Public Draft

2025 Urban Water Management Plan

MAY 2026

CITY OF SANTA BARBARA

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2025 Urban Water Management Plan

MAY 2026

Public Draft

Prepared by Water Systems Consulting, Inc

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ACRONYMS & ABBREVIATIONS

AB	Assembly Bill
AF	Acre-feet
AFY	Acre-feet per year
AMI	Advanced Metering Infrastructure
ASR	Aquifer Storage and Recovery
AWWA	American Water Works Association
BA	Biological Assessment
BMP	Best Management Practices
BO	Biological Opinion
CAL GREEN	California Green Building Standards Code
CASGEM	California Statewide Groundwater Elevation Monitoring
CDFW	California Department of Fish and Wildlife
CCRB	Cachuma Conservation Release Board
CCWA	Central Coast Water Authority
CII	commercial, industrial, and institutional
CIMIS	California Irrigation Management Information System
COMB	Cachuma Operation and Maintenance Board
CWC	California Water Code
DCR	Delivery Capability Report
DPR	direct potable reuse
DRA	Drought Risk Assessment
DWR	Department of Water Resources
EIR	Environmental Impact Report
ETO	evapotranspiration
FY	Fiscal Year
GPCD	Gallons per Capita per Day
GSA	Groundwater Sustainability Agency

GSP	Groundwater Sustainability Plan
HCF	hundred cubic feet
KWH	kilowatt-hours
LCMWC	La Cumbre Mutual Water Company
LTWSP	Long Term Water Supply Plan
MGD	million gallons per day
NMFS	National Marine Fisheries Service
NO-DES	Neutral Output Discharge Elimination System
RHNA	Regional Housing Needs Allocation
RWEP	Regional Water Efficiency Program
SB	Senate Bill
SB X7-7	Senate Bill 7 of Special Extended Session 7
SBCWA	Santa Barbara County Water Agency
SBMC	Santa Barbara Municipal Code
SGMA	Sustainable Groundwater Management Act
SWP	State Water Project
SWRCB	State Water Resources Control Board
USGS	United States Geological Survey
USFWS	U.S. Fish and Wildlife Service
UWMP	Urban Water Management Plan
UWMP ACT	Urban Water Management Planning Act
UWUO	Urban Water Use Objective
WRC	Water Resource Center
WSCP	Water Shortage Contingency Plan
WTP	Water Treatment Plant
WY	Water Year

Executive Summary

This section summarizes the 2025 Urban Water Management Plan for the City of Santa Barbara. This summary describes the fundamental purpose of the Plan and key takeaways including projected water demand, water service reliability, and strategies for managing risks to water reliability.

IN THIS SECTION

- Purpose of the Plan
- Key Takeaways
- Outreach and Engagement
- Water Demand
- Water Supplies
- Water Supply Reliability
- Water Shortage Contingency Plan
- Water Efficiency and Conservation

