td>
<td>44,482</td>
<td>6,032</td>
<td>121</td>
<td>15.94</td>
</tr>
<tr>
<td>2003</td>
<td>44,357</td>
<td>5,968</td>
<td>120</td>
<td>22.91</td>
</tr>
<tr>
<td>2004</td>
<td>44,298</td>
<td>6,239</td>
<td>126</td>
<td>16.08</td>
</tr>
<tr>
<td>2005</td>
<td>44,687</td>
<td>6,098</td>
<td>122</td>
<td>40.09</td>
</tr>
<tr>
<td>2006</td>
<td>44,559</td>
<td>5,999</td>
<td>120</td>
<td>30.35</td>
</tr>
<tr>
<td>2007</td>
<td>44,433</td>
<td>6,493</td>
<td>130</td>
<td>10.28</td>
</tr>
<tr>
<td>2008</td>
<td>44,579</td>
<td>6,359</td>
<td>127</td>
<td>19.92</td>
</tr>
<tr>
<td>2009</td>
<td>44,829</td>
<td>6,134</td>
<td>122</td>
<td>31.77</td>
</tr>
<tr>
<td>2010</td>
<td>44,948</td>
<td>5,489</td>
<td>109</td>
<td>31.50</td>
</tr>
</tbody>
</table>

1. Rainfall amounts for July through June from Cal Poly weather station
2. Rainfall amount from County rain gauge at City’s Reservoir #1

II. MULTI-SOURCE WATER SUPPLY

The City has adopted a multi-source water policy to provide increased reliability for meeting the community’s water supply needs. With the addition of the Nacimiento Reservoir supply, the City now has five sources of water and has accomplished the goal of diversifying its water supply portfolio to meet current and future community needs. The following sections provide an overview of each water source available to the City.

*Water Resource Availability*

**Salinas & Whale Rock Reservoirs**

Salinas and Whale Rock Reservoirs have been the City’s primary water supplies for over 50 years. The County of San Luis Obispo Flood Control and Water Conservation District provides the oversight, operations, and maintenance of the Salinas Dam and water delivery facilities for the benefit of the City. The City pays the County for the associated costs for these services. The City provides the oversight, operations, and maintenance of the Whale Rock Reservoir for the benefit of the Whale Rock Commission. The Whale
Rock Commission is a joint powers agency made up of Cal Poly State University, California Men’s Colony, and the City. The City draws water from these two reservoirs in a coordinated manner to maximize the long-term water supply available from these two sources. In addition, the City has adopted policies in the Water and Wastewater Management Element of the General Plan to account for reductions in storage capacity at each lake resulting from siltation.

**Nacimiento Reservoir**

The City has been involved in the Nacimiento Project planning efforts for over 15 years. Construction of the 45-mile pipeline and related facilities was completed in December 2010. Water deliveries to the City’s water treatment plant began on January 5, 2011. The City has a contractual right to 3,380 acre feet per year and will likely maximize the use of this water each year since the contractual amount of water cannot be carried over (“banked”) from year to year. Current use for this first year is estimated to be about 2,000 acre feet.

**Recycled Water**

Recycled water use for the 2010 year totaled just over 153 acre feet, up over ten percent from 138 acre feet in 2009. During 2010, six new sites (eight additional meters) were connected to the City’s recycled water distribution system (Table 4 below). The use of the recycled water at all of these sites is for landscape irrigation.

<table>
<thead>
<tr>
<th>Site</th>
<th>Address</th>
<th>AF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Los Verdes Park I HOA (2 meters)</td>
<td>Los Osos Valley Road at South Higuera</td>
<td>6.5 acre feet</td>
</tr>
<tr>
<td>DeVaul Park</td>
<td>1593 Madonna Road</td>
<td>2.0 acre feet</td>
</tr>
<tr>
<td>DeTolosa HOA (2 meters)</td>
<td>1501 and 1601 Madonna Road</td>
<td>3.7 acre feet</td>
</tr>
<tr>
<td>Los Osos Valley Road median</td>
<td>Madonna Road @ Los Osos Valley Road</td>
<td>0.5 acre feet</td>
</tr>
<tr>
<td>Mission Community Bank</td>
<td>3380 Higuera S.</td>
<td>0.5 acre feet</td>
</tr>
<tr>
<td>Meathead Movers &amp; Storage</td>
<td>3600 Higuera S.</td>
<td>0.5 acre feet</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>13.7 acre feet</strong></td>
</tr>
</tbody>
</table>

Two new development sites, Prefumo Creek Commons and the Hampton Inn, are planned to receive recycled water in 2011. These new recycled water use sites are estimated to use ten acre feet per year.

**Groundwater**

The City uses one domestic well to supplement its other water supply sources. In addition, there is a non-potable well at the City’s Corporation Yard for use for construction activities. There are two wells at the City’s Laguna Lake Golf Course that provide for a portion of the golf course irrigation needs. The additional irrigation demands at the golf course are met with recycled water.
Based on the policies adopted in the City’s Water and Wastewater Management Element of the General Plan, Table 5 below shows the available water supplies to serve the community’s water demands.

### Table 5: Water Resource Availability

<table>
<thead>
<tr>
<th>Water Resource</th>
<th>2010 Annual Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salinas &amp; Whale Rock Reservoirs</td>
<td>6,940 AF</td>
</tr>
<tr>
<td>Nacimiento Reservoir</td>
<td>3,380 AF</td>
</tr>
<tr>
<td>Recycled Water</td>
<td>153 AF</td>
</tr>
<tr>
<td>Siltation to 2060</td>
<td>(500 AF)</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>9,973 AF</strong></td>
</tr>
</tbody>
</table>

**Water Supply Accounting and Demand**

The policies in the Water and Wastewater Management Element of the General Plan establish that the City will account for water supplies necessary to meet three specific community needs: 1) primary water supply, 2) reliability reserve, and 3) secondary water supply which are discussed in more detail below and shown in Table 6.

**Primary Water Supply**

The primary water supply is defined as the amount of water needed to serve the build-out population of the City as identified in the Land Use Element of the General Plan. The quantity of water needed for the primary water supply is calculated using the ten-year average of actual per capita water use, shown in Table 3, and the City’s build-out population (57,200).

**Reliability Reserve**

The reliability reserve provides a buffer for future unforeseen or unpredictable long-term impacts to the City’s available water supply. The quantity of water for the reliability reserve is established using twenty percent of the ten-year average of actual per capita water use and the existing City population. The reliability reserve concept is included in the City’s Charter (Section 909) which identifies that the water cannot be used to allow additional development.

**Secondary Water Supply**

The secondary water supply is the amount of water remaining from the City’s available water resources above those needed to meet the primary water supply and reliability reserve. The secondary supply is identified to meet peak water demand periods or short-term loss of City water supply sources.
### Table 6: 2011 Water Supply Accounting

<table>
<thead>
<tr>
<th>Total</th>
<th>Primary Water Supply</th>
<th>Reliability Reserve</th>
<th>Secondary Water Supply</th>
</tr>
</thead>
<tbody>
<tr>
<td>9,973 AF</td>
<td>7,791 AF</td>
<td>1,237 AF</td>
<td>945 AF</td>
</tr>
</tbody>
</table>

### III. WATER DEMAND MANAGEMENT

The City’s water conservation program is an integral part of its overall water management strategy. The program has assisted in adding reliability to the water supply system over the years. In the late 1980’s, the City implemented effective water efficiency programs and policies that allowed continued growth and economic development within the community even during water-constrained periods. Even with a more diversified multi-source water supply portfolio in 2011, conservation will continue to play an important role in the future as the City potentially faces new water supply challenges attributable to climate change and regulatory requirements related to statewide water use reduction goals.

Historically the City has utilized the California Urban Water Conservation Council’s (CUWCC) Best Management Practices (BMPs) as defined in the Memorandum of Understanding Regarding Urban Water Conservation in California (MOU) as a guide for the City’s water conservation program. The BMPs are programs and services that MOU signatories agree to implement over time. Based on the BMPs, the City’s water conservation program in the past has been divided into three primary components: financial incentives, technical assistance, and public education.

Because of the changing regulatory requirements and water supply availability, the following sections describe the shifting role of water conservation within the community and the evolution of the programs and services offered by the Utilities Department.

### Recent Water Use Efficiency Legislation

There are two pieces of legislation that have been passed since 2007 that require water agencies to implement water conservation measures in order to be eligible for state grants, loans, or assistance. Eligibility for grants and loans apply to both water and wastewater projects that the City may undertake. The following is a summary of the legislation:

**AB 1420**

Assembly Bill 1420 (Stats. 2007, ch. 628) amended the Urban Water Management Planning Act, Water Code Section 10610 et seq., to require, effective January 1, 2009, that the terms of, and eligibility for, any water management grant or loan made to an urban water supplier and awarded or administered by the Department of Water Resources (DWR), State Water Resources Control Board, or California Bay-Delta Authority, be conditioned on the implementation of the water Demand Management Measures (DMMs).
described in Water Code Section 10631(f). DWR was given discretionary authority to determine whether an urban water supplier is eligible for a grant or loan.

SBx7-7
Senate Bill x7-7 was enacted in November 2009, requiring all water suppliers to increase water use efficiency. The legislation sets an overall goal of reducing per capita urban water use by 20 percent by December 31, 2020. The law directs incremental progress towards this goal by reducing per capita water use by at least ten percent by December 31, 2015.

The law states:

- Each urban retail water supplier shall develop water use targets and an interim water use target by July 1, 2011.

- An urban retail water supplier shall include in its water management plan, due July 2011, the baseline daily per capita water use, water use target, interim water use target, and compliance per capita water use.

- Effective 2016, urban retail water suppliers who do not meet the water conservation requirements established by this bill are not eligible for state grants or loans.

The City’s 2010 Urban Water Management Plan provides a complete discussion of the legislative requirements. Table 7 summarizes the per capita targets the City must meet in order to be in compliance with the law.

### Financial Incentives Summary

Financial incentives have been an important tool for the water conservation program since 1990. For a number of years, toilet retrofitting was the focus of the incentive program with the toilet rebate program running from June 1990 through June 2007. The high efficiency washing machine rebate program was added to the financial incentive program in 2001 and is still in place today within minimum funding levels. New irrigation equipment incentive pilot programs were tested in the summer/fall of 2008 and were added to the incentive program in 2009. The following is a summary of the financial incentive programs.

#### High Efficiency Washing Machine Replacements

<table>
<thead>
<tr>
<th>Year</th>
<th>Adjusted Per Capita Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>120 gpcd</td>
</tr>
<tr>
<td>2020</td>
<td>117 gpcd</td>
</tr>
</tbody>
</table>

**Table 8: Washing Machine Rebates**

<table>
<thead>
<tr>
<th>Year</th>
<th>Rebate</th>
<th>Savings in acre</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The high efficiency washing machine rebate program was implemented in 2001 and offers a $150 dollar rebate for qualifying machines. As indicated in Table 8, participation in the program has been up and down over the years. In 2009 the program had a record high of 175 rebates. In 2010 rebate funds were reduced by 50% thereby limiting the number of participants in the program. It is estimated that about 14.11 acre feet of water is saved annually by these water efficient machines with energy savings as a side benefit.

**Irrigation Equipment Replacement**

Added to the financial incentive program in late 2008, the first irrigation efficiency rebates were issued in 2009. The focus of the program is on the replacement of old irrigation controllers in commercial landscapes. Prior to receiving the incentive, the irrigation system is required to be audited and repaired to bring it up to standards. Table 9 summarizes the participation in the program.

<table>
<thead>
<tr>
<th>2001-2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>Total</th>
<th>feet per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>354</td>
<td>47</td>
<td>76</td>
<td>147</td>
<td>175</td>
<td>76</td>
<td>799</td>
<td>14.11</td>
</tr>
<tr>
<td>5.97</td>
<td>.78</td>
<td>1.2</td>
<td>2.26</td>
<td>2.70</td>
<td>1.2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Customer Service/Technical Assistance**

**Residential and Commercial Assistance**

The City offers technical assistance to water customers via free indoor and outdoor water consultations or audits. The consultations can either be by phone or in person. In person consultations include indoor and outdoor leak detection services, irrigation system evaluation, landscape plant material information, and other information on how to use water efficiently.

The requests for consultations are typically received from people experiencing high water bills, residents participating in the low income assistance program, or customers requesting a utility bill adjustment through the Utility Billing Adjustment Committee. Water audits often reveal problems which are then corrected by the property owner resulting in lower water use and reduced water bills.

The most common problems experienced by customers are summarized in Table 10. A total of 1,814 contacts were made, either by letter, telephone, or direct contact during 2010.
Past practice included mailing letters to customers using more than 25 units of water per billing cycle in the summer and 20 units in the winter. In 2010, 1,475 letters were sent to customers with high water use. This program is being curtailed for fiscal year 2011-2012 due to adjusted priorities and workload measures in the Utilities Conservation section.

**Public Information & Education**

In an ongoing effort to educate the public, the City provides informational brochures on a variety of water conservation, water quality, energy conservation, and recycling topics upon request. Additionally, a quarterly newsletter is produced which focuses on current information regarding water, wastewater, stormwater, and solid waste issues. The newsletter is mailed to approximately 21,000 households. Additional information has been distributed through paid media advertising, public service announcements, and participation at Farmer’s Market, home shows, etc.

In 1999, the Utilities Department implemented a water education program within San Luis Coastal Unified School District. The program targets third through fifth grade students and compliments the study of water within the School District’s existing curriculum. Teachers have been enthusiastic about the program, particularly with the field trip to the Water Reclamation Facility.

During the 2010-2011 school year, ten class presentations and eight field trips were given for schools within the City. The class presentations were 45 minutes and covered the subjects of the water cycle, treatment, use, conservation, and reclamation. The classroom presentation is a prerequisite for the field trip.

A new water quality module focusing on storm water runoff and creek and ocean health has been developed. This will add another option for teachers to select when looking for water education activities. Eight water quality class presentations were given during this school year.

**Summary**

The City has implemented numerous programs over the years which have resulted in a dramatic decrease in per capita water use since the late 1980’s. The water conservation program has provided many economic benefits to the community while adding reliability to the water supply. The program has also brought per capita water use to a level where it will be relatively straightforward for the community to be in compliance with the state’s mandatory water reduction goals in the future. With adequate water supplies to meet both the current and future water needs as envisioned in the City’s General Plan, the water conservation program will play a different but continuing role for the City in the future.
IV. PROJECTED WATER SUPPLY SITUATION

Reservoir Storage Curve
The Reservoir Storage Curve is integral to the City's annual water resource analysis. It is based on a computer model used to estimate the City's future reservoir storage in Salinas and Whale Rock Reservoirs, utilizing historical drought weather patterns, water use projections, reservoir data, and available water supplies from Nacimiento Reservoir, recycled water, and limited groundwater. The model is used to forecast the City's water supply position and to make certain water policy recommendations. Figure 5 shows the Reservoir Storage Curve. The model assumes implementation of Stage I conservation when supplies are projected to last only three years. Stages II and III conservation measures are implemented when water supplies are estimated to last only two years and one year, respectively (as shown on Figure 5). The model was updated to reflect the City's current water storage and assumptions relative to water demands and drought conditions.

The model predicts current water supplies will last into the year 2022 (Figure 5).

V. SUMMARY
This past year’s rainfall was significantly above normal for the area. The City’s surface water supplies from Salinas and Whale Rock Reservoirs are in very good shape. Even with these available supplies, the community must continue to utilize water in an efficient manner. Water conservation will continue to be an important element of the City’s water resources planning in the future and the State’s requirement for reducing urban water use. With the multi-source water policy, the completion of the Nacimiento Project this year, planned expansion of users for recycled water, strong water conservation programs, and other related policies which were adopted as part of the Water and Wastewater Management Element, the City has implemented a long-term strategy which will ensure a reliable supply of water to meet the current and future needs of the community.

Attachments:
1. Definitions & Information
2. Figures 1-5
**Definitions & Information**

**Safe Annual Yield:**
The maximum quantity of water which can be delivered from the water source each year during a critical dry period (i.e. historical drought period).

**Minimum Pool:**
Minimum amount of water in Whale Rock or Salinas Reservoirs below which water deliveries must be stopped. This amount is established at 2,000 acre feet which is left in the reservoirs to support aquatic habitat and other wildlife.

**Acre Foot:**
- 1 acre foot = 325,851 gallons
- Enough water to cover a football field with 1 foot of water
- Enough water to serve approximately 3.5 average single family homes (in San Luis Obispo) per year

**Gallons per Capita per Day (gpcd):**
Calculation = \(\frac{\text{Total Acre Feet} \times 325,851}{\text{City Population} \times 365}\)

**Present Water Demand (acre feet per year):**
Calculation = \(\frac{145 \text{ gpcd} \times \text{Current City Population} \times 365}{325,851}\)

**Salinas Reservoir:**
- Maximum Storage Capacity = 23,842.9 acre feet
- Minimum Pool = storage amount when water extractions must cease = 2,000 acre feet
- Surface Area = 730 acres
- Drainage Area = 112 square miles = 71,700 acres

**Whale Rock Reservoir:**
- Maximum Storage Capacity = 40,662 acre feet
- Minimum Pool = storage amount when water extractions must cease = 2,000 acre feet
- Surface Area = 594 acres
- Drainage Area = 20.3 square miles = 13,000 acres
Water Resources Status Report

2012

Prepared by:
Ron Munds, Utilities Conservation Manager
Jennifer Metz, Utilities Project Manager
Wade Horton, Water Division Manager
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City of San Luis Obispo

**2012 Water Resources Status Report**

The 2012 Water Resources Status Report updates the City Council and community members on water supply accounting and demand projections as specified in the Water and Wastewater Management Element of the General Plan, Policy A 5.3.1.

The report covers four main areas:

I. Existing Water Supply Status  
II. Multi-Source Water Supply  
III. Water Demand Management  
IV. Projected Water Supply

I. EXISTING WATER SUPPLY STATUS

The City currently utilizes five water sources to meet community water demand:

1. Salinas Reservoir (also referred to as Santa Margarita Lake)  
2. Whale Rock Reservoir  
3. Nacimiento Reservoir  
4. Recycled water from the City’s Water Reclamation Facility  
5. Groundwater

**Current Supply Status**

As of June 1, 2012, the City’s available water storage in Salinas Reservoir was 18,573 acre feet. The City’s share of the Whale Rock storage was 15,287 acre feet. The combined total water storage available to meet City water needs from these two sources was 33,860 acre feet, equating to 73 percent of maximum available storage.

Based on available storage from Salinas & Whale Rock reservoirs, contractual water from Nacimiento Reservoir, estimated groundwater production, estimated recycled water deliveries, and assuming an extended drought until reservoirs levels are drawn down to minimum pool (see Definitions) the City has approximately eleven years of water supply.