Purpose of the Plan

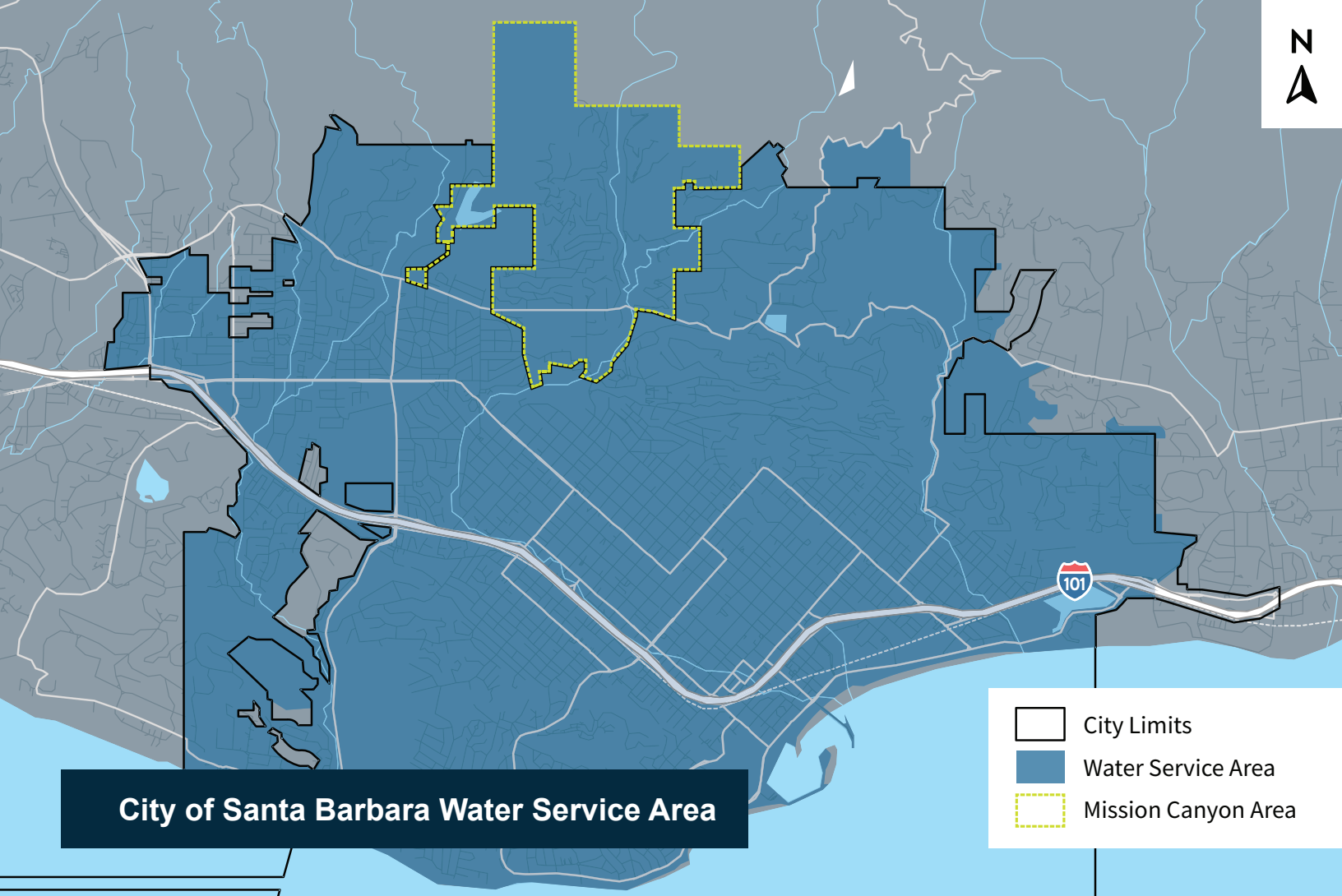
This Urban Water Management Plan (UWMP) provides the California Department of Water Resources with a detailed summary of present and future water resources and demands within the City of Santa Barbara's (City) service area. Specifically, the UWMP provides water supply planning for a 25-year period in five-year increments, identifying water supplies needed to meet future needs out to 2050. The analysis identifies supply reliability under three hydrologic or rainfall conditions: an average (or normal) year, a single-dry year, and multiple-dry years.

The City's guiding water supply planning document is their Long-Term Water Supply Plan (LTWSP), which was updated in 2021 along with their 2020 UWMP. Together these documents are known as the 2020 Enhanced UWMP. This 2025 UWMP is an update to the 2020 Enhanced UWMP, addressing new requirements and regulations while aligning with the City's LTWSP.

Key Takeaways

The City's 2025 UWMP key takeways include:

- The City’s baseline demands are lower than projected in the 2020 EUWMP, reflecting updated population trends and the absence of a post-drought rebound in water use. Demand projections are updated as new data becomes available, consistent with adaptive water supply planning.
- The City’s diversified water supply portfolio—including surface water, desalination, groundwater, recycled water, and imported supplies—provides flexibility and resilience across a wide range of hydrologic conditions.
- The City has sufficient supplies to meet demands through 2050 in a normal, single-dry, and multiple dry-year conditions. In the event of an extended five-year drought, 20% of extraordinary conservation would be required during the fifth year.
- The five-year drought risk assessment shows that, under current assumptions, the City has sufficient supplies to meet demands even if dry conditions persist.
- The City has decades of sustained investment in water efficiency and operation of a successful water conservation program, resulting in a low per capita water use. The City’s current water demand is comparable to levels observed in the 1950s despite population growth.
- The City’s Water Shortage Contingency Plan serves as the operating manual for proactively managing water shortages and reducing the risk of catastrophic service disruptions.