This estimate is based on data derived from the City’s Reservoir Storage Model and is shown in Figure 5 (figures are provided at the end of report). The model assumes conservation measures, consistent with the City’s Water Shortage Contingency Plan, are implemented when supplies are estimated to last three years or less. The various stages of conservation are indicated in Figure 5. The Water Shortage Contingency Plan details the City’s conservation measures related to drought and is an appendix to the Urban Water Management Plan, adopted June 2011.

*The City now has five water sources, achieving the goal of a diversified water supply portfolio to meet current and future community needs*
2011 Summary
Table 1 summarizes City 2011 water demand per source. The total 2011 calendar year water demand (based on water production figures) was 5,285 acre feet. Water use per category is shown in Chart 1.

Table 1: 2011 City Water Demand Sources (acre feet)

<table>
<thead>
<tr>
<th>Source</th>
<th>Salinas</th>
<th>Whale Rock*</th>
<th>Nacimiento</th>
<th>Groundwater</th>
<th>Recycled</th>
<th>Total Water Used</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2,830</td>
<td>14</td>
<td>2,181</td>
<td>100</td>
<td>160</td>
<td>5,285</td>
</tr>
</tbody>
</table>

*Water delivered to Cal Poly State University is excluded from City Water Demand

Historical water use is summarized in Table 2, as well as corresponding population, per capita use rate, and precipitation. The 2011 per capita water use was approximately 104 gallons per person per day (gpcd), representing a 5 gpcd decrease from the previous year. The decrease in per capita demand is consistent with nationwide trending, due in part to the success of conservation and recessionary impacts.

The ten-year per capita average water use is 120.1 gpcd. Based on policies contained in the Water and Wastewater Management Element of the General Plan (WWME), the City uses the ten-year average to project water required to serve build-out population as identified in the Land Use Element of the General Plan. Water use per customer class is summarized in Chart 1.

Table 2: Population Estimates, Water Use & Rainfall

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Total Water Use (acre feet)</th>
<th>Per Capita (gpcd)</th>
<th>Rainfall¹ (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>44,482</td>
<td>6,032</td>
<td>121</td>
<td>13.08</td>
</tr>
<tr>
<td>2003</td>
<td>44,357</td>
<td>5,968</td>
<td>120</td>
<td>16.40</td>
</tr>
<tr>
<td>2004</td>
<td>44,298</td>
<td>6,239</td>
<td>126</td>
<td>17.73</td>
</tr>
<tr>
<td>2005</td>
<td>44,687</td>
<td>6,098</td>
<td>122</td>
<td>16.21</td>
</tr>
<tr>
<td>2006</td>
<td>44,559</td>
<td>5,999</td>
<td>120</td>
<td>14.80</td>
</tr>
<tr>
<td>2007</td>
<td>44,433</td>
<td>6,493</td>
<td>130</td>
<td>6.14</td>
</tr>
<tr>
<td>2008</td>
<td>44,579</td>
<td>6,359</td>
<td>127</td>
<td>15.84</td>
</tr>
<tr>
<td>2009</td>
<td>44,829</td>
<td>6,134</td>
<td>122</td>
<td>18.18</td>
</tr>
<tr>
<td>2010</td>
<td>44,948</td>
<td>5,489</td>
<td>109</td>
<td>33.53</td>
</tr>
<tr>
<td>2011</td>
<td>45,418</td>
<td>5,285</td>
<td>104</td>
<td>21.16</td>
</tr>
</tbody>
</table>

Ten-year per capita average 120.1

1. Rainfall amounts for calendar year source: Cal Poly CIMIS Weather Station

II. MULTI-SOURCE WATER SUPPLY
Per WWME Policy A 2.2.1, the City shall utilize multiple water resources to meet its water supply needs. Having several sources of water avoids dependence on any one source that may not be available during a drought or other water supply reduction or emergency. Maintaining different type sources [surface water, recycled water (for irrigation), ground water] provides greater reliability and flexibility; as does maintaining surface water sources in distinct watersheds. With the delivery of Nacimiento...
Reservoir water beginning in January 2011, the City now has five water sources, achieving the goal of diversifying its water supply portfolio to meet current and future community needs. The following sections provide an overview of each water source available to the City.

**Water Supply Sources**

**Salinas & Whale Rock Reservoirs**

Salinas and Whale Rock Reservoirs have served as the City’s primary water supplies for over 50 years. The County of San Luis Obispo Flood Control and Water Conservation District provides the oversight, operations, and maintenance of the Salinas Dam and water delivery facilities for the benefit of the City. The City pays the County for the associated costs for these services. The City provides the oversight, operations, and maintenance of the Whale Rock Reservoir for the benefit of the Whale Rock Commission. The Whale Rock Commission is a joint powers agency made up of Cal Poly State University, California Men’s Colony, and the City. The City draws water from these two reservoirs, as well as the Nacimiento Reservoir, in a coordinated manner to maximize the long-term water supply available from these two sources. In addition, the City has adopted policies in the WWME to account for reductions in storage capacity at each lake resulting from siltation.

**Nacimiento Reservoir**

The City has been involved in the Nacimiento Project planning efforts for over 15 years. Construction of the 45-mile pipeline and related facilities was completed in December 2010. Water deliveries to the City’s water treatment plant began on January 5, 2011. The City has a contractual right to 3,380 acre feet per year and will likely maximize the use of this water source each year since the contractual amount of water cannot be carried over (“banked”) from year to year.

**Recycled Water**

Recycled water use for calendar year 2011 year totaled approximately 158 acre feet, up three percent from 153 acre feet in 2010. During 2011, three new sites (six additional meters) were connected to the City’s recycled water distribution system to provided landscape irrigation – see Table 3.

<table>
<thead>
<tr>
<th>Site</th>
<th>Address</th>
<th>AF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Margarita Medians (3 meters)</td>
<td>Margarita</td>
<td>1.2</td>
</tr>
<tr>
<td>Prefumo Creek Commons (2 meters)</td>
<td>Froom Ranch Way @ Los Osos Valley Road</td>
<td>4.5</td>
</tr>
<tr>
<td>MD2 Hydrant Meter/Detention Basin</td>
<td>Prado Road</td>
<td>9.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>14.8</strong></td>
</tr>
</tbody>
</table>

Three new development sites, the Olive Garden, Hampton Inn and Prado Road Streetscape, are planned to receive recycled water in 2012. These new recycled water use sites are estimated to use five acre feet per year.

**Groundwater**

The City uses one domestic well to supplement its other water supply sources. In addition, there is a non-potable well at the City’s Corporation Yard for construction activity use. There are two additional non-potable wells at the City’s Laguna Lake Golf Course that provide for a portion of the golf course irrigation needs. The
additional irrigation demands at the golf course are met with recycled water. Per WWME Policy A 3.2.3, the City will continue to use groundwater for domestic purposes when available, but will not consider this source of supply as a part of its water resources availability due to limitations for the use of groundwater resources.

**Water Resource Availability**

Based on WWME Section 3, water resource availability to serve the community’s water demand is summarized in Table 4. Calendar Year 2011 water availability totaled 9,980 Acre-Feet.

### Table 4: Water Resource Availability

<table>
<thead>
<tr>
<th>Water Resource</th>
<th>2011 Annual Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salinas &amp; Whale Rock Reservoirs</td>
<td>6,940 AF</td>
</tr>
<tr>
<td>Nacimiento Reservoir</td>
<td>3,380 AF</td>
</tr>
<tr>
<td>Recycled Water</td>
<td>160 AF</td>
</tr>
<tr>
<td>Siltation from 2010 to 2060</td>
<td>(500 AF)</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>9,980 AF</strong></td>
</tr>
</tbody>
</table>

A. Quantity of water which can be withdrawn every year while operating both reservoirs in coordinated operations under critical drought conditions. Safe Annual Yield determined from computer model, which accounts for siltation loss through 2010 (per WWME Policy A 4.2.1)

B. Dependable Yield is the contractual amount of water the City has rights to from Nacimiento Reservoir.

C. The quantity of recycled water included is the actual prior year’s recycled water usage (2011) per WWME Policy A 7.2.2

D. Reservoir siltation is a natural occurrence that reduces storage capacity over long periods, resulting in the reduction of safe annual yield

**Water Supply Accounting**

Per WWME Section 5, the City will account for water supplies necessary to meet three specific community needs: 1) Primary water supply, 2) Reliability reserve, 3) Secondary water supply.

**Primary Water Supply**

The primary water supply is defined as the amount of water needed to serve the build-out population of the City as identified in the Land Use Element of the General Plan. The quantity of water needed for the primary water supply is calculated using the ten-year average of actual per capita water use, shown in Table 2, and the City’s build-out population (57,200 per **1994 Land Use Element of the General Plan, revised 2010**), per WWME Policy A 5.2.2:

\[
\text{Primary Water Supply} = \text{Ten Year Average per Capita Water Use} \times \text{City Build-out Population} \\
= 120.1 \text{ gal/cap-day} \times 57,200 \text{ cap} \times 365 \text{ day/year} \times \text{Acre-Ft/325,853 gal} \\
= 7,695 \text{ Acre-ft/year}
\]

**Reliability Reserve**

The reliability reserve provides a buffer for future unforeseen or unpredictable long-term impacts to the City’s available water supply. The quantity of water for the reliability reserve is established using twenty percent of the ten-year average of actual per capita water use and the existing City population (45,418, 2011 population). The reliability reserve concept is included in the City’s Charter (Section 909) which identifies that the water may not be used to serve future development, and is defined per WWME Policy A 5.2.3:

\[
\text{Reliability Reserve} = \text{Ten Year Average per Capita Water Use} \times 20% \times \text{2011 City Population} \\
= 120.1 \text{ gal/cap-day} \times 45,418 \text{ cap} \times 365 \text{ day/year} \times \text{Acre-Ft/325,853 gal} \times 20% \\
= 1,222 \text{ Acre-ft/year}
\]

**Secondary Water Supply**

The secondary water supply is the amount of water remaining from the City’s available water resources above those needed to meet the primary water supply and reliability reserve. The secondary supply is identified to meet peak water demand periods or short-term loss of City water supply sources, per WWME Policy A 5.2.4:
Secondary Water Supply = Current Annual Availability – Primary Water Supply - Reliability Reserve
= 9,980 Acre-ft/year\(^A\) – 7,695 Acre-ft/year – 1,222 Acre-ft/yr
= 1,063 Acre-ft/year
\(^A\).2011 Annual Availability

Water supply accounting is summarized in Table 5:

| Table 5: 2011 Water Supply Accounting |
|-----------------|-----------------|-----------------|-----------------|
| Total           | Primary Water Supply | Reliability Reserve | Secondary Water Supply |
| 9,980 AF        | 7,695 AF          | 1,222 AF          | 1,063 AF         |

III. WATER DEMAND MANAGEMENT

The City’s water conservation program is an integral part of its overall water management strategy. The program has assisted in adding reliability to the water supply system over the years. In the late 1980’s, the City implemented effective water efficiency programs and policies that allowed for continued community growth and economic development during water-constrained periods. Even with a more diversified 2011 multi-source water supply portfolio, conservation continues to play an important role considering potential water supply impacts associated with climate change and regulatory requirements related to statewide water use reduction goals.

Taking into account changing regulatory requirements and water supply availability, the following sections describe the shifting role of water conservation within the community and the evolution of the programs and services offered by the Utilities Department.

**California Urban Water Conservation Council – Best Management Practices**

Historically the City has utilized the California Urban Water Conservation Council’s (CUWCC) Best Management Practices (BMPs) as defined in the Memorandum of Understanding Regarding Urban Water Conservation in California (MOU) as a guide for the City’s water conservation program. The BMPs are programs and services that MOU signatories agree to implement over time. Though BMPs implementation is voluntary, all state regulatory agencies now recognize them as the standard for compliance with State law (discussed below). The City has fully implemented the required measures and is thus in compliance with all applicable State laws.

**Water Use Efficiency Legislation**

Legislation passed over the years requires water agencies to implement water conservation measures in order to be eligible for state grants, loans, or assistance. Eligibility for grants and loans apply to both water and wastewater projects that the City may undertake. A summary of the legislation follows:

**AB 1420**

Assembly Bill 1420 (Stats. 2007, ch. 628) amended the Urban Water Management Planning Act, Water Code Section 10610 et seq., to require, effective January 1, 2009, that the terms of, and eligibility for, any water management grant or loan made to an urban water supplier and awarded or administered by the Department of Water Resources (DWR), State Water Resources Control Board, or California Bay-Delta Authority, be conditioned on the implementation of the water Demand Management Measures (DMMs) described in Water Code Section 10631(f). DWR was given discretionary authority to determine whether an urban water supplier is eligible for a grant or loan.
SBx7-7

Senate Bill x7-7 was enacted in November 2009, requiring all water suppliers to increase water use efficiency. The legislation sets an overall goal of reducing per capita urban water use by 20 percent by December 31, 2020. The law directs incremental progress towards this goal by reducing per capita water use by at least ten percent by December 31, 2015.

The law states:

- Each urban retail water supplier shall develop water use targets and an interim water use target by July 1, 2011.
- An urban retail water supplier shall include in its water management plan, due July 2011, the baseline daily per capita water use, water use target, interim water use target, and compliance per capita water use.
- Effective 2016, urban retail water suppliers who do not meet the water conservation requirements established by this bill are not eligible for state grants or loans.

The City’s Urban Water Management Plan provides a complete discussion of the legislative requirements. Table 6 summarizes the per capita targets the City must meet in order to be in compliance with the law.

### Urban Water Management Planning Act

Initially passed in 1984 and amended several times over the years, the Urban Water Management Planning Act requires water agencies to report on their progress in implementing Water Demand Management Measures outlined in the law. The law was amended so that full implementation of the BMPs would be accepted as being in compliance with the part of the law. The City’s 2010 Urban Water Management Plan provides a complete discussion of the City’s water conservation program and verification of compliance with the regulations of the act.

### Other Regulatory Requirements

The Clean Water State Revolving Fund Requirements

In order to qualify for a loan for any water or wastewater project from the State Water Resources Control Board an agency must provide verification that it is in compliance with either the Demand Management Measures in the Urban Water Conservation Planning Act or the CUWCC BMPs.

### 2011 Water Conservation Program Highlights

#### Residential and Commercial Technical Assistance

The most important program the Utilities Conservation Section offers is its technical assistance and support to the community. During 2011 the section responded to approximately 1,860 requests for assistance with high water bill, leak detection assistance, and general consultations regarding customer billing problems. The requests for consultations are typically received from people experiencing high water bills, residents participating in the low income assistance program, or customers requesting a utility bill adjustment through the Utility Billing Adjustment Committee. Water audits often reveal problems which are then corrected by the property owner resulting in lower water use and reduced water bills. In addition, the section processed approximately 400 utility billing adjustment requests during 2011.

### Table 6: 2015 and 2020 Targets

<table>
<thead>
<tr>
<th>Year</th>
<th>Adjusted Per Capita Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>120 gpcd</td>
</tr>
<tr>
<td>2020</td>
<td>117 gpcd</td>
</tr>
</tbody>
</table>

Utilities Conservation responded to 1,860 requests for assistance in 2011
Public Information & Education

In an ongoing effort to educate the public, the City provides informational brochures on a variety of water conservation, water quality, energy conservation, and recycling topics upon request. Additionally, a quarterly newsletter is produced which focuses on current information regarding water, wastewater, stormwater, and solid waste issues. The newsletter is mailed to approximately 21,000 households. Additional information has been distributed through paid media advertising, public service announcements, and participation at Farmer’s Market, home shows, etc.

The Utilities Department continues to offer a water education program within San Luis Coastal Unified School District. The program targets third through fifth grade students and compliments the study of water within the School District’s existing curriculum. Teachers have been enthusiastic about the program, particularly with the field trip to the Water Reclamation Facility.

IV. PROJECTED WATER SUPPLY SITUATION

Reservoir Storage Curve

The Reservoir Storage Curve is integral to the City's annual water resource analysis. It is based on a computer model used to estimate the City's future reservoir storage in Salinas and Whale Rock Reservoirs, utilizing historical drought weather patterns, water use projections, reservoir data, and available water supplies from Nacimiento Reservoir, recycled water, and limited groundwater. Figure 5 shows the Reservoir Storage Curve. The model assumes implementation of Stage I conservation when supplies are projected to last only three years. Stages II and III conservation measures are implemented when water supplies are estimated to last only two years and one year, respectively (as shown on Figure 5). The model was updated to reflect the City's current water storage and assumptions relative to water demands.

Assuming the onset of an extended drought, the model predicts current water supplies will last into the year 2024 until Whale Rock and Salinas reservoirs are drawn down to minimum pool. (Figure 5).

V. SUMMARY

As of June 01, 2012, the City’s surface water supplies from Salinas and Whale Rock Reservoirs are at 73% of maximum storage. Even with these available supplies, the community must continue to utilize water in an efficient manner to meet the State's requirement for reducing urban water use. With the multi-source water policy, including the delivery of Nacimiento water in 2011, the City has implemented a long-term strategy which will ensure a reliable supply of water to meet the current and future needs of the community.

Attachments:
1. Definitions & Information
2. Figures 1
Definitions & Information

Safe Annual Yield:
The maximum quantity of water which can be delivered from the water source each year during a critical dry period (i.e. historical drought period).

Minimum Pool:
Minimum amount of water in Whale Rock or Salinas Reservoirs below which water deliveries must be stopped. This amount is established at 2,000 acre feet which is left in the reservoirs to support aquatic habitat and other wildlife.

Acre Foot:
* 1 acre foot = 325,851 gallons
* Enough water to cover a football field with 1 foot of water
* Enough water to serve approximately 4 average single family homes (in San Luis Obispo) per year

Gallons per Capita per Day (gpcd):
Calculation = \( \frac{\text{Total Acre Feet} \times 325,851}{\text{City Population} \times 365} \)

Water Demand (acre feet per year):
Calculation = \( \frac{\text{gpcd} \times \text{Current City Population} \times 365}{325,851} \)

Salinas Reservoir:
Maximum Storage Capacity = 23,842.9 acre feet
Minimum Pool = storage amount when water extractions must cease = 2,000 acre feet
Surface Area = 730 acres
Drainage Area = 112 square miles = 71,700 acres

Whale Rock Reservoir:
Maximum Storage Capacity = 40,662 acre feet
Minimum Pool = storage amount when water extractions must cease = 2,000 acre feet
Surface Area = 594 acres
Drainage Area = 20.3 square miles = 13,000 acres
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City of San Luis Obispo
2013 Water Resources Status Report

The 2013 Water Resources Status Report updates the City Council and community members on water supply accounting and demand projections as specified in the Water and Wastewater Management Element of the General Plan, Policy A 5.3.1.

The 2013 Report covers four main areas:

I. Existing Water Supply Status
II. Multi-Source Water Supply
III. Water Demand Management
IV. Projected Water Supply

I. EXISTING WATER SUPPLY STATUS

The City currently utilizes five water sources to meet community water demand:

1. Salinas Reservoir (also referred to as Santa Margarita Lake)
2. Whale Rock Reservoir
3. Nacimiento Reservoir
4. Recycled water from the City’s Water Reclamation Facility
5. Groundwater

Current Supply Status

As of September 1, 2013, the City’s available water storage in Salinas Reservoir was 11,148 acre feet. The City’s share of available Whale Rock storage was 11,935 acre feet. The combined total water storage available to meet City water needs from these two sources was 23,083 acre feet, equating to 53 percent of maximum available storage.