City of Santa Barbara Water Service Area

Service Area

The City is a retail water supplier and serves potable water to a population of approximately 93,000 people through more than 26,200 service connections. These include those located within City limits and in adjacent unincorporated areas such as Mission Canyon, shown in the figure above. The City serves primarily residential water uses, followed by commercial, landscape irrigation, and industrial uses. The City also provides wastewater collection and treatment services and recycled water used primarily for outdoor irrigation at City parks and golf courses.

Outreach and Engagement

The City regularly coordinates with multiple agencies who are directly or indirectly involved in the City's water supplies, including:

- ***Cachuma Operation and Maintenance Board (COMB)***, a Joint Powers Authority that operates portions of the Cachuma Project and coordinates with the US Bureau of Reclamation (Reclamation) on deliveries of Cachuma Project water. Lake Cachuma is the City's main source of water supply. The COMB member agencies include the Carpinteria Valley Water District, Goleta Water District, City of Santa Barbara, Montecito Water District, and Santa Ynez River Water Conservation District-Improvement District No. 1.
- ***Cachuma Conservation and Release Board (CCRB)***, a multi-agency advisory body that coordinates on water conservation, storage, and release decisions related to Lake Cachuma to support regional water supply reliability.
- ***The Santa Barbara County Water Agency***, which administers the Cachuma Project and contracts with Reclamation. The Santa Barbara County Water Agency also conducts investigations and reports on the County's water requirements, groundwater conditions, efficient use of water, and other water supply related technical studies.
- ***The Central Coast Water Authority (CCWA)***, a Joint Powers Authority that manages and operates Santa Barbara County's local facilities for distribution and treatment of State Water. CCWA's member agencies include the City of Santa Maria, City of Guadalupe, City of Buellton, Goleta Water District, City of Santa Barbara, Montecito Water District, Carpinteria Valley Water District, and Santa Ynez River Water Conservation District, Improvement District No. 1, and the following nonmember project participants: La Cumbre Mutual Water Company (LCMWC), Vandenberg Air Force Base, Raytheon Company, and Morehart Land Company.

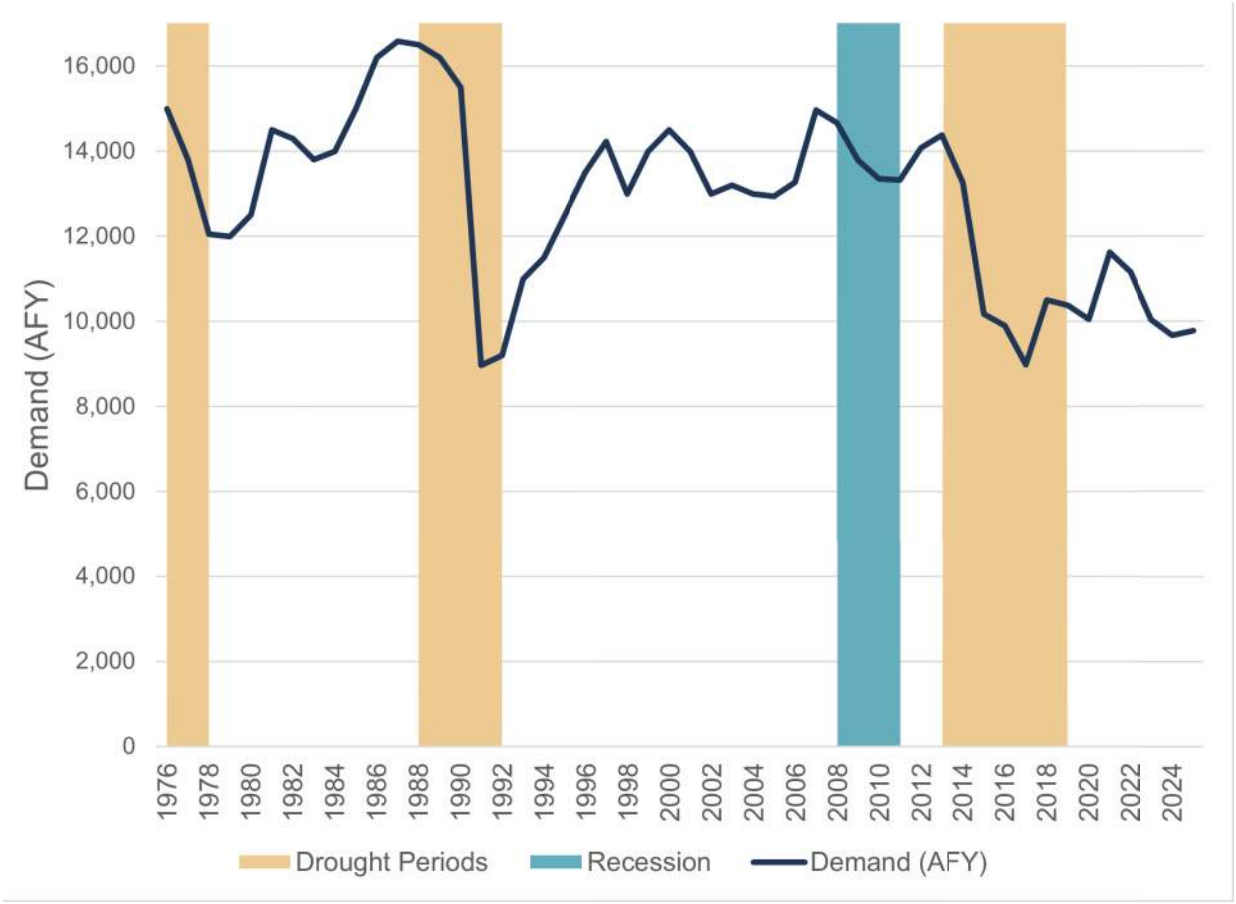
As required for the UWMP, the City notified cities, counties, and other relevant stakeholders of the preparation of the UWMP 60-days ahead of the public hearing and provided notice of the Public Draft for review more than 14-days ahead of the public hearing (see table below).

Agency	Sent Notice of Preparation	Coordination for Projections	Sent a copy of the Public Draft for review
CCWA	✓	✓	✓
COMB	✓	✓	✓
CCRB	✓		✓
Santa Barbara County Water Agency	✓		✓
United States Bureau of Reclamation (Reclamation)	✓	✓	✓
Goleta Water District	✓		✓
Montecito Water District	✓		✓
Carpinteria Valley Water District	✓		✓
Santa Ynez River Water Conservation District, Improvement District No. 1	✓		✓

Water Demand

Total water use includes customer potable water deliveries, water losses in the distribution system, recycled water use, and sales to Montecito Water District. The City tracks total water demand based on production to the potable water and recycled water distribution systems. The combined total is referred to as “system” demand. Figure ES-1 illustrates the system demand and its response to severe drought in the late 1980s, early 1990s, and mid 2010s. Outside of the economic demand drivers of the 2008 recession, variations from 1998 through 2012 are primarily the result of year-to-year variations in weather. Beginning in 2013, the dramatic drop in demand indicates the response to the most recent drought, officially declared by the City in 2014. As shown, demands have partially recovered following the 2014-2019 drought and again show variation based on weather.

Figure ES-1: Historic System Demand



Note: Total water demand (dark blue) is quantified as production to the potable water and recycled water distribution systems.

As shown, variations in historic system demand have been influenced by economic drivers, droughts, and weather.