San Luis Obispo County is currently experiencing a D3 Extreme Drought as characterized by the National Oceanic and Atmospheric Administration. Fortunately, based on available storage from Salinas & Whale Rock reservoirs, contractual water from Nacimiento Reservoir, estimated groundwater production, estimated recycled water deliveries, and assuming the continuation of an extended drought, the City has approximately eight years of water supply until reservoirs levels are drawn down to minimum pool (see Definitions).

This estimate is based on data derived from the City’s Reservoir Storage Model and is reflected in Figure 1 (figures are provided at the end of report). The model assumes conservation measures are implemented when supplies are estimated to last three years or less, consistent with the City’s Water
Shortage Contingency Plan. The various stages of conservation are indicated in Figure 1. The City’s Water Shortage Contingency Plan details conservation measures related to drought and is an appendix to the Urban Water Management Plan, adopted June 2011.

2012 Summary

Table 1 summarizes 2012 water demand per source. The total 2012 calendar year water demand (based on water production figures) was 5,541 acre feet. Water use by category is shown in Chart 1.

<table>
<thead>
<tr>
<th>Source</th>
<th>Water Demand (in acre feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salinas</td>
<td>1,959</td>
</tr>
<tr>
<td>Whale Rock*</td>
<td>1,822</td>
</tr>
<tr>
<td>Nacimiento</td>
<td>1,502</td>
</tr>
<tr>
<td>Groundwater</td>
<td>93</td>
</tr>
<tr>
<td>Recycled</td>
<td>165</td>
</tr>
<tr>
<td>Total</td>
<td>5,541</td>
</tr>
</tbody>
</table>

*Water delivered to Cal Poly State University is excluded from the City’s Water Demand.
Historical water use is summarized in Table 2, as well as corresponding population, per capita use rate, and precipitation. The 2012 per capita water use was approximately 109 gallons per capita per day (gpcd), representing a 5 gpcd increase from the previous year.

The ten-year average water use is 119 gpcd. Based on policies contained in the General Plan’s *Water and Wastewater Management Element* (WWME), the City uses the ten-year average to project water required to serve build-out population.

**Table 2: Population Estimates, Water Use & Rainfall**

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Total Water Use (acre feet)</th>
<th>Per Capita (gpcd)</th>
<th>Rainfall¹ (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>44,357</td>
<td>5,968</td>
<td>120</td>
<td>16.4</td>
</tr>
<tr>
<td>2004</td>
<td>44,298</td>
<td>6,239</td>
<td>126</td>
<td>21.0</td>
</tr>
<tr>
<td>2005</td>
<td>44,687</td>
<td>6,098</td>
<td>122</td>
<td>20.8</td>
</tr>
<tr>
<td>2006</td>
<td>44,559</td>
<td>5,999</td>
<td>120</td>
<td>17.2</td>
</tr>
<tr>
<td>2007</td>
<td>44,433</td>
<td>6,493</td>
<td>130</td>
<td>12.7</td>
</tr>
<tr>
<td>2008</td>
<td>44,579</td>
<td>6,359</td>
<td>127</td>
<td>18.1</td>
</tr>
<tr>
<td>2009</td>
<td>44,829</td>
<td>6,134</td>
<td>122</td>
<td>18.9</td>
</tr>
<tr>
<td>2010</td>
<td>44,948</td>
<td>5,489</td>
<td>109</td>
<td>36.0</td>
</tr>
<tr>
<td>2011</td>
<td>45,418</td>
<td>5,285</td>
<td>104</td>
<td>18.9</td>
</tr>
<tr>
<td>2012</td>
<td>45,308</td>
<td>5,541</td>
<td>109</td>
<td>21.5</td>
</tr>
</tbody>
</table>

**Ten-year per capita average** 119

*NOTE:*
1. Rainfall amounts for calendar year source: [Cal Poly CIMIS Weather Station](#)
II. MULTI-SOURCE WATER SUPPLY

Per WWME Policy A 2.2.1, the City shall utilize multiple water resources to meet its water supply needs. Having several sources of water avoids dependence on any one source that may not be available during a drought or other water supply reduction or emergency. Maintaining different type sources [surface water, recycled water (for irrigation), ground water] provides greater reliability and flexibility; as does maintaining surface water sources in distinct watersheds. The City has five water sources, achieving the goal of diversifying its water supply portfolio to meet current and future community needs.

**Water Supply Sources**

**Salinas & Whale Rock Reservoirs**

Salinas and Whale Rock Reservoirs have served as the City’s primary water supplies for over 50 years. The County of San Luis Obispo Flood Control and Water Conservation District (County) provides the oversight, operations, and maintenance of the Salinas Dam and water delivery facilities for the benefit of the City. The City pays the County for the associated costs for these services. The City provides the oversight, operations, and maintenance of the Whale Rock Reservoir for the benefit of the Whale Rock Commission. The Whale Rock Commission is a joint powers agency made up of Cal Poly State University, California Men’s Colony, and the City. The City draws water from these two reservoirs in a coordinated manner to maximize the long-term water supply available from these two sources. In addition, the City has adopted policies in the WWME to account for reductions in storage capacity at each lake resulting from siltation.

**Nacimiento Reservoir**

Water deliveries from the Nacimiento Reservoir began on January 5, 2011. The City has a contractual right to 3,380 acre feet per year. The County operates and maintains the project that delivers water from Nacimiento Reservoir to participating agencies (currently cities of Paso Robles and San Luis Obispo, Atascadero Mutual Water Company, Templeton Community Services District, and County
Service Area 10A (Cayucos)). The Nacimiento Project Commission, which is made up of representatives from each of the four agencies’ governing boards and County Representative (i.e. County Board of Supervisors), provides oversight to project operations, maintenance, and the project budget.

Recycled Water
Recycled water use for calendar year 2012 year totaled approximately 165 acre feet, up four percent from 158 acre feet in 2011. During 2012, two new sites (Olive Garden and Hampton Inn) were connected to the City’s recycled water distribution system to provide landscape irrigation.

Groundwater
The City used one domestic well in 2012 (Pacific Beach #1 located on Los Osos Valley Road near Pacific Beach school) to supplement its other potable water supply sources. In addition, the City maintains a non-potable well at the City’s Corporation Yard for construction activity use and two non-potable wells at the City’s Laguna Lake Golf Course for a portion of the golf course irrigation (additional golf course irrigation demand is met with recycled water). Per WWME Policy A 3.2.3, the City will continue to use groundwater for domestic purposes when available, but will not consider this source of supply as a part of its water resources availability due to limitations for the use of groundwater resources.

Water Resource Availability
Table 3 summarizes the Water Resource Availability (based on WWME Section 3), to serve community water demand. Calendar Year 2012 water availability totaled 9,985 Acre-Feet.

Table 3: 2012 Water Resource Availability

<table>
<thead>
<tr>
<th>Water Resource</th>
<th>Acre Feet</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salinas &amp; Whale Rock Reservoirs</td>
<td>6,940</td>
<td>Safe Annual Yield (^1)</td>
</tr>
<tr>
<td>Nacimiento Reservoir</td>
<td>3,380</td>
<td>Dependable Yield (^2)</td>
</tr>
<tr>
<td>Recycled Water</td>
<td>165</td>
<td>2012 Annual Usage (^3)</td>
</tr>
<tr>
<td>Siltation from 2010 to 2060</td>
<td>(500)</td>
<td>WWME Policy A 4.2.2 (^4)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>9,985</strong></td>
<td><strong>2012 Annual Availability</strong></td>
</tr>
</tbody>
</table>

NOTES:
1. Quantity of water which can be withdrawn every year while operating both reservoirs in coordinated operations under critical drought conditions. Safe Annual Yield determined from computer model, which accounts for siltation loss through 2010 (per WWME Policy A 4.2.1)
2. Dependable Yield is the contractual amount of water the City has rights to from Nacimiento Reservoir.
3. The quantity of recycled water included is the actual prior year’s recycled water usage (2012) per WWME Policy A 7.2.2
4. Reservoir siltation is a natural occurrence that reduces storage capacity over long periods, resulting in the reduction of safe annual yield.

Water Supply Accounting
Per WWME Section 5, the City will account for water supplies necessary to meet three specific community needs:

1. Primary water supply,
2. Reliability reserve, and
3. Secondary water supply.
The primary water supply is defined as the amount of water needed to serve the build-out population of the City as identified in the Land Use Element of the General Plan. The quantity of water needed for the primary water supply is calculated using the ten-year average of actual per capita water use, shown in Table 2, and the City’s build-out population 53,700 (Table 4, 2013 Water and Wastewater Development Impact Fee Study (as provided by Community Development staff working on LUCE update), down from 57,200, 1994 Land Use Element to the General Plan, revised 2010. Per WWME Policy A 5.2.2:

\[
\text{Primary Water Supply: } \\
= \text{Ten Year Average per Capita Water Use x City Build-out Population} \\
= 118.9 \text{ gal/cap-day x 53,700 cap x 365 day/year x Acre-Ft/325,853 gal} \\
= 7,152 \text{ Acre-Ft/year}
\]

The reliability reserve provides a buffer for future unforeseen or unpredictable long-term impacts to the City’s available water supply. The quantity of water for the reliability reserve is established using twenty percent of the ten-year average of actual per capita water use and the existing City population (45,308, 2012 population). The reliability reserve concept is included in the City’s Charter (Section 909) which identifies that the water may not be used to serve future development, and is defined per WWME Policy A 5.2.3:

\[
\text{Reliability Reserve: } \\
= \text{Ten Year Average per Capita Water Use x 2012 City Population x 20\%} \\
= 118.9 \text{ gal/cap-day x 45,308 cap x 365 day/year x Acre-Ft/325,853 gal x 20\%} \\
= 1,207 \text{ Acre-Ft/year}
\]

The secondary water supply is the amount of water remaining from the City’s available water resources above those needed to meet the primary water supply and reliability reserve. The secondary supply is identified to meet peak water demand periods or short-term loss of City water supply sources, per WWME Policy A 5.2.4:

\[
\text{Secondary Water Supply: } \\
= \text{Current Annual Availability – Primary Water Supply – Reliability Reserve} \\
= 9,985 \text{ Acre-Ft/year} \text{ } ^{\wedge} – 7,152 \text{ acre-ft/year} – 1,207 \text{ Acre-Ft/year} \\
= 1,626 \text{ Acre-Ft/year} \\
^{\wedge}.2012 \text{ Annual Availability}
\]

Water supply accounting is summarized in Table 4.
### III. WATER DEMAND MANAGEMENT

The City’s water conservation program is an integral part of its overall water management strategy. The program has assisted in adding reliability to the water supply system over the years. In the late 1980’s, the City implemented effective water efficiency programs and policies that allowed for continued community growth and economic development during water-constrained periods. Although the City’s investment in a multi-source water supply portfolio satisfies anticipated build-out water demand, water is a valuable resource that should be used wisely.

The following sections describe regulatory requirements and services provided by the water conservation program.

**California Urban Water Conservation Council – Best Management Practices**  
Historically the City has utilized the California Urban Water Conservation Council's (CUWCC) Best Management Practices (BMPs) as defined in the *Memorandum of Understanding Regarding Urban Water Conservation in California* (MOU) as a guide for the City’s water conservation program. The BMPs are programs and services that MOU signatories agree to implement over time. Though BMP implementation is voluntary, all state regulatory agencies now recognize them as the standard for compliance with State law. The City has fully implemented the required measures and is thus in compliance with all applicable State laws.

**Water Use Efficiency Legislation**  
Legislation passed over the years requires water agencies to implement water conservation measures in order to be eligible for state grants, loans, or assistance. Eligibility for grants and loans apply to both water and wastewater projects that the City may undertake. A summary of the legislation follows:

**AB 1420**  
Assembly Bill 1420 (Stats. 2007, ch. 628) amended the *Urban Water Management Planning Act*, Water Code Section 10610 et seq., to require, effective January 1, 2009, that the terms of, and eligibility for, any water management grant or loan made to an urban water supplier and awarded or administered by the Department of Water Resources (DWR), State Water Resources Control Board, or California Bay-Delta Authority, be conditioned on the implementation of the water Demand Management Measures (DMMs) described in Water Code Section 10631(f). DWR was given discretionary authority to determine whether an urban water supplier is eligible for a grant or loan.

**SBx7-7**  
Senate Bill x7-7 was enacted in November 2009, requiring all water suppliers to increase water use efficiency. The legislation sets an overall goal of reducing per capita urban water use by 20 percent by

### Table 4: 2012 Water Supply Accounting  
(in acre feet)

<table>
<thead>
<tr>
<th>Total</th>
<th>Primary Water Supply</th>
<th>Reliability Reserve</th>
<th>Secondary Water Supply</th>
</tr>
</thead>
<tbody>
<tr>
<td>9,985</td>
<td>7,152</td>
<td>1,207</td>
<td>1,626</td>
</tr>
</tbody>
</table>

---

**Table 4: 2012 Water Supply Accounting**

<table>
<thead>
<tr>
<th>Total</th>
<th>Primary Water Supply</th>
<th>Reliability Reserve</th>
<th>Secondary Water Supply</th>
</tr>
</thead>
<tbody>
<tr>
<td>9,985</td>
<td>7,152</td>
<td>1,207</td>
<td>1,626</td>
</tr>
</tbody>
</table>

---
December 31, 2020. The law directs incremental progress towards this goal by reducing per capita water use by at least ten percent by December 31, 2015. The law states:

- Each urban retail water supplier shall develop water use targets and an interim water use target by July 1, 2011.
- An urban retail water supplier shall include in its water management plan, due July 2011, the baseline daily per capita water use, water use target, interim water use target, and compliance per capita water use.
- Effective 2016, urban retail water suppliers who do not meet the water conservation requirements established by this bill are not eligible for state grants or loans.

The City’s Urban Water Management Plan provides a complete discussion of the legislative requirements. Table 5 summarizes the per capita targets the City must meet in order to be in compliance with the law.

### Table 5: 2015 and 2020 Targets

<table>
<thead>
<tr>
<th>Year</th>
<th>Adjusted Per Capita Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>120 gpcd</td>
</tr>
<tr>
<td>2020</td>
<td>117 gpcd</td>
</tr>
</tbody>
</table>

#### Urban Water Management Planning Act

Initially passed in 1984 and amended several times over the years, the Urban Water Management Planning Act requires water agencies to report on their progress in implementing Water Demand Management Measures outlined in the law. The law was amended so that full implementation of the BMPs would be accepted as being in compliance with the part of the law. The City’s 2010 Urban Water Management Plan provides a complete discussion of the City’s water conservation program and verification of compliance with the regulations of the act.

#### Other Regulatory Requirements

**The Clean Water State Revolving Fund Requirements**

In order to qualify for a loan for any water or wastewater project from the State Water Resources Control Board, an agency must provide verification that it is in compliance with either the Demand Management Measures in the Urban Water Conservation Planning Act or the CUWCC BMPs.

#### 2012 Water Conservation Program Highlights

**Residential and Commercial Technical Assistance**

The most important program the Utilities Conservation Section offers is its technical assistance and support to the community. During 2012 the section responded to approximately 1,700 requests for assistance with high water bill, leak detection assistance, and general consultations regarding customer billing problems. The requests for consultations are typically received from people experiencing high water bills, residents participating in the low income assistance program, or customers requesting a utility bill adjustment through the Utility Billing Adjustment Committee. Water audits often reveal problems which are then
corrected by the property owner resulting in lower water use and reduced water bills. In addition, approximately 465 utility billing adjustment requests were processed during 2011.

**Public Information & Education**

In an ongoing effort to educate the public, the City provides informational brochures on a variety of water conservation, water quality, energy conservation, and recycling topics upon request. Additionally, a quarterly newsletter is produced which focuses on current information regarding water, wastewater, stormwater, and solid waste issues. The newsletter is mailed to approximately 21,000 households. Additional information was distributed through paid media advertising, public service announcements, and participation at Farmer’s Market, home shows, etc.

The Utilities Department continues to offer a water education program within San Luis Coastal Unified School District. The program targets third through fifth grade students and compliments the study of water within the School District’s existing curriculum. Teachers have been enthusiastic about the program, particularly with the field trip to the Water Reclamation Facility.

**IV. PROJECTED WATER SUPPLY SITUATION**

**Reservoir Storage Curve**

The Reservoir Storage Curve is integral to the City's annual water resource analysis. It is based on a computer model used to estimate the City's future reservoir storage in Salinas and Whale Rock Reservoirs, utilizing historical drought weather patterns, water use projections, reservoir data, and available water supplies from Nacimiento Reservoir, recycled water, and limited groundwater. Figure 1 shows the Reservoir Storage Curve. The model assumes implementation of Stage I conservation when supplies are projected to last only three years. Stage II and III conservation measures are implemented when water supplies are estimated to last only two years and one year, respectively (as shown on Figure 1/conservation stages as defined in Section 8 of the 2010 Urban Water Management Plan). The model was updated to reflect the City's current water storage and assumptions relative to water demands.

Assuming the onset of an extended drought, the model predicts current water supplies will last into the year 2021 until Whale Rock and Salinas reservoirs are drawn down to minimum pool. (Figure 1).
V. SUMMARY
As of September 1, 2013, the City’s surface water supplies from Salinas and Whale Rock Reservoirs are at 53 percent of maximum storage. Assuming the onset of an extended drought, currently water supplies are projected to last into the year 2021. With its multi-source water policy, the City has implemented a long-term strategy which will ensure a reliable supply of water to meet the current and future needs of the community.

ATTACHMENTS:

1. Definitions & Information
2. Figure 1
ATTACHMENT 1: DEFINITIONS & INFORMATION

Safe Annual Yield:
The maximum quantity of water which can be delivered from the water source each year during a critical dry period (i.e. historical drought period).

Minimum Pool:
Minimum amount of water in Whale Rock or Salinas Reservoirs below which water deliveries must be stopped. This amount is established at 2,000 acre feet which is left in the reservoirs to support aquatic habitat and other wildlife.

Acre Foot:
- One acre foot = 325,851 gallons
- Enough water to cover a football field with one foot of water
- Enough water to serve approximately four average single-family homes (in San Luis Obispo) per year

Gallons per Capita per Day (gpcd):
Calculation = Total Acre Feet x 325,851
City Population x 365

Water Demand (acre feet per year):
Calculation = gpcd x Current City Population x 365
325,851

Salinas Reservoir:
Maximum Storage Capacity = 23,842.9 acre feet
Minimum Pool = storage amount when water extractions must cease = 2,000 acre feet
Surface Area = 730 acres
Drainage Area = 112 square miles = 71,700 acres

Whale Rock Reservoir:
Maximum Storage Capacity = 40,662 acre feet
Minimum Pool = storage amount when water extractions must cease = 2,000 acre feet
Surface Area = 594 acres
Drainage Area = 20.3 square miles = 13,000 acres
This revision corrects per capita demand calculations and 2014 water supply accounting. The original report accepted by City Council on 02 September 2014 misapplied how Cal Poly agricultural water was accounted for in the city per capita demand calculations—this revision corrects that error.
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2014 Water Resources Status Report

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- Nacimiento Water Project  
- Recycled Water  
- Groundwater  
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## WATER DEMAND

## WATER RESOURCE AVAILABILITY
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## WATER DEMAND MANAGEMENT
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City of San Luis Obispo

2014 Water Resources Status Report

Although the Governor declared a statewide drought emergency in January 2014 and San Luis Obispo County is currently experiencing a category D4 Exceptional Drought, our city’s local water supply remains reliable and secure. Assuming historical worst-case drought conditions and current reservoir storage levels, mid July 2014 water projection modeling estimates about seven years of water currently available (with the last three of those years being a period where mandatory conservation actions would occur). Investment in a multi-source water supply allows for responsible use even following 2013’s driest year on record.

This 2014 Water Resources Status Report is prepared in accordance with the Water and Wastewater Management Element of the General Plan (WWME) Policy A 5.3.1. This report covers production and use information for calendar year 2013.

WATER SUPPLY

Per WWME Policy A 2.2.1, the city uses multiple water sources to meet its water supply needs. The city has four primary water supply sources including Whale Rock Reservoir, Salinas Reservoir, Nacimiento Reservoir, and recycled water (for irrigation), with groundwater serving as a fifth supplemental source. Calendar year 2013 water supply per source is summarized as follows:

<table>
<thead>
<tr>
<th></th>
<th>Salinas</th>
<th>Whale Rock**</th>
<th>Nacimiento</th>
<th>Groundwater</th>
<th>Recycled</th>
<th>Total Water Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2013 City Water Supply by Source (Acre Feet)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1,494</td>
<td>2,897</td>
<td>1,247</td>
<td>77</td>
<td>177</td>
<td>5,892</td>
</tr>
<tr>
<td></td>
<td>25%</td>
<td>49%</td>
<td>21%</td>
<td>1%</td>
<td>3%</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Values rounded

**Does not include Cal Poly Domestic or Agriculture

SALINAS & WHALE ROCK RESERVOIRS

Salinas and Whale Rock Reservoirs have served as the city’s primary water supplies for over 50 years. The city pays the County of San Luis Obispo Flood Control and Water Conservation District (County) to provide oversight, operations, and maintenance of the Salinas Dam and water delivery facilities. The City of San Luis Obispo provides the oversight, operations, and maintenance of the Whale Rock Reservoir for the benefit of the Whale Rock Commission, a joint powers agency made up of Cal Poly State University, California Men’s Colony, and the City. The city draws water from these two reservoirs

<table>
<thead>
<tr>
<th>Current Supply Status (As of July 1, 2014)</th>
<th>Available Storage (Acre Feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salinas Reservoir</td>
<td>7,229</td>
</tr>
<tr>
<td>Whale Rock Reservoir (City Allocation)</td>
<td>9,015</td>
</tr>
<tr>
<td>Total Storage</td>
<td>16,244</td>
</tr>
<tr>
<td>% of Maximum Storage</td>
<td>36%</td>
</tr>
</tbody>
</table>
to maximize the long-term water supply available from these two sources. In addition, the City has in a coordinated manner adopted policies in the WWME to account for reductions in storage capacity at each lake resulting from siltation.

NACIMIENTO WATER PROJECT

Water deliveries from the Nacimiento Reservoir began on January 5, 2011. The City has a contractual right to 3,380 acre feet per year. The county operates and maintains the project that delivers water from Nacimiento Reservoir to participating agencies (currently the cities of Paso Robles and San Luis Obispo, Atascadero Mutual Water Company, Templeton Community Services District, and County Service Area 10A [Cayucos]). The Nacimiento Project Commission, which is made up of representatives from each of the four agencies’ governing boards and County Representative (i.e. County Board of Supervisors), provides oversight to project operations, maintenance, and the project budget.

RECYCLED WATER

Recycled water use for calendar year 2013 totaled 177 acre feet, up seven percent from 165 acre feet in 2012. During 2013, two new sites (America’s Tire and Mangano Homes streetscape) were connected to the city’s recycled water distribution system to provide landscape irrigation.

GROUNDWATER

Per WWME Policy A 3.2.3, the city will continue to use groundwater for domestic purposes when available, but will not consider this source of supply as a part of its water resources availability due to limitations for the use of groundwater resources. City wells are summarized below:

<table>
<thead>
<tr>
<th>Well Type</th>
<th>Use</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pacific Beach #1</td>
<td>Potable Domestic</td>
<td>Los Osos Valley Rd. near Pacific Beach School</td>
</tr>
<tr>
<td>Corp Yard Well*</td>
<td>Non Potable Construction Water</td>
<td>City Corporation Yard Prado Rd.</td>
</tr>
<tr>
<td>Laguna Lake Golf Course #1</td>
<td>Non Potable Irrigation</td>
<td>Laguna Lake Golf Course</td>
</tr>
<tr>
<td>SLO Farm**</td>
<td>Non Potable Irrigation</td>
<td>SLO Community Farm off HWY 101 &amp; LOVR</td>
</tr>
</tbody>
</table>

*Use of the City Corporation Yard well has increased from prior years. The Utilities Department is currently evaluating the use of this well.

**Installed May 2014 for agricultural irrigation.

PROJECTED WATER SUPPLY

The City uses a computer model to estimate the city’s future reservoir storage in Salinas and Whale Rock Reservoirs, applying historical drought weather patterns, water use projections, reservoir data, and available water supplies from Nacimiento Reservoir, recycled water, and limited groundwater. The model assumes implementation of Stage I conservation when supplies are projected to last only three years. Stage II and III conservation measures are implemented when water supplies are estimated to last only two years and one year, respectively. Assuming an extended drought, the model predicts current water supplies will last seven years. See the following reservoir storage curve figure for details.
WATER DEMAND

Water use by category for 2013 is shown here. Historical water use is summarized below, as well as corresponding population, per capita use rate, and precipitation. The 2013 per capita water use was 116 gallons per capita per day (gpcd).

Based on WWME policies, the City uses the ten-year gpcd average to project water required to serve build-out population. The ten-year average water use is 119 gpcd.

### Population, Water Use & Rainfall

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Total Water Use (acre feet)</th>
<th>Per Capita¹ (gpcd)</th>
<th>Rainfall (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>44,298</td>
<td>6,239</td>
<td>125.7</td>
<td>21.0</td>
</tr>
<tr>
<td>2005</td>
<td>44,687</td>
<td>6,098</td>
<td>121.8</td>
<td>20.8</td>
</tr>
<tr>
<td>2006</td>
<td>44,559</td>
<td>6,000</td>
<td>120.2</td>
<td>17.2</td>
</tr>
<tr>
<td>2007</td>
<td>44,433</td>
<td>6,494</td>
<td>130.5</td>
<td>12.7</td>
</tr>
<tr>
<td>2008</td>
<td>44,579</td>
<td>6,359</td>
<td>127.3</td>
<td>18.1</td>
</tr>
<tr>
<td>2009</td>
<td>44,829</td>
<td>6,134</td>
<td>122.2</td>
<td>18.9</td>
</tr>
<tr>
<td>2010</td>
<td>44,948</td>
<td>5,489</td>
<td>109.0</td>
<td>36.0</td>
</tr>
<tr>
<td>2011</td>
<td>45,418</td>
<td>5,285</td>
<td>103.9</td>
<td>18.9</td>
</tr>
<tr>
<td>2012</td>
<td>45,308</td>
<td>5,541</td>
<td>109.2</td>
<td>21.5</td>
</tr>
<tr>
<td>2013</td>
<td>45,541</td>
<td>5,892</td>
<td>115.5</td>
<td>3.8</td>
</tr>
</tbody>
</table>

Ten-year per capita average 118.5

**NOTE:**

WATER RESOURCE AVAILABILITY

The following table summarizes the Water Resource Availability (based on WWME Section 3), to serve community water demand. Water availability for 2014 is 9,997 Acre-Feet.

<table>
<thead>
<tr>
<th>Water Resource</th>
<th>Acre Feet</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salinas &amp; Whale Rock Reservoirs</td>
<td>6,940</td>
<td>Safe Annual Yield¹</td>
</tr>
<tr>
<td>Nacimiento Reservoir</td>
<td>3,380</td>
<td>Dependable Yield²</td>
</tr>
<tr>
<td>Recycled Water</td>
<td>177</td>
<td>2013 Annual Usage³</td>
</tr>
<tr>
<td>Siltation from 2010 to 2060</td>
<td>(500)</td>
<td>WWME Policy A 4.2.2⁴</td>
</tr>
<tr>
<td></td>
<td>9,997</td>
<td>2014 Annual Availability</td>
</tr>
</tbody>
</table>

NOTES:
1. Quantity of water which can be withdrawn every year while operating both reservoirs in coordinated operations under critical drought conditions. Safe Annual Yield determined from computer model, which accounts for siltation loss through 2010 (per WWME Policy A 4.2.1).
2. Dependable Yield is the contractual amount of water the City has rights to from Nacimiento Reservoir.
3. The quantity of recycled water included is the actual prior year’s recycled water usage (2013) per WWME Policy A 7.2.2.
4. Reservoir siltation is a natural occurrence that reduces storage capacity over long periods, resulting in the reduction of safe annual yield.

WATER SUPPLY ACCOUNTING

Per WWME Section 5, the City will account for water supplies necessary to meet three specific community needs:

1. Primary water supply  2. Reliability reserve  3. Secondary water supply

The primary water supply is defined as the amount of water needed to serve the build-out population of the city (Table 4, 2013 Water and Wastewater Development Impact Fee Study). The quantity of water needed for the primary water supply is calculated using the ten-year average of actual per capita water use, shown in Table 4, and the city’s build-out population 53,700. Per WWME Policy A 5.2.2:

Primary Water Supply:
= Ten Year Average per Capita Water Use x City Build-out Population
= 118.5 gal/cap-day x 53,700 cap x 365 day/year x Acre-Ft/325,853 gal
= 7128 Acre-Ft/year
The reliability reserve provides a buffer for future unforeseen or unpredictable long-term impacts to the city’s available water supply. The quantity of water for the reliability reserve is established using twenty percent of the ten-year average of actual per capita water use and the existing city population (45,541, 2013 population). The reliability reserve concept is included in the city’s charter (Section 909) which identifies that the water may not be used to serve future development, and is defined per WWME Policy A 5.2.3:

**Reliability Reserve:**

- Ten Year Average per Capita Water Use x 2013 City Population x 20%
- $118.5 \text{ gal/cap-day} \times 45,541 \text{ cap} \times 365 \text{ day/year} \times \frac{\text{Acre-Ft}}{325,853 \text{ gal}} \times 20\%$
- $1,209 \text{ Acre-Ft/year}$

The secondary water supply is the amount of water remaining from the city’s available water resources above those needed to meet the primary water supply and reliability reserve. The secondary supply is identified to meet peak water demand periods or short-term loss of city water supply sources, per WWME Policy A 5.2.4:

**Secondary Water Supply:**

- Current Annual Availability – Primary Water Supply – Reliability Reserve
- $9,997 \text{ Acre-Ft/year} - 7,128 \text{ Acre-Ft/year} - 1,209 \text{ Acre-Ft/year}$
- $1,660 \text{ Acre-Ft/year}$

Water supply accounting is summarized as follows:

<table>
<thead>
<tr>
<th>2014 Water Supply Accounting (Acre Feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>9,997</td>
</tr>
</tbody>
</table>

**WATER DEMAND MANAGEMENT**

The City’s water conservation program is an integral part of its overall water management strategy. In the late 1980’s, the City implemented effective water efficiency programs and policies that allowed for continued community growth and economic development during water-constrained periods. Through strong conservation efforts, our community has reduced its annual average per capita water use from over 180 gallons in 1987 to 116 gallons in 2013.

During 2013, 1,750 requests were received for assistance with high water bills, leak detection assistance, and general consultations regarding billing problems. In addition, approximately 355 utility billing adjustment requests were processed during 2013.

Legislation passed over the years requires water agencies to implement water conservation measures in order to be eligible for state grants, loans, or assistance, and is summarized in Figure 3.
Figure 3: Water Conservation Legislation Summary

**CLEAN WATER STATE REVOLVING FUND REQUIREMENTS**
In order to qualify for a State Water Resources Control Board loan, an agency must comply with either the Demand Management Measures in the Urban Water Conservation Planning Act or the California Urban Water Conservation Council Best Management Practices.

**AB 1420**
Enacted in January 2009, specifies eligibility for water management grants or loans be conditioned on implementation of water Demand Management Measures described in Water Code Section 10631(f).

**SBx7-7**
Enacted in November 2009, requires increase in water use efficiency and sets goal of reducing per capita urban water use by 10% in 2015 and 20% in 2020. City target is 120 gpcd in 2015 and 117 gpcd in 2020 – city use was 116 gpcd in 2013, exceeding targets.

**URBAN WATER MANAGEMENT PLANNING ACT**
Passed in 1984, requires agencies to report progress in implementing Water Demand Management Measures law. The City’s 2010 Urban Water Management Plan outlines the City’s water conservation program and verification of compliance with the act.

**2014 STATE EMERGENCY DROUGHT REGULATIONS**
On July 15, 2014, the California State Water Resources Control Board (Water Board) adopted emergency drought regulations that must be implemented by all urban water suppliers who have over 3,000 water connections regardless of that community’s water supply situation. Water purveyors who do not implement the mandatory requirements face up to $10,000 per day in fines and other penalties. The Emergency Regulations are in effect for 270 days but can be rescinded, extended or amended based on drought conditions.

Notwithstanding the city’s stable water supply position, the Emergency Regulations specifically mandate that the City implement mandatory outdoor water restrictions and water waste prohibitions or face fines up to $10,000 a day and no access to state grants and loans. Accordingly, city council adopted an ordinance limiting the outdoor irrigation of ornamental landscape and turf with potable water to three days a week, and allocated funding for education and public outreach efforts.

**REGIONAL COOPERATION**
The City is a participating member of the Water Resources Advisory Council and Regional Water Management Group, which promotes collaborative, integrated management of water resources within San Luis Obispo County and provides policy recommendations to the County Board of Supervisors. In addition, the City participates in the Paso Robles Groundwater Basin Advisory Committee.
This Report Covers the Time Period of October 1, 2014 through September 30, 2015

PREPARED BY:
Ron Munds, Utilities Services Manager
Jennifer Metz, Utilities Projects Manager
Aaron Floyd, Utilities Deputy Director-Water
The Water Resources Status Report updates the City Council and community on existing water resources. This report focuses on seven main areas:

I. Drought
II. Water Supply
III. Projected Water Supply
IV. Water Demand
V. Water Resource Availability
VI. Water Supply Accounting
VII. Water Demand Management

The 2015 Water Resources Status Report includes water production and water consumption data for October 1, 2014 through September 30, 2015 and was prepared in accordance with the City’s General Plan, Water and Wastewater Management Element (WWME), Policy A5.3.1.

Historically, data provided in the Water Resources Status Report reflected on the preceding calendar year. Starting with this report, the Report corresponds to the Water Year (October 1 through September 30), the 12-month period for which precipitation totals are measured. This change enables the City to better report on water supply availability issues.

I. DROUGHT

The statewide drought has continued and is now well into the fourth year. Governor Brown declared a drought emergency on January 17, 2014 and, as part of the response, directed the State Water Resources Control Board (State Water Board) to draft water conservation regulations to respond to the emergency. The State Water Board adopted regulations prohibiting water waste in July 2014, and issued directives to reduce water use statewide. In response to the continuing drought conditions, the State Water Board extended the 2014 emergency regulations and added new measures on March 17, 2015. On April 1, 2015, the Governor issued Executive Order B-29-15 mandating increased enforcement against water waste and declared a statewide water use reduction goal of 25 percent. This action was followed by the State Water Board adopting regulations that require specific water purveyors to reduce water use in a range of 8 to 36 percent compared to their 2013 water usage. The amount of the mandated reduction is dependent on the water purveyor’s per capita use in 2013. The City’s required reduction is 12 percent. The following is a summary of the City’s progress of reaching this goal.
The community has done an outstanding job in reducing water consumption in response to the new regulations and the city is on target to meet the State’s requirement.

### LOCAL RESPONSE STRATEGY

The impacts of the 1987-1991 drought encouraged a strong water conservation ethic in San Luis Obispo along with an urgency to develop new water supply sources. The current statewide drought brought about unprecedented regulatory action from the State of California which resulted in a mandatory average 12 percent reduction in water use from June 2015 to February 2016, when compared with 2013 water use numbers. To achieve this mandate, the City Council adopted a drought response strategy in June 2015. This strategy includes:

1. Adoption of a resolution declaring a drought emergency;
2. Adoption of a resolution to defer new landscape installation or the use of modified landscape plans during the drought emergency;
3. Introduction of an ordinance amending Chapter 13.07 of the City’s Municipal Code to include two-day-a-week and time-of-day restrictions for outdoor watering;
4. Approval of an incentive program for high efficiency toilets and washing machines; and
5. Adoption of a resolution establishing a permit fee for the use of the Corporation Yard groundwater well.

This strategy relies on active enforcement of water waste prohibitions, with a core focus on providing information and resources to the public.

<table>
<thead>
<tr>
<th>2015</th>
<th>Reduction from 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>June</td>
<td>20%</td>
</tr>
<tr>
<td>July</td>
<td>26%</td>
</tr>
<tr>
<td>August</td>
<td>25%</td>
</tr>
<tr>
<td>September</td>
<td>19%</td>
</tr>
<tr>
<td>October</td>
<td>19%</td>
</tr>
</tbody>
</table>
II. WATER SUPPLY

Per WWME Policy A2.2.1, the city uses multiple water sources to meet its water supply needs. The city has four primary water supply sources including Whale Rock Reservoir, Salinas Reservoir, Nacimiento Reservoir, and recycled water (for landscape irrigation and construction water), with groundwater serving as a fifth supplemental source. The supply per source for Water Year 2015 (October 1, 2014 to September 30, 2015) is summarized as follows:

<table>
<thead>
<tr>
<th>Source</th>
<th>Supply (Acre Feet)</th>
<th>Demand (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salinas</td>
<td>1,122</td>
<td>23%</td>
</tr>
<tr>
<td>Whale Rock*</td>
<td>1,718</td>
<td>34%</td>
</tr>
<tr>
<td>Nacimiento</td>
<td>1,891</td>
<td>38%</td>
</tr>
<tr>
<td>Groundwater</td>
<td>89</td>
<td>2%</td>
</tr>
<tr>
<td>Recycled</td>
<td>168</td>
<td>3%</td>
</tr>
<tr>
<td>Total</td>
<td>4,988</td>
<td>100%</td>
</tr>
</tbody>
</table>

Notes:
All Values are rounded.
*Water delivered to Cal Poly State University is excluded from the City’s water demand.