Future water demands were estimated for the City as part of its Water Conservation Strategic Plan (updated 2026). The major assumptions incorporated in the future baseline demand projection include:

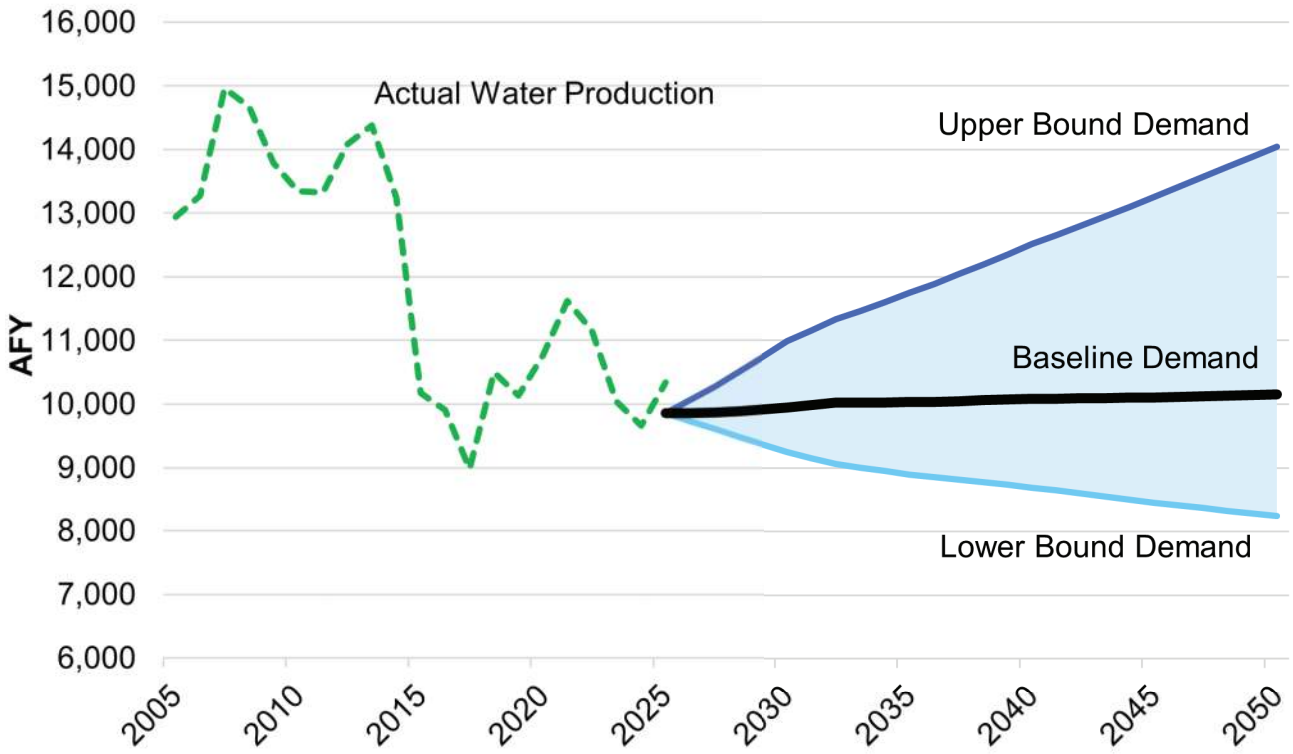
- Baseline customer water use estimated from 2021 to 2024 average water use.
- Population growth projections from the Regional Growth Forecast 2050 Santa Barbara County.
- 2023 Housing Element quantified objectives of 3,083 new units to be constructed between 2023 and 2035, including 162 new multi-family units, 78 accessory dwelling units, and two single-family units per year from 2025 to 2035.
- Employment projections from California Employment Development Department for the Santa Maria–Santa Barbara Metropolitan Statistical Area.

- Distribution water losses align with the City's water loss standard in gallons per service connection per day and grow with the growth in service connections.
- Estimated water savings from the plumbing code.
- The City's existing Water Conservation Program B and plumbing code implementation, with some additional measures.
- Recycled water demand is based on the average use over the last five years and is projected to be constant through 2050.
- Includes 1,430 AF of sales based on the City's Water Supply Agreement with Montecito Water District.

There are uncertainties associated with demand projections in general. The City considered a range of potential future demand scenarios, presented together as a "demand envelope" (see Figure ES-2). The demand envelope was developed by analyzing multiple demand scenarios that adjust key variables of the baseline demand, including population, employment, an increase in the baseline water use by customer (demand creep), and incorporating climate change and water rate change impacts. Each variable has the potential to put upward or downward pressure on the City's future water demand. The demand envelope can be thought of as a range of plausible water demand futures that may materialize depending on which pressures occur and influence water demand.