SALINAS & WHALE ROCK RESERVOIRS
Salinas and Whale Rock Reservoirs have served as the city’s primary water supplies for over 50 years. The City pays the County of San Luis Obispo Flood Control and Water Conservation District (County) to provide oversight, operations, and maintenance of the Salinas Dam and related water delivery facilities. The City of San Luis Obispo provides the oversight, operations, and maintenance of the Whale Rock Reservoir for the benefit of the Whale Rock Commission, a joint powers agency made up of Cal Poly State University, California Men’s Colony, and the City. The city draws water from these two reservoirs to maximize the long-term water supply available from these two sources. In addition, the city has in a coordinated manner adopted policies in the WWME to account for reductions in storage capacity at each lake resulting from siltation.

NACIMIENTO WATER PROJECT
Water deliveries from the Nacimiento Reservoir began on January 5, 2011. The City has a contractual right to 3,380 acre feet per year. The county operates and maintains the project that delivers water from Nacimiento Reservoir to participating agencies (currently the cities of Paso Robles and San Luis Obispo, Atascadero Mutual Water Company, Templeton Community
Services District, and County Service Area 10A [Cayucos]). The Nacimiento Project Commission, which is made up of representatives from each of the four agencies’ governing boards and a County Representative (who is a member of the County Board of Supervisors which also sits as the Board of Directors for the Flood Control District), provides oversight to project operations, maintenance, and the project budget. The Nacimiento pipeline was shut down on June 2, 2014 for emergency repairs and was offline for the remainder of 2014, with flow being reinstated in April of 2015.

**RECYCLED WATER**
Recycled water use for 2014 totaled 185 acre feet, up five percent from 177 acre feet in 2013. For the 2015 Water Year, the City delivered 168 acre feet of recycled water.

**GROUNDWATER**
The City stopped supplying groundwater to its drinking water system in April 2015. Due to new regulatory requirements, using the groundwater would require additional costly treatment at the wells before the water could be used. Groundwater wells remain in operable stand-by condition should use of groundwater be required in the future.

Per WWME Policy A.3.2.3, the City does not consider groundwater a source of supply due to limitations on its use. City wells are summarized below:

<table>
<thead>
<tr>
<th>Well</th>
<th>Type</th>
<th>Use</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pacific Beach #1</td>
<td>Potable</td>
<td>Domestic</td>
<td>Los Osos Valley Road near Pacific Beach School</td>
</tr>
<tr>
<td>Corp Yard Well</td>
<td>Non-potable</td>
<td>Construction Water</td>
<td>City Corporation Yard Prado Road</td>
</tr>
<tr>
<td>Laguna Lake Golf Course</td>
<td>Non-potable</td>
<td>Irrigation</td>
<td>Laguna Lake Golf Course on LOVR</td>
</tr>
<tr>
<td>SLO City Farm</td>
<td>Non-potable</td>
<td>Irrigation</td>
<td>SLO Community Farm off Highway 101 &amp; LOVR</td>
</tr>
</tbody>
</table>

Note: The City discontinued domestic groundwater use in 2015.
III. PROJECTED WATER SUPPLY

The City uses a computer model to estimate its future reservoir storage in Salinas and Whale Rock Reservoirs. This is accomplished by applying historical drought, weather patterns, water use projections, reservoir data, and available water supplies from Nacimiento Reservoir, and recycled water. The model assumes implementation of Stage I conservation measures when supplies are projected to last three years. Stage II and III conservation measures are implemented when water supplies are estimated to last two years and one year, respectively. In December 2014 the model predicted water supplies would last six years. In early 2015, the model was updated to include the new worst case drought information (climatic data for 2012, 2013, and 2014). The model indicates the City has approximately a three year supply of water as of September 2015.

IV. WATER DEMAND

During Water Year 2015, 68 percent of water use in the City was for single and multi-family residential uses. Historical water use is summarized below, as well as corresponding population, per capita use rate, and precipitation. The 2015 per capita water use was 97.3 gallons per capita per day (gpcd). Based on WWME policies, the City uses the ten-year gpcd average to project water required to serve build-out population. The ten-year average water use is 114.4 gpcd.
Population, Water Use & Rainfall

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Total Water Use (acre feet)</th>
<th>Per Capita (gpcd)</th>
<th>Rainfall (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>44,559</td>
<td>5,999</td>
<td>120.2</td>
<td>17.2</td>
</tr>
<tr>
<td>2007</td>
<td>44,433</td>
<td>6,493</td>
<td>130.5</td>
<td>12.7</td>
</tr>
<tr>
<td>2008</td>
<td>44,579</td>
<td>6,359</td>
<td>127.3</td>
<td>18.1</td>
</tr>
<tr>
<td>2009</td>
<td>44,829</td>
<td>6,134</td>
<td>122.2</td>
<td>18.9</td>
</tr>
<tr>
<td>2010</td>
<td>44,948</td>
<td>5,489</td>
<td>109.0</td>
<td>36.0</td>
</tr>
<tr>
<td>2011</td>
<td>45,418</td>
<td>5,285</td>
<td>103.9</td>
<td>18.9</td>
</tr>
<tr>
<td>2012</td>
<td>45,308</td>
<td>5,541</td>
<td>109.2</td>
<td>21.5</td>
</tr>
<tr>
<td>2013</td>
<td>45,541</td>
<td>5,892</td>
<td>115.5</td>
<td>3.8</td>
</tr>
<tr>
<td>2014</td>
<td>45,473</td>
<td>5,524</td>
<td>108.5</td>
<td>14.2</td>
</tr>
<tr>
<td>2015</td>
<td>45,802</td>
<td>4,990</td>
<td>97.3</td>
<td>11.8</td>
</tr>
</tbody>
</table>

Ten-year per capita average: 114.4

Notes:

V. WATER RESOURCE AVAILABILITY

The following table summarizes the Water Resource Availability to serve the community water demand based on WWME Section 3. Water availability for 2015 is 10,005 acre feet.

2015 Water Resource Availability

<table>
<thead>
<tr>
<th>Water Resource</th>
<th>Acre Feet</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salinas &amp; Whale Rock Reservoirs</td>
<td>6,940</td>
<td>Safe Annual Yield 1</td>
</tr>
<tr>
<td>Nacimiento Reservoir</td>
<td>3,380</td>
<td>Dependable Yield 2</td>
</tr>
<tr>
<td>Recycled Water</td>
<td>185</td>
<td>2014 Annual Usage 3</td>
</tr>
<tr>
<td>Siltation from 2010 to 2060</td>
<td>(500)</td>
<td>WWME Policy A 4.2.2 4</td>
</tr>
<tr>
<td></td>
<td><strong>10,005</strong></td>
<td><strong>2015 Annual Availability</strong></td>
</tr>
</tbody>
</table>

NOTES:
1. Safe Annual Yield determined from computer model, which accounts for siltation loss through 2010 (per WWME Policy A 4.2.1).
2. Dependable Yield is the contractual amount of water the City has rights to from Nacimiento Reservoir.
3. The quantity of recycled water included is the actual prior year’s recycled water usage (calendar year 2014) per WWME Policy A 7.2.2.
4. Reservoir siltation is a natural occurrence that reduces storage capacity over long periods, resulting in the reduction of safe annual yield.
VI. WATER SUPPLY ACCOUNTING

Per WWME Section 5, the City will account for water supplies necessary to meet three specific community needs:

1. Primary water supply
2. Reliability reserve
3. Secondary water supply

The primary water supply is defined as the amount of water needed to serve the build-out population of the City as identified in the Land Use Element of the General Plan. Table 3 in the Land Use Element identifies an urban reserve capacity of 57,200 people. The quantity of water needed for the primary water supply is calculated using the ten-year average of actual per capita water use, shown in Table 2, and the population of 57,200 (2014 LUCE). Per WWME Policy A 5.2.2:

\[
\text{Primary Water Supply:} = \text{Ten Year Average per Capita Water Use} \times \text{City Build-out Population} \\
= 114.4 \text{ gal/cap-day} \times 57,200 \times 365 \text{ day/year} \times \text{Acre-Ft/325,853 gal} \\
= 7,330 \text{ Acre-Ft/year}
\]

The reliability reserve provides a buffer for future unforeseen or unpredictable long-term impacts to the City’s available water supply. The quantity of water for the reliability reserve is established using 20 percent of the ten-year average of per capita water use and the existing City population (45,802, 2015 population). The reliability reserve concept is included in the City’s Charter (Section 909) which identifies that the water may not be used to serve future development, and is defined per WWME Policy A 5.2.3:

\[
\text{Reliability Reserve:} = \text{Ten Year Average per Capita Water Use} \times 2014 \text{ City Population} \times 20\% \\
= 114.4 \text{ gal/cap-day} \times 45,802 \text{ cap} \times 365 \text{ day/year} \times \text{Acre-Ft/325,853 gal x 20\%} \\
= 1,174 \text{ Acre-Ft/year}
\]
The secondary water supply is the amount of water remaining from the City’s available water resources above those needed to meet the primary water supply and reliability reserve. The secondary supply is identified to meet peak water demand periods or short-term loss of City water supply sources, per WWME Policy A 5.2.4:

<table>
<thead>
<tr>
<th>Secondary Water Supply:</th>
</tr>
</thead>
<tbody>
<tr>
<td>= Current Annual Availability – Primary Water Supply – Reliability Reserve</td>
</tr>
<tr>
<td>= 10,005 Acre-Ft/year $^A$ – 7,484 acre-Ft/year – 1,190 Acre-Ft/year</td>
</tr>
<tr>
<td>= 1,501 Acre-Ft/year</td>
</tr>
</tbody>
</table>

$^A$ 2015 Annual Availability

Water supply accounting is summarized as follows:

**2015 Water Supply Accounting (acre feet)**

<table>
<thead>
<tr>
<th>Total</th>
<th>Primary Water Supply</th>
<th>Reliability Reserve</th>
<th>Secondary Water Supply</th>
</tr>
</thead>
<tbody>
<tr>
<td>10,005</td>
<td>7,330</td>
<td>1,174</td>
<td>1,501</td>
</tr>
</tbody>
</table>

**VII. WATER DEMAND MANAGEMENT**

The City’s water conservation program is an integral part of its overall water management strategy. In the late 1980’s, the City implemented effective water efficiency programs and policies that allowed for continued community growth and economic development during water-constrained periods. Through strong conservation efforts, the community has reduced its annual average per capita water use from over 180 gallons in 1987 to 97 for the 2015 Water Year.

**REGIONAL COOPERATION**

Beyond the involvement in the Nacimiento Water Project, the City is a participating member of the Water Resources Advisory Council and Regional Water Management Group, which promotes collaborative, integrated management of water resources within San Luis Obispo County and provides policy recommendations to the County Board of Supervisors. In addition, the City participates in the Paso Robles Groundwater Basin Advisory Committee and the regional water conservation group *Partners in Water Conservation*.
Appendix III: Department of Water Resources Checklist
## APPENDIX III: Compliance Checklist

The City completed the following checklist of specific UWMP requirements as requested by DWR. The Checklist includes each UWMP requirements by subject, applicable CWC section, and the page number where the required element is addressed in the Plan to assist in the DWR review of the City’s UWMP.

<table>
<thead>
<tr>
<th>CWC Section</th>
<th>UWMP Requirement</th>
<th>Subject</th>
<th>Guidebook Location</th>
<th>UWMP Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>10620(b)</td>
<td>Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.</td>
<td>Plan Preparation</td>
<td>Section 2.1</td>
<td>Page 1-1</td>
</tr>
<tr>
<td>10620(d)(2)</td>
<td>Coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.</td>
<td>Plan Preparation</td>
<td>Section 2.5.2</td>
<td>Pages 1-2 &amp; 1-3</td>
</tr>
<tr>
<td>10642</td>
<td>Provide supporting documentation that the water supplier has encouraged active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan.</td>
<td>Plan Preparation</td>
<td>Section 2.5.2</td>
<td>Page 1-3</td>
</tr>
<tr>
<td>10631(a)</td>
<td>Describe the water supplier service area.</td>
<td>System Description</td>
<td>Section 3.1</td>
<td>Page 2-1</td>
</tr>
<tr>
<td>10631(a)</td>
<td>Describe the climate of the service area of the supplier.</td>
<td>System Description</td>
<td>Section 3.3</td>
<td>Page 2-1</td>
</tr>
<tr>
<td>10631(a)</td>
<td>Provide population projections for 2020, 2025, 2030, and 2035.</td>
<td>System Description</td>
<td>Section 3.4</td>
<td>Pages 2-2 &amp; 2-3, Table 2</td>
</tr>
<tr>
<td>10631(a)</td>
<td>Describe other demographic factors affecting the supplier’s water management planning.</td>
<td>System Description</td>
<td>Section 3.4</td>
<td>Pages 2-1 &amp; 2-2</td>
</tr>
<tr>
<td>10631(a)</td>
<td>Indicate the current population of the service area.</td>
<td>System Description and Baselines and Targets</td>
<td>Sections 3.4 and 5.4</td>
<td>Page 2-2 Table 2</td>
</tr>
<tr>
<td>10631(e)(1)</td>
<td>Quantify past, current, and projected water use, identifying the uses among water use sectors.</td>
<td>System Water Use</td>
<td>Section 4.2</td>
<td>Page 3-1 Table 4</td>
</tr>
<tr>
<td>10631(e)(3)(A)</td>
<td>Report the distribution system water loss for the most recent 12-month period available.</td>
<td>System Water Use</td>
<td>Section 4.3</td>
<td>Table 4 &amp; Page 3-2</td>
</tr>
<tr>
<td>10631.1(a)</td>
<td>Include projected water use needed for lower income housing projected in the service area of the supplier.</td>
<td>System Water Use</td>
<td>Section 4.5</td>
<td>Pages 3-2 &amp; 3-3, Table 6</td>
</tr>
<tr>
<td>10608.20(b)</td>
<td>Retail suppliers shall adopt a 2020 water use target using one of four methods.</td>
<td>Baselines and Targets</td>
<td>Section 5.7 and App E</td>
<td>Page 3-3 &amp; Tables 7 &amp; 11</td>
</tr>
<tr>
<td>10608.20(e)</td>
<td>Retail suppliers shall provide baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.</td>
<td>Baselines and Targets</td>
<td>Chapter 5 and App E</td>
<td>Pages 3-4, 3-5, 3-6, &amp; 3.7 Tables 8, 9, 10, &amp; 11</td>
</tr>
<tr>
<td>10608.22</td>
<td>Retail suppliers’ per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use of the 5 year baseline. This does not apply if the suppliers base GPCD is at or below 100.</td>
<td>Baselines and Targets</td>
<td>Section 5.7.2</td>
<td>Page 3-7 &amp; Table 11</td>
</tr>
<tr>
<td>10608.24(a)</td>
<td>Retail suppliers shall meet their interim target by December 31, 2015.</td>
<td>Baselines and Targets</td>
<td>Section 5.8 and App E</td>
<td>Page 3-8 &amp; Table 14</td>
</tr>
<tr>
<td>CWC Section</td>
<td>UWMP Requirement</td>
<td>Subject</td>
<td>Guidebook Location</td>
<td>UWMP Location</td>
</tr>
<tr>
<td>-------------</td>
<td>------------------</td>
<td>---------</td>
<td>--------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>10608.24(d) (2)</td>
<td>If the retail supplier adjusts its compliance GPCD using weather normalization, economic adjustment, or extraordinary events, it shall provide the basis for, and data supporting the adjustment.</td>
<td>Baselines and Targets</td>
<td>Section 5.8.2</td>
<td>NA</td>
</tr>
<tr>
<td>10608.36</td>
<td>Wholesale suppliers shall include an assessment of present and proposed future measures, programs, and policies to help their retail water suppliers achieve targeted water use reductions.</td>
<td>Baselines and Targets</td>
<td>Section 5.1</td>
<td>NA</td>
</tr>
<tr>
<td>10608.40</td>
<td>Retail suppliers shall report on their progress in meeting their water use targets. The data shall be reported using a standardized form.</td>
<td>Baselines and Targets</td>
<td>Section 5.8 and App E</td>
<td>Pages 3-8 &amp; 3-9, Table 14</td>
</tr>
<tr>
<td>10631(b)</td>
<td>Identify and quantify the existing and planned sources of water available for 2015, 2020, 2025, 2030, and 2035.</td>
<td>System Supplies</td>
<td>Chapter 6</td>
<td>Table 19</td>
</tr>
<tr>
<td>10631(b)</td>
<td>Indicate whether groundwater is an existing or planned source of water available to the supplier.</td>
<td>System Supplies</td>
<td>Section 6.2</td>
<td>Pages 4.5 &amp; 4.6</td>
</tr>
<tr>
<td>10631(b)(1)</td>
<td>Indicate whether a groundwater management plan has been adopted by the water supplier or if there is any other specific authorization for groundwater management. Include a copy of the plan or authorization.</td>
<td>System Supplies</td>
<td>Section 6.2.2</td>
<td>Page 4-6</td>
</tr>
<tr>
<td>10631(b)(2)</td>
<td>Describe the groundwater basin.</td>
<td>System Supplies</td>
<td>Section 6.2.1</td>
<td>Page 4-5</td>
</tr>
<tr>
<td>10631(b)(2)</td>
<td>Indicate if the basin has been adjudicated and include a copy of the court order or decree and a description of the amount of water the supplier has the legal right to pump.</td>
<td>System Supplies</td>
<td>Section 6.2.2</td>
<td>Page 4-6</td>
</tr>
<tr>
<td>10631(b)(2)</td>
<td>For unadjudicated basins, indicate whether or not the department has identified the basin as overdrafted, or projected to become overdrafted. Describe efforts by the supplier to eliminate the long-term overdraft condition.</td>
<td>System Supplies</td>
<td>Section 6.2.3</td>
<td>Page 4-6 and Page 6-2</td>
</tr>
<tr>
<td>10631(b)(3)</td>
<td>Provide a detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years.</td>
<td>System Supplies</td>
<td>Section 6.2.4</td>
<td>Page 4-6, Table 17</td>
</tr>
<tr>
<td>10631(b)(4)</td>
<td>Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.</td>
<td>System Supplies</td>
<td>Sections 6.2 and 6.9</td>
<td>Page 4-6</td>
</tr>
<tr>
<td>10631(d)</td>
<td>Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.</td>
<td>System Supplies</td>
<td>Section 6.7</td>
<td>Page 4-7 to 4-8</td>
</tr>
<tr>
<td>10631(g)</td>
<td>Describe the expected future water supply projects and programs that may be undertaken by the water supplier to address water supply reliability in average, single-dry, and multiple-dry years.</td>
<td>System Supplies</td>
<td>Section 6.8</td>
<td>Page 4-8</td>
</tr>
<tr>
<td>10631(h)</td>
<td>Describe desalinated water project opportunities for long-term supply.</td>
<td>System Supplies</td>
<td>Section 6.6</td>
<td>Page 4-8</td>
</tr>
<tr>
<td>10631(j)</td>
<td>Retail suppliers will include documentation that they have provided their wholesale supplier(s) – if any - with water use projections from that source.</td>
<td>System Supplies</td>
<td>Section 2.5.1</td>
<td>Appendix I</td>
</tr>
<tr>
<td>CWC Section</td>
<td>UWMP Requirement</td>
<td>Subject</td>
<td>Guidebook Location</td>
<td>UWMP Location</td>
</tr>
<tr>
<td>-------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------------</td>
<td>------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>10631(j)</td>
<td>Wholesale suppliers will include documentation that they have provided their urban water suppliers with identification and quantification of the existing and planned sources of water available from the wholesale to the urban supplier during various water year types.</td>
<td>System Supplies</td>
<td>Section 2.5.1</td>
<td>NA</td>
</tr>
<tr>
<td>10633</td>
<td>For wastewater and recycled water, coordinate with local water, wastewater, groundwater, and planning agencies that operate within the supplier’s service area.</td>
<td>System Supplies (Recycled Water)</td>
<td>Section 6.5.1</td>
<td>Wastewater treatment is also City of San Luis Obispo</td>
</tr>
<tr>
<td>10633(a)</td>
<td>Describe the wastewater collection and treatment systems in the supplier's service area. Include quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.</td>
<td>System Supplies (Recycled Water)</td>
<td>Section 6.5.2</td>
<td>Pages 5-1 &amp; 5.2. Table 22</td>
</tr>
<tr>
<td>10633(b)</td>
<td>Describe the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.</td>
<td>System Supplies (Recycled Water)</td>
<td>Section 6.5.2.2</td>
<td>Page 5-2</td>
</tr>
<tr>
<td>10633(c)</td>
<td>Describe the recycled water currently being used in the supplier's service area.</td>
<td>System Supplies (Recycled Water)</td>
<td>Section 6.5.3 and 6.5.4</td>
<td>Page 5-2 &amp; Figure 5</td>
</tr>
<tr>
<td>10633(d)</td>
<td>Describe and quantify the potential uses of recycled water and provide a determination of the technical and economic feasibility of those uses.</td>
<td>System Supplies (Recycled Water)</td>
<td>Section 6.5.4</td>
<td>Page 5-4</td>
</tr>
<tr>
<td>10633(e)</td>
<td>Describe the projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected.</td>
<td>System Supplies (Recycled Water)</td>
<td>Section 6.5.4</td>
<td>Page 5-5</td>
</tr>
<tr>
<td>10633(f)</td>
<td>Describe the actions which may be taken to encourage the use of recycled water and the projected results of these actions in terms of acre-feet of recycled water used per year.</td>
<td>System Supplies (Recycled Water)</td>
<td>Section 6.5.5</td>
<td>Page 5-5 to 5-6</td>
</tr>
<tr>
<td>10633(g)</td>
<td>Provide a plan for optimizing the use of recycled water in the supplier's service area.</td>
<td>System Supplies (Recycled Water)</td>
<td>Section 6.5.5</td>
<td>Page 5-4 and 5-7</td>
</tr>
<tr>
<td>10620(f)</td>
<td>Describe water management tools and options to maximize resources and minimize the need to import water from other regions.</td>
<td>Water Supply Reliability Assessment</td>
<td>Section 7.4</td>
<td>Page 6-1 and 6-2</td>
</tr>
<tr>
<td>10631(c)(1)</td>
<td>Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage.</td>
<td>Water Supply Reliability Assessment</td>
<td>Section 7.1</td>
<td>Page 6-3</td>
</tr>
<tr>
<td>10631(c)(1)</td>
<td>Provide data for an average water year, a single dry water year, and multiple dry water years</td>
<td>Water Supply Reliability Assessment</td>
<td>Section 7.2</td>
<td>Page 6-3, Table 27</td>
</tr>
<tr>
<td>10631(c)(2)</td>
<td>For any water source that may not be available at a consistent level of use, describe plans to supplement or replace that source.</td>
<td>Water Supply Reliability Assessment</td>
<td>Section 7.1</td>
<td>N/A as noted on Page 6-3</td>
</tr>
<tr>
<td>10634</td>
<td>Provide information on the quality of existing sources of water available to the supplier and the manner in which water quality affects water management strategies and supply reliability</td>
<td>Water Supply Reliability Assessment</td>
<td>Section 7.1</td>
<td>Page 6-3</td>
</tr>
<tr>
<td>10635(a)</td>
<td>Assess the water supply reliability during normal, dry, and multiple dry water years by comparing the total water supply sources available to the water supplier with the total projected water use over the next 20 years.</td>
<td>Water Supply Reliability Assessment</td>
<td>Section 7.3</td>
<td>Page 6-4 and 6-5, Tables 28, 29 and 30</td>
</tr>
<tr>
<td>CWC Section</td>
<td>UWMP Requirement</td>
<td>Subject</td>
<td>Guidebook Location</td>
<td>UWMP Location</td>
</tr>
<tr>
<td>-------------</td>
<td>------------------</td>
<td>---------</td>
<td>--------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>10632(a) and 10632(a)(1)</td>
<td>Provide an urban water shortage contingency analysis that specifies stages of action and an outline of specific water supply conditions at each stage.</td>
<td>Water Shortage Contingency Planning</td>
<td>Section 8.1</td>
<td>Page 8-4 to 8-10</td>
</tr>
<tr>
<td>10632(a)(2)</td>
<td>Provide an estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency.</td>
<td>Water Shortage Contingency Planning</td>
<td>Section 8.9</td>
<td>Page 8-11</td>
</tr>
<tr>
<td>10632(a)(3)</td>
<td>Identify actions to be undertaken by the urban water supplier in case of a catastrophic interruption of water supplies.</td>
<td>Water Shortage Contingency Planning</td>
<td>Section 8.8</td>
<td>Page 8-11</td>
</tr>
<tr>
<td>10632(a)(4)</td>
<td>Identify mandatory prohibitions against specific water use practices during water shortages.</td>
<td>Water Shortage Contingency Planning</td>
<td>Section 8.2</td>
<td>Page 8-6, 8-7, 8-8, 8-9, 8-10</td>
</tr>
<tr>
<td>10632(a)(5)</td>
<td>Specify consumption reduction methods in the most restrictive stages.</td>
<td>Water Shortage Contingency Planning</td>
<td>Section 8.4</td>
<td>Page 8-9, 8-10</td>
</tr>
<tr>
<td>10632(a)(6)</td>
<td>Indicated penalties or charges for excessive use, where applicable.</td>
<td>Water Shortage Contingency Planning</td>
<td>Section 8.3</td>
<td>Page 8-9, 8-10</td>
</tr>
<tr>
<td>10632(a)(7)</td>
<td>Provide an analysis of the impacts of each of the actions and conditions in the water shortage contingency analysis on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts.</td>
<td>Water Shortage Contingency Planning</td>
<td>Section 8.6</td>
<td>Page 8-10</td>
</tr>
<tr>
<td>10632(a)(8)</td>
<td>Provide a draft water shortage contingency resolution or ordinance.</td>
<td>Water Shortage Contingency Planning</td>
<td>Section 8.7</td>
<td>Appendix VII</td>
</tr>
<tr>
<td>10632(a)(9)</td>
<td>Indicate a mechanism for determining actual reductions in water use pursuant to the water shortage contingency analysis.</td>
<td>Water Shortage Contingency Planning</td>
<td>Section 8.5</td>
<td>Page 8-2</td>
</tr>
<tr>
<td>10631(f)(1)</td>
<td>Retail suppliers shall provide a description of the nature and extent of each demand management measure implemented over the past five years. The description will address specific measures listed in code.</td>
<td>Demand Management Measures</td>
<td>Sections 9.2 and 9.3</td>
<td>Page 7-2</td>
</tr>
<tr>
<td>10631(f)(2)</td>
<td>Wholesale suppliers shall describe specific demand management measures listed in code, their distribution system asset management program, and supplier assistance program.</td>
<td>Demand Management Measures</td>
<td>Sections 9.1 and 9.3</td>
<td>N/A</td>
</tr>
<tr>
<td>10631(i)</td>
<td>CUWCC members may submit their 2013-2014 CUWCC BMP annual reports in lieu of, or in addition to, describing the DMM implementation in their UWMPs. This option is only allowable if the supplier has been found to be in full compliance with the CUWCC MOU.</td>
<td>Demand Management Measures</td>
<td>Section 9.5</td>
<td>Appendix VI</td>
</tr>
<tr>
<td>10608.26(a)</td>
<td>Retail suppliers shall conduct a public hearing to discuss adoption, implementation, and economic impact of water use targets.</td>
<td>Plan Adoption, Submittal, and Implementation</td>
<td>Section 10.3</td>
<td>Appendix I</td>
</tr>
<tr>
<td>10621(b)</td>
<td>Notify, at least 60 days prior to the public hearing, any city or county within which the supplier provides water that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan.</td>
<td>Plan Adoption, Submittal, and Implementation</td>
<td>Section 10.2.1</td>
<td>Appendix I</td>
</tr>
<tr>
<td>CWC Section</td>
<td>UWMP Requirement</td>
<td>Subject</td>
<td>Guidebook Location</td>
<td>UWMP Location</td>
</tr>
<tr>
<td>-------------</td>
<td>------------------</td>
<td>---------</td>
<td>--------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>10621(d)</td>
<td>Each urban water supplier shall update and submit its 2015 plan to the department by July 1, 2016.</td>
<td>Plan Adoption, Submittal, and Implementation</td>
<td>Sections 10.3.1 and 10.4</td>
<td>Available Following Adoption by City Council</td>
</tr>
<tr>
<td>10635(b)</td>
<td>Provide supporting documentation that Water Shortage Contingency Plan has been, or will be, provided to any city or county within which it provides water, no later than 60 days after the submission of the plan to DWR.</td>
<td>Plan Adoption, Submittal, and Implementation</td>
<td>Section 10.4.4</td>
<td>Available Following Adoption by City Council</td>
</tr>
<tr>
<td>10642</td>
<td>Provide supporting documentation that the urban water supplier made the plan available for public inspection, published notice of the public hearing, and held a public hearing about the plan.</td>
<td>Plan Adoption, Submittal, and Implementation</td>
<td>Sections 10.2.2, 10.3, and 10.5</td>
<td>Appendix I</td>
</tr>
<tr>
<td>10642</td>
<td>The water supplier is to provide the time and place of the hearing to any city or county within which the supplier provides water.</td>
<td>Plan Adoption, Submittal, and Implementation</td>
<td>Sections 10.2.1</td>
<td>Appendix I</td>
</tr>
<tr>
<td>10642</td>
<td>Provide supporting documentation that the plan has been adopted as prepared or modified.</td>
<td>Plan Adoption, Submittal, and Implementation</td>
<td>Section 10.3.1</td>
<td>Available Following Adoption by City Council</td>
</tr>
<tr>
<td>10644(a)</td>
<td>Provide supporting documentation that the urban water supplier has submitted this UWMP to the California State Library.</td>
<td>Plan Adoption, Submittal, and Implementation</td>
<td>Section 10.4.3</td>
<td>Available Following Adoption by City Council</td>
</tr>
<tr>
<td>10644(a)(1)</td>
<td>Provide supporting documentation that the urban water supplier has submitted this UWMP to any city or county within which the supplier provides water no later than 30 days after adoption.</td>
<td>Plan Adoption, Submittal, and Implementation</td>
<td>Section 10.4.4</td>
<td>Available Following Adoption by City Council</td>
</tr>
<tr>
<td>10644(a)(2)</td>
<td>The plan, or amendments to the plan, submitted to the department shall be submitted electronically.</td>
<td>Plan Adoption, Submittal, and Implementation</td>
<td>Sections 10.4.1 and 10.4.2</td>
<td>Available Following Adoption by City Council</td>
</tr>
<tr>
<td>10645</td>
<td>Provide supporting documentation that, not later than 30 days after filing a copy of its plan with the department, the supplier has or will make the plan available for public review during normal business hours.</td>
<td>Plan Adoption, Submittal, and Implementation</td>
<td>Section 10.5</td>
<td>Available Following Adoption by City Council</td>
</tr>
</tbody>
</table>
**AWWA Free Water Audit Software: Reporting Worksheet**

**Water Audit Report for:**
City of San Luis Obispo (4010009)

**Reporting Year:**
2015

All volumes to be entered as: ACRE-FEET PER YEAR

### WATER SUPPLIED

| Volume from own sources: | 3 | 2,044.410 acre-ft/yr |
| Water imported: | 3 | 2,677.020 acre-ft/yr |
| Water exported: | n/a | 0.000 acre-ft/yr |

**WATER SUPPLIED:** 4,721.430 acre-ft/yr

### AUTHORIZED CONSUMPTION

| Billed metered: | 7 | 4,296.000 acre-ft/yr |
| Billed unmetered: | 10 | 2.980 acre-ft/yr |
| Unbilled metered: | 7 | 59.018 acre-ft/yr |

**AUTHORIZED CONSUMPTION:** 4,357.998 acre-ft/yr

### WATER LOSSES (Water Supplied - Authorized Consumption)

**Apparent Losses**

- Unauthorized consumption: 7 | 11.804 acre-ft/yr
- Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

**Real Losses (Current Annual Real Losses or CARL)**

- Real Losses = Water Losses - Apparent Losses: 7 | 340.889 acre-ft/yr

### NON-REVENUE WATER

- NON-REVENUE WATER: 7 | 425.430 acre-ft/yr

### SYSTEM DATA

- Length of mains: 8 | 185.0 miles
- Number of active AND inactive service connections: 10 | 14,995
- Service connection density: 81 conn./mile main
- Are customer meters typically located at the curbstop or property line? Yes (length of service line, beyond the property boundary, that is the responsibility of the utility)
- Average length of customer service line has been set to zero and a grading score of 10 has been applied
- Average operating pressure: 7 | 70.0 psi

### COST DATA

- Total annual cost of operating water system: 7 | $16,952,760 $/Year
- Customer retail unit cost (applied to Apparent Losses): 4 | $9.20 $/100 cubic feet (ccf)
- Variable production cost (applied to Real Losses): 4 | $639.20 $/acre-ft

### WATER AUDIT DATA VALIDITY SCORE:

**YOUR SCORE IS: 52 out of 100***

A weighted scale for the components of consumption and water loss is included in the calculation of the Water Audit Data Validity Score

### PRIORITY AREAS FOR ATTENTION:

Based on the information provided, audit accuracy can be improved by addressing the following components:

1. Water imported
2. Volume from own sources
3. Customer metering inaccuracies
### System Attributes:

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apparent Losses</td>
<td>22.544 acre-ft/yr</td>
</tr>
<tr>
<td>+ Real Losses</td>
<td>340.889 acre-ft/yr</td>
</tr>
<tr>
<td>= Water Losses</td>
<td>363.432 acre-ft/yr</td>
</tr>
<tr>
<td>Unavoidable Annual Real Losses (UARL)</td>
<td>254.84 acre-ft/yr</td>
</tr>
<tr>
<td>Annual cost of Apparent Losses</td>
<td>$90,344</td>
</tr>
<tr>
<td>Annual cost of Real Losses</td>
<td>$217,896 Valued at Variable Production Cost</td>
</tr>
</tbody>
</table>

### Performance Indicators:

**Financial:**

- Non-revenue water as percent by volume of Water Supplied: 9.0%
- Non-revenue water as percent by cost of operating system: 2.1%

**Operational Efficiency:**

- Apparent Losses per service connection per day: 1.34 gallons/connection/day
- Real Losses per service connection per day: 20.30 gallons/connection/day
- Real Losses per length of main per day*: N/A
- Real Losses per service connection per day per psi pressure: 0.29 gallons/connection/day/psi

From Above, Real Losses = Current Annual Real Losses (CARL): 340.89 acre-feet/year

<table>
<thead>
<tr>
<th>Performance Indicator</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrastructure Leakage Index (ILI) [CARL/UARL]</td>
<td>1.34</td>
</tr>
</tbody>
</table>

* This performance indicator applies for systems with a low service connection density of less than 32 service connections/mile of pipeline.
<table>
<thead>
<tr>
<th>Category</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Exported</td>
<td>0.000</td>
</tr>
<tr>
<td>Authorized Consumption (Own Sources)</td>
<td>4,357.998</td>
</tr>
<tr>
<td>Billed Authorized Consumption</td>
<td>4,296.000</td>
</tr>
<tr>
<td>Unbilled Authorized Consumption</td>
<td>61.998</td>
</tr>
<tr>
<td>Billed Water Exported</td>
<td>4,296.000</td>
</tr>
<tr>
<td>Revenue Water</td>
<td>4,296.000</td>
</tr>
<tr>
<td>Non-Revenue Water (NRW)</td>
<td>425.430</td>
</tr>
<tr>
<td>Water Supplied</td>
<td>4,721.430</td>
</tr>
<tr>
<td>Water Losses</td>
<td>363.432</td>
</tr>
<tr>
<td>Real Losses</td>
<td>340.889</td>
</tr>
<tr>
<td>Apparent Losses</td>
<td>22.544</td>
</tr>
<tr>
<td>Unauthorized Consumption</td>
<td>11.804</td>
</tr>
<tr>
<td>Customer Metering Inaccuracies</td>
<td>0.000</td>
</tr>
<tr>
<td>Systematic Data Handling Errors</td>
<td>10.740</td>
</tr>
<tr>
<td>Leakage on Transmission and/or Distribution Mains</td>
<td>Not broken down</td>
</tr>
<tr>
<td>Leakage and Overflows at Utility's Storage Tanks</td>
<td>Not broken down</td>
</tr>
<tr>
<td>Leakage on Service Connections</td>
<td>Not broken down</td>
</tr>
<tr>
<td>Water Imported</td>
<td>2,677.020</td>
</tr>
<tr>
<td>Authorized Consumption (Water Supplied)</td>
<td>4,357.998</td>
</tr>
<tr>
<td>Billed Authorized Consumption (Adjusted for known errors)</td>
<td>4,296.000</td>
</tr>
<tr>
<td>Unbilled Authorized Consumption</td>
<td>61.998</td>
</tr>
<tr>
<td>Billed Water Exported (Non-Revenue Water (NRW))</td>
<td>425.430</td>
</tr>
<tr>
<td>Revenue Water</td>
<td>4,296.000</td>
</tr>
</tbody>
</table>
Meeting the Challenge

Once again we are proud to present our annual drinking water report, covering all drinking water testing performed between January 1 and December 31, 2015. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best quality drinking water to your homes and businesses. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all of our water users.

Please remember that we are always available to assist you, should you ever have any questions or concerns about your water.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or http://water.epa.gov/drink/hotline.