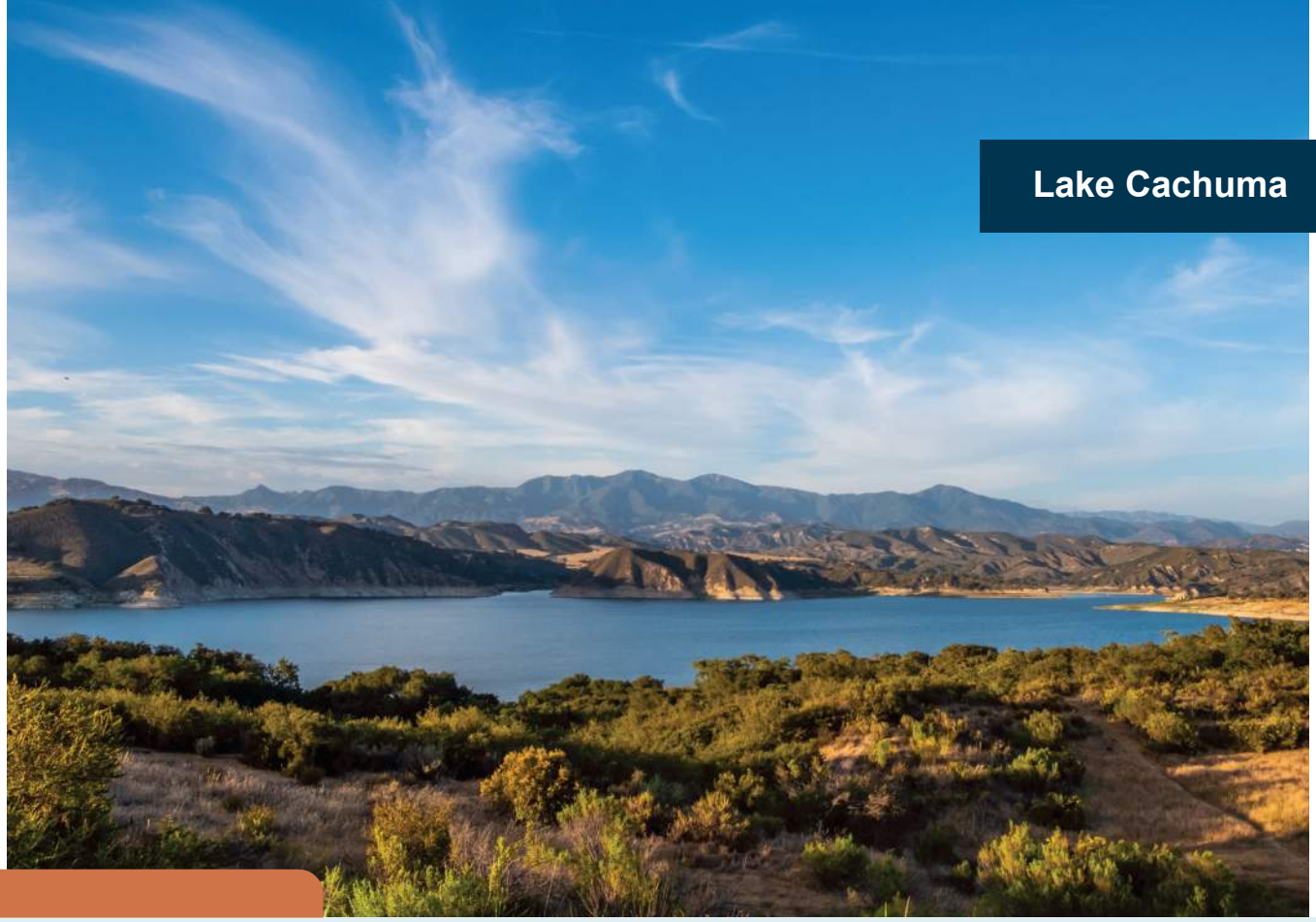
The upper bound of the demand envelope is the demand creep scenario. The lower bound of the demand envelope combines the two demand scenarios that cause demand to decrease the most, water rate impacts and slower job growth.