Substances That Could Be in Water

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (U.S. EPA) and the State Water Resources Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. State Board regulations also establish limits for contaminants in bottled water that must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk.

Contaminants that may be present in source water include:

- **Microbial Contaminants**, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife;

- **Inorganic Contaminants**, such as salts and metals, that can be naturally occurring or can result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;

- **Pesticides and Herbicides**, that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses;

- **Organic Chemical Contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and which can also come from gas stations, urban stormwater runoff, agricultural applications, and septic systems;

- **Radioactive Contaminants**, that can be naturally occurring or can be the result of oil and gas production and mining activities.

More information about contaminants and potential health effects can be obtained by calling the U.S. EPA’s Safe Drinking Water Hotline at (800) 426-4791.

Community Participation

City Council meetings are held on the first and third Tuesdays of each month at 6:00 p.m. at City Hall, 990 Palm Street, San Luis Obispo, California. A public comment period is held at the beginning of each meeting.
Lead in Home Plumbing

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. We are responsible for providing high-quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. (If you do so, you may wish to collect the flushed water and reuse it for another beneficial purpose, such as watering plants.) If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/lead.

Source Water Assessment

Assessments of the drinking water sources for the City of San Luis Obispo have been conducted. These sources include Salinas Reservoir, Whale Rock Reservoir, Nacimiento Lake, Pacific Beach Well, and Fire Station #4 Well. To request a summary of an assessment, contact Jeff Densmore, District Engineer, Santa Barbara District, at (805) 566-1326, or the City of San Luis Obispo at (805) 781-7215.

A copy of the complete assessment is available from the SWRCB Division of Drinking Water, 1180 Eugenia Place, Suite 200, Carpinteria, California 93013; or the City of San Luis Obispo, 879 Morro Street, San Luis Obispo, California 93401.

Fluoridation

Our water system treats your water by adding fluoride to the naturally occurring level to help prevent dental caries in consumers. State regulations require the fluoride levels in the treated water be maintained within a range of 0.6 - 1.2 ppm with an optimum dose of 0.7 ppm. Our monitoring showed that the fluoride levels in the treated water ranged from 0.1 to 0.8 with an average of 0.6 ppm. Information about fluoridation, oral health, and current issues is available from http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Fluoridation.shtml.

Where Does My Water Come From?

The City of San Luis Obispo is fortunate to have several sources of water. The Salinas Reservoir (also known as Santa Margarita Lake, eight miles east of Santa Margarita), Whale Rock Reservoir (Cayucos), and Nacimiento Lake (16 miles northwest of Paso Robles) are our main supplies. The surface water from the three lakes is treated at the Stenner Creek Water Treatment Plant. In 2015, well water was used to meet a small percentage (1%) of the City’s demand for water. The active well was the Pacific Beach Well #1 (Los Osos Valley Road). During 2015, our treatment plant and well delivered 1.69 billion gallons of water to San Luis Obispo.

Questions?

For more information about this report, or for any questions relating to your drinking water, please contact Dean Furukawa, Water Treatment Plant Supervisor, at (805) 781-7566 or dfurukawa@slocity.org.
Sampling Results

During the past year, we have taken hundreds of water samples to determine the presence of any radioactive, biological, inorganic, volatile organic or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. The State requires us to monitor for certain substances less often that once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

We participated in the 3rd stage of the EPA’s Unregulated Contaminant Monitoring Rule (UCMR3) program by performing additional tests on our drinking water. UCMR3 benefits the environment and public health by providing the EPA with data on the occurrence of contaminants suspected to be in drinking water, in order to determine if EPA needs to introduce new regulatory standards to improve drinking water quality. Contact us for more information on this program.

| REGULATED SUBSTANCES | | | | | | | |
|---|---|---|---|---|---|---|
| SUBSTANCE (UNIT OF MEASURE) | YEAR SAMPLED | MCL (MRDL) | PHG (MCLG) (MRDLG) | AMOUNT DETECTED | RANGE LOW-HIGH | VIOLATION |
| Aluminum (ppm) | 2015 | 1 | 0.6 | 0.068 | ND–0.13 | No |
| Barium (ppm) | 2015 | 1 | 2 | 0.043 | ND–0.13 | No |
| Chlorine (ppm) | 2015 | [4.0 (as Cl2)] | [4 (as Cl2)] | 0.81 | 0.1–1.4 | No |
| Chromium (ppb) | 2015 | 50 | (100) | 3.57 | ND–14 | No |
| Control of DBP precursors [TOC] | 2015 | TT | NA | 23.5 | 11–31 | No |
| Fluoride (ppm) | 2015 | 2.0 | 1 | 0.6 | 0.1–0.8 | No |
| Gross Alpha Particle Activity (pCi/L) | 2011 | 15 | (0) | 0.0145 | ND–0.029 | No |
| Haloacetic Acids (ppb) | 2015 | 60 | NA | 20.8 | 8.0–23.0 | No |
| Hexavalent Chromium (ppb) | 2015 | 10 | 0.02 | 2.0 | ND–12.0 | No |
| Nitrate [as nitrate] (ppm) | 2015 | 45 | 45 | 4.87 | 0.5–9.1 | No |
| TTHMs [Total Trihalomethanes] (ppb) | 2015 | 80 | NA | 82.1 | 30.4–115.0 | Yes |
| Turbidity (NTU) | 2015 | TT | NA | 0.12 | 0.03–0.12 | No |
| Turbidity (Lowest monthly percent of samples meeting limit) | 2015 | TT = 95% of samples < 0.3 NTU | NA | 100% | NA | No |

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

<table>
<thead>
<tr>
<th>SUBSTANT UNIT OF MEASURE</th>
<th>YEAR SAMPLED</th>
<th>AL</th>
<th>PHG (MCLG)</th>
<th>AMOUNT DETECTED (90TH% TILE)</th>
<th>SITES ABOVE AL/TOTAL SITES</th>
<th>VIOLATION</th>
<th>TYPICAL SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper (ppm)</td>
<td>2013</td>
<td>1.3</td>
<td>0.3</td>
<td>0.114</td>
<td>0/30</td>
<td>No</td>
<td>Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives</td>
</tr>
<tr>
<td>Lead (ppb)</td>
<td>2013</td>
<td>15</td>
<td>0.2</td>
<td>0.9</td>
<td>0/30</td>
<td>No</td>
<td>Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits</td>
</tr>
</tbody>
</table>
### Secondary Substances

<table>
<thead>
<tr>
<th>Substance (Unit of Measure)</th>
<th>Year Sampled</th>
<th>SMCL</th>
<th>PHG (MCLG)</th>
<th>Amount Detected</th>
<th>Range Low-High</th>
<th>Violation</th>
<th>Typical Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum (ppb)</td>
<td>2015</td>
<td>200</td>
<td>NS</td>
<td>68</td>
<td>ND–130</td>
<td>No</td>
<td>Erosion of natural deposits; residual from some surface water treatment processes</td>
</tr>
<tr>
<td>Chloride (ppm)</td>
<td>2015</td>
<td>500</td>
<td>NS</td>
<td>28.7</td>
<td>22–34</td>
<td>No</td>
<td>Runoff/leaching from natural deposits; seawater influence</td>
</tr>
<tr>
<td>Specific Conductance (micromhos)</td>
<td>2015</td>
<td>1,600</td>
<td>NS</td>
<td>691</td>
<td>580–830</td>
<td>No</td>
<td>Substances that form ions when in water; seawater influence</td>
</tr>
<tr>
<td>Sulfate (ppm)</td>
<td>2015</td>
<td>500</td>
<td>NS</td>
<td>58</td>
<td>30–84</td>
<td>No</td>
<td>Runoff/leaching from natural deposits; industrial wastes</td>
</tr>
<tr>
<td>Total Dissolved Solids (ppm)</td>
<td>2015</td>
<td>1,000</td>
<td>NS</td>
<td>373</td>
<td>300–460</td>
<td>No</td>
<td>Runoff/leaching from natural deposits</td>
</tr>
</tbody>
</table>

### Unregulated Contaminant Monitoring Rule Part 3 (UCMR3)

<table>
<thead>
<tr>
<th>Substance (Unit of Measure)</th>
<th>Year Sampled</th>
<th>Amount Detected</th>
<th>Range Low-High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorate (ppb)</td>
<td>2015</td>
<td>140</td>
<td>88–240</td>
</tr>
<tr>
<td>Molybdenum (ppb)</td>
<td>2015</td>
<td>3.33</td>
<td>ND–4.5</td>
</tr>
<tr>
<td>Strontium (ppb)</td>
<td>2015</td>
<td>412</td>
<td>290–450</td>
</tr>
<tr>
<td>Vanadium (ppb)</td>
<td>2015</td>
<td>2.0</td>
<td>ND–5.4</td>
</tr>
</tbody>
</table>

1. Total organic carbon (TOC) has no health effects. However, TOC provides a medium for the formation of disinfection by-products such as TTHMs and HAAs. The City’s TOC reduction requirement was 15 - 25% based on a running annual average calculated quarterly.

2. The City currently adds fluoride to the treated water produced by the water treatment plant to achieve an optimum target residual of 0.7 ppm. Some limited areas in the City along Los Osos Valley Road received a blend of surface water and groundwater that may have a lower fluoride residual.

3. Regulatory compliance is determined based on the Locational Running Annual Average (LRAA).

4. Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

### Summary Information for Violation of a MCL, MRDL, AL, TT, or Monitoring and Reporting Requirement

<table>
<thead>
<tr>
<th>Violation</th>
<th>Explanation</th>
<th>Duration</th>
<th>Actions Taken to Correct the Violation</th>
<th>Health Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>TTHM Primary Standard</td>
<td>In the 2nd quarter of 2015, the Stage 2 Disinfectant By-product regulatory sampling site near Johnson Avenue and Southwood Drive exceeded the locational running annual average (LRAA) for Total Trihalomethanes (TTHM). That LRAA was 82.1 parts per billion (ppb) which exceeded the standard or maximum contaminant level (MCL) of 80 ppb. TTHM form when chlorine used for disinfection reacts with naturally occurring organic material in surface and ground waters.</td>
<td>One quarter</td>
<td>In response, City staff evaluated each surface water source, optimized the water treatment process to lower the potential of TTHM formation, made operational changes in the water distribution system to reduce the water age, and increased the monitoring of chlorine residual throughout the system. These adjustments have resulted in lower TTHM levels and all subsequent LRAAs to be less than the MCL.</td>
<td>Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience liver, kidney, or central nervous system problems, and may have an increased risk of getting cancer.</td>
</tr>
</tbody>
</table>

### Definitions

**AL (Regulatory Action Level):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

**LRAA (Locational Running Annual Average):** The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters. Amount Detected values for TTHMs and HAAs are reported as LRAAs.

**MCL (Maximum Contaminant Level):** The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs (SMCLs) are set to protect the odor, taste and appearance of drinking water.

**MCLG (Maximum Contaminant Level Goal):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. EPA.

**micromhos:** A measure of electrical conductance.

**MRDL (Maximum Residual Disinfectant Level):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

**MRDLG (Maximum Residual Disinfectant Level Goal):** The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

**NA:** Not applicable

**ND (Not detected):** Indicates that the substance was not found by laboratory analysis.

**NS:** No standard

**NTU (Nephelometric Turbidity Units):** Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

**pCi/L (picocuries per liter):** A measure of radioactivity.

**PDWS (Primary Drinking Water Standard):** MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

**PHG (Public Health Goal):** The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California EPA.

**ppb (parts per billion):** One part substance per billion parts water (or micrograms per liter).

**ppm (parts per million):** One part substance per million parts water (or milligrams per liter).

**TT (Treatment Technique):** A required process intended to reduce the level of a contaminant in drinking water.
Appendix VI: CUWCC Best Management Practices
BMP 1.1 Operation Practices

City of San Luis Obispo

1. Conservation Coordinator provided with necessary resources to implement BMPs?

<table>
<thead>
<tr>
<th>Name:</th>
<th>Marcus Henderson</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title:</td>
<td>Utilities Services Interim Manager</td>
</tr>
<tr>
<td>Email:</td>
<td><a href="mailto:mhenderson@slocity.org">mhenderson@slocity.org</a></td>
</tr>
</tbody>
</table>

2. Water Waste Prevention Documents

<table>
<thead>
<tr>
<th>WW Document Name</th>
<th>WWP File Name</th>
<th>WW Prevention URL</th>
<th>WW Prevention Ordinance Terms Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Option A Describe the ordinances or terms of service adopted by your agency to meet the water waste prevention requirements of this BMP.</td>
<td></td>
<td><a href="http://www.codepublishing.com/ca/sanluisobispo/">http://www.codepublishing.com/ca/sanluisobispo/</a></td>
<td><a href="http://www.codepublishing.com/ca/sanluisobispo/">http://www.codepublishing.com/ca/sanluisobispo/</a>, <a href="http://www.slocity.org/utilities/download/engstandland">http://www.slocity.org/utilities/download/engstandland</a>. City Ordinance, Chapter 13.07 Water Conservation City Ordinance, Chapter 13.06 Mandatory Plumbing Retrofit Standards Engineering Standards, Se</td>
</tr>
<tr>
<td>Option B Describe any water waste prevention ordinances or requirements adopted by your local jurisdiction or regulatory agencies within your service area.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Option C Describe any documentation of support for legislation or regulations that prohibit water waste.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Option D Describe your agency efforts to cooperate with other entities in the adoption or enforcement of local requirements consistent with this BMP.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Option E Describe your agency support positions with respect to adoption of legislation or regulations that are consistent with this BMP.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Option F Describe your agency efforts to support local ordinances that establish permits requirements for water efficient design in new development.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

At Least As effective As: No
<table>
<thead>
<tr>
<th>BMP 1.1 Operation Practices</th>
<th>ON TRACK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exemption</td>
<td>No</td>
</tr>
<tr>
<td>Comments:</td>
<td></td>
</tr>
</tbody>
</table>
BMP 1.2 Water Loss Control

City of San Luis Obispo

Completed Standard Water Audit Using AWWA Software? Yes
AWWA File provided to CUWCC? Yes
Copy_of_AWWA-water_audit_13-14.xls
AWWA Water Audit Validity Score? 50
Complete Training in AWWA Audit Method Yes
Complete Training in Component Analysis Process? Yes
Component Analysis? Yes
Repaired all leaks and breaks to the extent cost effective? Yes
Locate and Repair unreported leaks to the extent cost effective? Yes

Maintain a record keeping system for the repair of reported leaks, including time of report, leak location, type of leaking pipe segment or fitting, and leak running time from report to repair. Yes

Provided 7 Types of Water Loss Control Info

<table>
<thead>
<tr>
<th>Leaks Repairs</th>
<th>Value Real Losses</th>
<th>Value Apparent Losses</th>
<th>Miles Surveyed</th>
<th>Press Reduction</th>
<th>Cost Of Interventions</th>
<th>Water Saved (AF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>58</td>
<td></td>
<td></td>
<td>0</td>
<td>True</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

At Least As effective As No
Exemption No
Comments:
### BMP 1.3 Metering With Commodity

**City of San Luis Obispo**

<table>
<thead>
<tr>
<th>Metric</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numbered Unmetered Accounts</td>
<td>No</td>
</tr>
<tr>
<td>Metered Accounts billed by volume of use</td>
<td>Yes</td>
</tr>
<tr>
<td>Number of CII Accounts with Mixed Use Meters</td>
<td>1013</td>
</tr>
<tr>
<td>Conducted a feasibility study to assess merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters?</td>
<td>Yes</td>
</tr>
<tr>
<td>Feasibility Study provided to CUWCC?</td>
<td>Yes</td>
</tr>
<tr>
<td>Date: 5/1/2011</td>
<td></td>
</tr>
<tr>
<td>Uploaded file name: BMP 1.3 Feasibility Study.xls</td>
<td></td>
</tr>
<tr>
<td>Completed a written plan, policy or program to test, repair and replace meters</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>At Least As effective As</strong></td>
<td>No</td>
</tr>
<tr>
<td><strong>Exemption</strong></td>
<td>No</td>
</tr>
<tr>
<td>Comments:</td>
<td></td>
</tr>
</tbody>
</table>
BMP 1.4 Retail Conservation Pricing  

**On Track**

87 City of San Luis Obispo

Implementation (Water Rate Structure)

<table>
<thead>
<tr>
<th>Customer Class</th>
<th>Water Rate Type</th>
<th>Conserving Rate?</th>
<th>(V) Total Revenue Commodity Charges</th>
<th>(M) Total Revenue Fixed Charges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single-Family</td>
<td>Increasing Block</td>
<td>Yes</td>
<td>7694943</td>
<td>617065.5</td>
</tr>
<tr>
<td>Multi-Family</td>
<td>Increasing Block</td>
<td>Yes</td>
<td>2852104</td>
<td>89913.78</td>
</tr>
<tr>
<td>Commercial</td>
<td>Increasing Block</td>
<td>Yes</td>
<td>3339986</td>
<td>118873.3</td>
</tr>
<tr>
<td>Dedicated Irrigation</td>
<td>Increasing Block</td>
<td>Yes</td>
<td>2848943</td>
<td>39355.58</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>16735976</td>
<td>865208.16</td>
</tr>
</tbody>
</table>

Calculate: \( \frac{V}{V + M} \)  95 %

Implementation Option: Use Annual Revenue As Reported

Use 3 years average instead of most recent year

Canadian Water and Wastewater Association

Upload file:

Agency Provide Sewer Service: Yes

<table>
<thead>
<tr>
<th>Customer Class</th>
<th>Rate Type</th>
<th>Conserving Rate?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single-Family</td>
<td>Uniform</td>
<td>Yes</td>
</tr>
<tr>
<td>Multi-Family</td>
<td>Uniform</td>
<td>Yes</td>
</tr>
<tr>
<td>Commercial</td>
<td>Uniform</td>
<td>Yes</td>
</tr>
</tbody>
</table>

At Least As effective As  Yes

NA

Exemption  No

Comments:

NA
BMP 2.1 Public Outreach

City of San Luis Obispo  Retail

Does your agency perform Public Outreach programs? Yes

The list of wholesale agencies performing public outreach which can be counted to help the agency comply with the BMP:

The name of agency, contact name and email address if not CUWCC Group 1 members:

Did at least one contact take place during each quarter of the reporting year? No

<table>
<thead>
<tr>
<th>Public Outreach Program List</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newsletter articles on conservation</td>
<td>88000</td>
</tr>
<tr>
<td>Total</td>
<td>88000</td>
</tr>
</tbody>
</table>

Did at least one contact take place during each quarter of the reporting year? Yes

<table>
<thead>
<tr>
<th>Number Media Contacts</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newspaper contacts</td>
<td>4</td>
</tr>
<tr>
<td>Television contacts</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>8</td>
</tr>
</tbody>
</table>

Did at least one website update take place during each quarter of the reporting year? Yes

Public Information Program Annual Budget

<table>
<thead>
<tr>
<th>Annual Budget Category</th>
<th>Annual Budget Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>40600</td>
</tr>
<tr>
<td>Total Amount</td>
<td>40600</td>
</tr>
</tbody>
</table>

Description of all other Public Outreach programs:

Comments:

At Least As effective As No

Exemption No 0
### BMP 2.2 School Education Programs

<table>
<thead>
<tr>
<th>City of San Luis Obispo</th>
<th>Retail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does your agency implement School Education programs?</td>
<td>No</td>
</tr>
<tr>
<td>The list of wholesale agencies performing public outreach which can be counted to help the agency comply with the BMP</td>
<td></td>
</tr>
<tr>
<td>Materials meet state education framework requirements?</td>
<td>Yes</td>
</tr>
<tr>
<td>Consultant guarantees curriculum meets state standards</td>
<td></td>
</tr>
<tr>
<td>Materials distributed to K-6?</td>
<td>Yes</td>
</tr>
<tr>
<td>In class presentations cover the state education framework; teachers guide with materials supporting the presentation provided a consultant</td>
<td></td>
</tr>
<tr>
<td>Materials distributed to 7-12 students?</td>
<td>Yes (Info Only)</td>
</tr>
<tr>
<td>In class presentations cover the state education framework; teachers guide with materials supporting the presentation provided a consultant</td>
<td></td>
</tr>
<tr>
<td>Annual budget for school education program:</td>
<td>10000.00</td>
</tr>
<tr>
<td>Description of all other water supplier education programs</td>
<td>water supply, water conservation, water recycling</td>
</tr>
<tr>
<td>Comments:</td>
<td></td>
</tr>
<tr>
<td>At Least As effective As</td>
<td>No</td>
</tr>
<tr>
<td>Exemption</td>
<td>No 0</td>
</tr>
</tbody>
</table>
**Baseline GPCD:** 123.81

**GPCD in 2014:** 104.81

**GPCD Target for 2018:** 101.50

### Biennial GPCD Compliance Table

<table>
<thead>
<tr>
<th>Year</th>
<th>Report</th>
<th>% Base</th>
<th>Target</th>
<th>% Base</th>
<th>GPCD</th>
<th>Highest Acceptable Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>1</td>
<td>96.4%</td>
<td>119.40</td>
<td>100%</td>
<td>123.80</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>2</td>
<td>92.8%</td>
<td>114.90</td>
<td>96.4%</td>
<td>119.40</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>3</td>
<td>89.2%</td>
<td>110.40</td>
<td>92.8%</td>
<td>114.90</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>4</td>
<td>85.6%</td>
<td>106.00</td>
<td>89.2%</td>
<td>110.40</td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>5</td>
<td>82.0%</td>
<td>101.50</td>
<td>82.0%</td>
<td>101.50</td>
<td></td>
</tr>
</tbody>
</table>

**ON TRACK**
Appendix VII: Draft Water Rationing Ordinance
Draft ORDINANCE NO. (2016 Series)

AN ORDINANCE OF THE COUNCIL OF THE CITY OF SAN LUIS OBISPO
AMENDING CHAPTER 13.07 OF THE SAN LUIS OBISPO MUNICIPAL CODE
REGARDING WATER CONSERVATION

WHEREAS, the Urban Water Management Act (“UWMA”), codified at California Water Code sections 10610 et seq., requires certain water purveyors, including the City, to develop and approve an Urban Water Management Plan (the “Plan”);

WHEREAS, the Plan is required to include a water shortage contingency analysis and a draft ordinance or resolution to implement any water shortage contingency plan. The City last updated its Plan in 2010 and is required to be updated every five years;

WHEREAS, Chapter 13.07 of the City of San Luis Obispo’s Municipal Code sets forth the City’s water conservation requirements;

WHEREAS, in 2015, the City adopted Ordinance No. 1619 amending Chapter 13.07 in order to comply with the Governor’s Executive Order regarding the drought and the State Water Resources Control Board’s emergency regulations, title 23 California Code of Regulations, sections 863, 864 and 865;

WHEREAS, the City’s most recent UWMA has been updated to include five levels of contingency planning with each level being based on the amount of water supply available to the City;

WHEREAS, it is the intent and desire of the City Council to amend the City’s water conservation regulations in order to be consistent with the recent updated planning efforts as set forth in the UWMA.

NOW THEREFORE, BE IT ORDAINED by the Council of the City of San Luis Obispo as follows:

SECTION 1. Environmental Determination. [To be determined. The City will prepare appropriate CEQA documentation when the Draft Ordinance is proposed for adoption].

SECTION 2. Action. Chapter 13.07 of the San Luis Obispo Municipal Code, entitled “WATER CONSERVATION,” is hereby amended in its entirety to read as follows:

13.07.010. Policy declaration and purpose.
It is declared that the city shall, for the general public health, safety and welfare, and to assure an adequate water supply to the community, require a mandatory water conservation plan to be authorized during a period of necessity.

The purpose of the water conservation plan is to identify the water demand reductions that will achieve measurable water savings during a water shortage response stage to prolong the city’s available water supply.
13.07.020 Application.
The provisions of this ordinance codified in this chapter shall apply to all customers, users and property served by the city. It shall also apply to all properties and facilities owned, maintained, operated, or under the jurisdiction of the city.

13.07.030 Definitions.
The following words and phrases used in this chapter, unless a different meaning is clearly required by the context, shall have the following meanings:

“Gallons per capita per day,” or abbreviated as “gpcd,” means the total quantity of water consumed by all customer classes in the City divided by the City’s population.

“Gallons per person per day,” or abbreviated as “gppd,” means the daily water consumption per resident in gallons per day.

“Heritage tree” means any tree existing within the city limits, which has been so designated by resolution of the city council. Heritage trees shall be trees with notable historic interest or trees of an unusual species or size.

“Measurable rainfall” means any amount of rainfall that generates run-off or puddles is considered measurable.

“Spray irrigation” means the method of applying water through an irrigation system where the water is sprayed through the air.

“Water projection model” means the model used by the City to project the water supply available in its reservoirs to serve the community.

13.07.040 Prohibited uses applicable to all customers.
The following uses of water are prohibited for all city water customers.

A. Water runoff prohibited. No person shall cause any water delivered by the city water system to flow away from property owned, occupied or controlled by such person in any gutter. Ditch or in any other manner over the surface of the ground, so as to constitute water waste runoff. “Water waste runoff” means water flowing away from property and which is caused by excessive application(s) of water beyond reasonable or practical flow rates, water volumes or duration of application.
B. No person shall cause or allow any water received by such person from the city water system to be wasted due to substandard, leaky or faulty water fixtures or water-using or distributing devices. The city Utilities Director shall have the power to notify owner or owners of property in writing of leaks in the water line on their private property and require repair of such leaks within three days after such notification. Upon failure to comply, the city Utilities Department may turn off the water on the property until the leak is repaired. Service will be restored after the property owner corrects the leak. Reconnection fees will be charged as set forth in Section 4.20.080 of this code.

C. No person shall use water from fire hydrants for any purpose other than to fight fires or for other activities where such use is immediately necessary to maintain the health, safety and welfare of the residents of San Luis Obispo. The city’s Utilities Director may except persons from this provision when the use of such water is for incidental governmental use.

D. Restaurants, cafés, delis or other public places where food is sold, served or offered for sale may not serve drinking water to any customer unless expressly requested by the customer.

E. Potable city water shall not be used for construction activities, such as grading and dust control, and shall not be used to wash down sidewalks, driveways, or parking areas. The city’s Utilities Director may except persons from this provision when the use of such water is for incidental governmental use.

F. No person shall make, cause, use or permit the watering or irrigation of lawn, turf or other landscaping after forty eight hours of measurable rainfall.

13.07.050 Emergency determination – Plan implementation. When deemed necessary in the judgment of the city council to conserve water during critical water shortage periods, the city council may declare an emergency water condition to exist and may implement the city’s water conservation plan. Said declaration shall be made in the form of a city council resolution stating the water conservation stage level as described in this chapter to be implemented and the reason for implementation.

13.07.060 Water shortage response stages. No customer of the city shall make, cause, use or permit the use of water from the city for residential, commercial, industrial, agricultural, governmental, or any other purpose in a manner contrary to any provision of the ordinance codified in this chapter or in an amount in excess of that use permitted by the water shortage response stage in effect pursuant to action taken by the city council in accordance with the provisions of the ordinance codified in this chapter.
A. **Monitor stage.** It is the purpose of a “Monitor” stage to maintain water consumption to no more than 117 gpcd. A Monitor stage may be declared at any time the city’s water projection model indicates that the city has five or more years of available water supply or based on any other factors which the city council finds to be justification for the declaration of such stage (i.e. differing water levels in the city’s reservoirs, etc.). During a declared Monitor stage, the city shall maintain conservation messaging at levels to achieve voluntary conservation of at least 117 gpcd.

B. **Watch stage.** It is the purpose of a “Watch” stage to reduce water consumption to no more than 107 gpcd. A Watch stage may be declared at any time the city’s water projection model indicates that the city has less than five years of available water supply or based on any other factors which the city council finds to be justification for the declaration of such stage. During a declared Watch stage, the city shall increase conservation messaging in order to achieve voluntary conservation of at least 100 gpcd. In addition, during a declared Watch stage, the city council may, by resolution, do any of the following:

1. Prohibit the use of a hose to wash an automobile, except where the hose is fitted with a shut off nozzle or device attached to it that causes it to cease dispensing water immediately when not in use;

2. Prohibit the watering or irrigation of lawn, landscape, or other turf in a wasteful manner; and

3. Impose any other conservation measures deemed necessary in order to reduce water consumption to 107 gpcd.

C. **Warning stage.** It is the purpose of a “Warning” stage to reduce water consumption to no more than 95 gpcd. A Warning stage may be declared at any time the city’s water projection model indicates that the city has less than four years of available water supply or based on any other factors which the city council finds to be justification for the declaration of such stage. During a declared Warning stage, the city may implement any regulation set forth in the Watch stage. In addition, during a declared Warning stage, the city council may, by resolution, prohibit the following uses of water:

1. Using potable water to clean, fill or maintain levels in decorative fountains, unless such water is part of a recycling system;

2. Watering or irrigated a lawn, landscape or other turf between the hours of seven a.m. and seven p.m.

3. Watering or irrigating a lawn, landscape or other turf in accordance with the following schedule:
Three-Day a Week Schedule

<table>
<thead>
<tr>
<th>Even numbered addresses</th>
<th>Sundays, Tuesdays and Thursdays</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odd numbered addresses</td>
<td>Mondays, Wednesdays and Fridays</td>
</tr>
</tbody>
</table>

Two-Day a Week Schedule

<table>
<thead>
<tr>
<th>Even numbered addresses</th>
<th>Tuesdays and Fridays</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odd numbered addresses</td>
<td>Mondays and Thursdays</td>
</tr>
</tbody>
</table>

4. Impose any other conservation measures deemed necessary in order to reduce water consumption to 95 gpcd.

D. **Severe stage.** It is the purpose of a “Severe” stage to reduce water consumption to no more than 90 gpcd. A Severe stage may be declared at any time the city’s water projection model indicates that the city has less than three years of available water supply or based on any other factors which the city council finds to be justification for the declaration of such stage. During a declared Severe stage, the city may implement any regulation set forth in the Warning stage. In addition, during a declared Severe stage, the city council may, by resolution, do any of the following:

1. Prohibit the use of spray irrigation for the watering of lawn, landscape or turf.

2. Prohibit outdoor irrigation for all uses.

3. Implement a water allotment program. In the event the City Council implements a water allotment program pursuant to this subdivision, no customer shall make, cause, use or permit the use of water in excess of allocations determined as follows:

   i. Single Family and Multi-family Residential – Each customer shall receive a monthly allocation of 192 gallons per day for each single family residence or multi-family dwelling unit. The 192 gallons per day allotment equals three residents using 64 gallons per day. Customers may request an increase in the allotment in the amount 48 gallons per day for each additional permanent resident. Each customer requesting an additional allotment shall submit a permanent resident certification form provided by the city.
ii. Commercial – Each commercial customer shall receive a monthly allocation using a percent reduction methodology established by resolution of the city council based on the average of the previous three years of water use. An optional baseline standard allocation will also be determined by resolution of the city council which will be available to commercial customers. Each commercial customer’s actual allocation will be the lesser of either formula.

iii. Institutional – Each institutional customer shall receive a monthly allocation using a percent reduction methodology established by resolution of the city council based on the average of the previous three years of water use.

iv. Landscape Meters – Each customer with a landscape meter will receive an allocation using a percent reduction methodology established by resolution of the city council based on the average of the previous three years of water use.

4. Require all new water utility connections to offset that development’s proposed water use on a one to one basis. The city’s Utilities Department shall develop and approve regulations to implement this offset program.

5. Impose any other conservation measures deemed necessary in order to reduce water consumption to 90 gpcd.

E. Extreme stage. It is the purpose of an “Extreme” stage to reduce water consumption to no more than 85 gpcd. An Extreme stage may be declared at any time the City’s water projection model indicates that the city has less than two years of available water supply or based on any other factors which the City Council finds to be justification for the declaration of such stage. During a declared Extreme stage, the city may implement any regulation set forth in the Severe stage. In addition, during a declared Extreme stage, the City Council may, by resolution, do any the following:

1. Reduce the water allotments set forth in Section 13.07.060.D.2 as follows:

   i. Single Family and Multi-family Residential. Each customer shall receive a monthly allocation of 159 gallons per day for each single family residence or multi-family dwelling unit. The 159 gallons per day allotment equals three residents using 56 gallons per day. Customers may request an increase in the allotment in the amount 48 gallons per day for each additional permanent resident. Each customer requesting an additional allotment shall submit a permanent resident certification form provided by the city.
ii. Each commercial and institutional customer, or a customer with a landscape meter, shall reduce their allocation in an amount established by resolution of the city council.

2. Require all new water utility connections to offset that development’s proposed water use on a two to one basis.

3. Prohibit the irrigation or watering of any lawn, landscape or turf, except for heritage trees.

4. Impose any other conservation measures deemed necessary in order to reduce water consumption to 85 gpcd.

F. **Critical stage.** It is the purpose of a “Critical” stage to reduce water consumption to no more than 75 gpcd. A Critical stage may be declared at any time the City’s water projection model indicates that the city has less than one year of available water supply or based on any other factors which the City Council justifies the declaration of such stage. During a declared Critical stage, the city may implement any regulation set forth in the Extreme stage. In addition, during a declared Critical stage, the City Council may do the following:

1. Reduce the water allotments set forth in Sections 13.07.060.D.2 or 13.07.060.E.1 as follows:

   i. Single Family and Multi-family Residential. Each customer shall receive a monthly allocation of 144 gallons per day for each single family residence or multi-family dwelling unit. The 144 gallons per day allotment equals three residents using 48 gallons per day. Customers may request an increase in the allotment in the amount 48 gallons per day for each additional permanent resident. Each customer requesting an additional allotment shall submit a permanent resident certification form provided by the city.

   ii. Each commercial and institutional customer, or a customer with a landscape meter, shall reduce their allocation in an amount established by resolution of the city council.

2. Impose any other conservation measures deemed necessary in order to reduce water consumption to 75 gpcd.

**13.07.060 Integration with other rules.** Whenever a water shortage response stage has been declared by the City Council pursuant to this Chapter, all other city rules, regulations, restrictions, definitions, enforcement procedures, violation provisions and appeal procedures which are in force shall remain in force, except where they are in conflict with the provisions of this chapter, in which event the provisions established by this chapter shall prevail and govern.
13.07.070 Exceptions. The water use prohibitions set forth in this section 13.07.030 shall not apply to the use of water necessary for public health, safety or for essential governmental services such as fire, police, public works or similar services.

13.07.080 Moratorium – Severe, Extreme or Critical stages. Upon the declaration of a Severe stage, Extreme stage or Critical stage, the City Council may by resolution prohibit new potable water service, except under the following circumstances:

A. A valid, unexpired building permit has been issued for the project; or
B. The project is necessary to protect the health, safety and welfare of the community.

This section shall not be construed to preclude the resetting or turn-on of meters to provide a continuation of water service or to restore service that has been interrupted for up to a period of one year.

13.07.090 Failure to comply - Violations.

It is unlawful for any customer to fail to comply with this Chapter.

A. Customers exceeding their assigned maximum water use allocation as set forth in subsections D.2, E.1 and F.1 of Section 13.07.060 shall be subject to the following actions and civil penalties:

a. The first violation of the maximum water use allotment shall be a warning letter.

b. The second violation of the maximum water use allotment within a one year period shall be subject to a fifty percent (50%) surcharge levied on all usage above the customer’s monthly allotment.

c. The third violation of the maximum water use allotment within a one year period shall be subject to a one hundred percent (100%) surcharge levied on all usage above the customer’s monthly allotment.

d. The fourth violation or any more violations of the maximum water use allotment within a one year period shall be subject to a two hundred percent (200%) surcharge levied on all usage above the customer’s monthly allotment, discontinuation of service, installation of flow restrictors, or any other remedy or penalty allowed by law.

B. Any violation of the provisions of this chapter by any person is a misdemeanor and is punishable as provided in Chapter 1.12.

C. Any violation of the provisions of this chapter by any person is also subject to administrative fines as provided in Chapter 1.24, which may be appealed pursuant to the procedures in Chapter 1.24.
D. In addition to other remedies provided by this chapter or by other law, any violation of this chapter may be remedied by a civil action brought by the city attorney, including but not limited to administrative or judicial nuisance abatement proceedings, civil or criminal code enforcement proceedings, and suits for injunctive relief. The remedies provided by this chapter are cumulative and in addition to any other remedies available at law or in equity.

SECTION 2. Severability. If any subdivision, paragraph, sentence, clause, or phrase of this ordinance is, for any reason, held to be invalid or unenforceable by a court of competent jurisdiction, such invalidity or unenforceability shall not affect the validity or enforcement of the remaining portions of this ordinance, or any other provisions of the City’s rules and regulations. It is the City’s express intent that each remaining portion would have been adopted irrespective of the fact that any one or more subdivisions, paragraphs, sentences, clauses, or phrases be declared invalid or unenforceable.

SECTION 3. A summary of this ordinance, approved by the City Attorney, together with the names of the Council members voting for and against it, shall be published at least five days prior to its final passage, in the Tribune, a newspaper published and circulated in this City. Pursuant to Water Code section 376(a) this ordinance will go into effect immediately after its final passage. Within 10 days after its final adoption, a summary of this ordinance shall be published pursuant to Government 6061 and in accordance with Water Code section 376(b).

INTRODUCED on the ________ day of ___________________________2016 AND FINALLY ADOPTED by the Council of the City of San Luis Obispo on the ________ day of ___________________________2016, on the following roll call vote:

AYES:

NOES:

ABSENT:

____________________________________
Mayor Jan Marx

ATTEST:

____________________________________
Lee Price, City Clerk
APPROVED AS TO FORM:

______________________________
J. Christine Dietrick, City Attorney