Figure ES-2: Demand Projection Envelope



Note: Demand scenarios include total customer potable demand, excluding recycled water demand and sales to other agencies.

The baseline demand projection is used in the UWMP and the City's Water Conservation Strategic Plan (updated 2026). The demand envelope analysis allows the City to track its demand moving forward as part of its adaptive management strategy and understand trends as they unfold within the demand envelope.

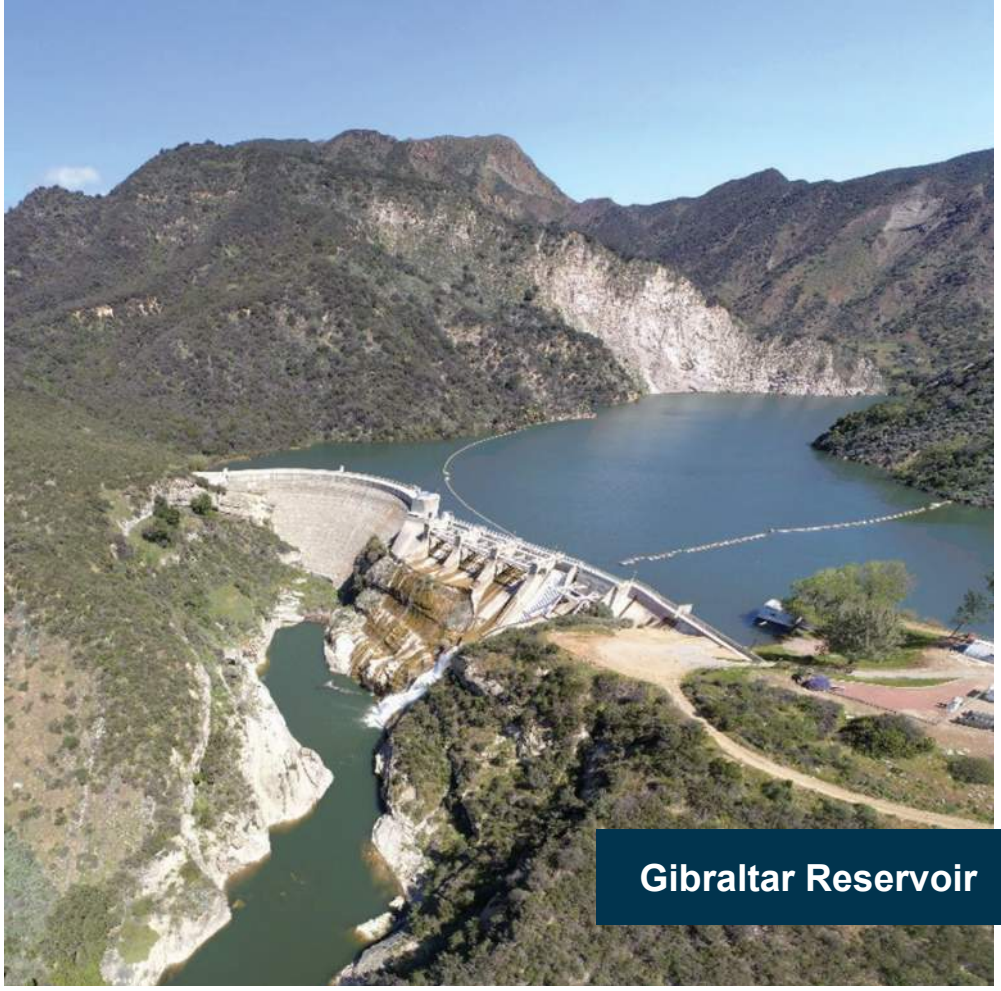


Lake Cachuma

Water Supplies

The City's water supply is comprised of the following sources, also illustrated on page 14-15:

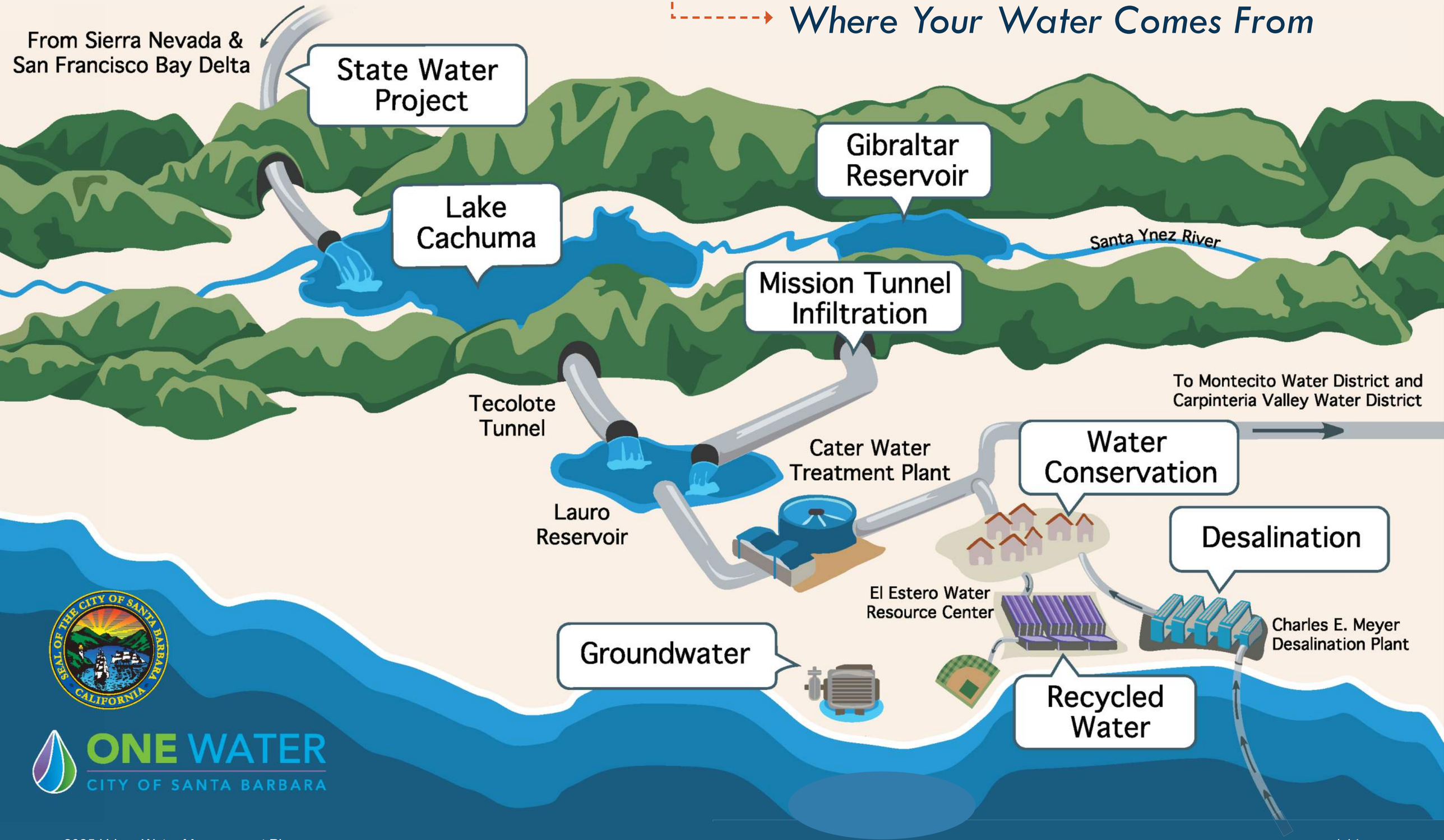
- ***Lake Cachuma:*** Reclamation constructed Lake Cachuma and Bradbury Dam in the early 1950s. The City's share of the annual project yield is 8,277 AFY (Acre-feet per Year). Water is delivered for treatment at Cater Water Treatment Plant (WTP) via the Tecolote Tunnel and South Coast Conduit. The City can store allocated water in Lake Cachuma as carryover, allowing the City to use other available supplies and build up a reserve supply in Lake Cachuma.



Gibraltar Reservoir

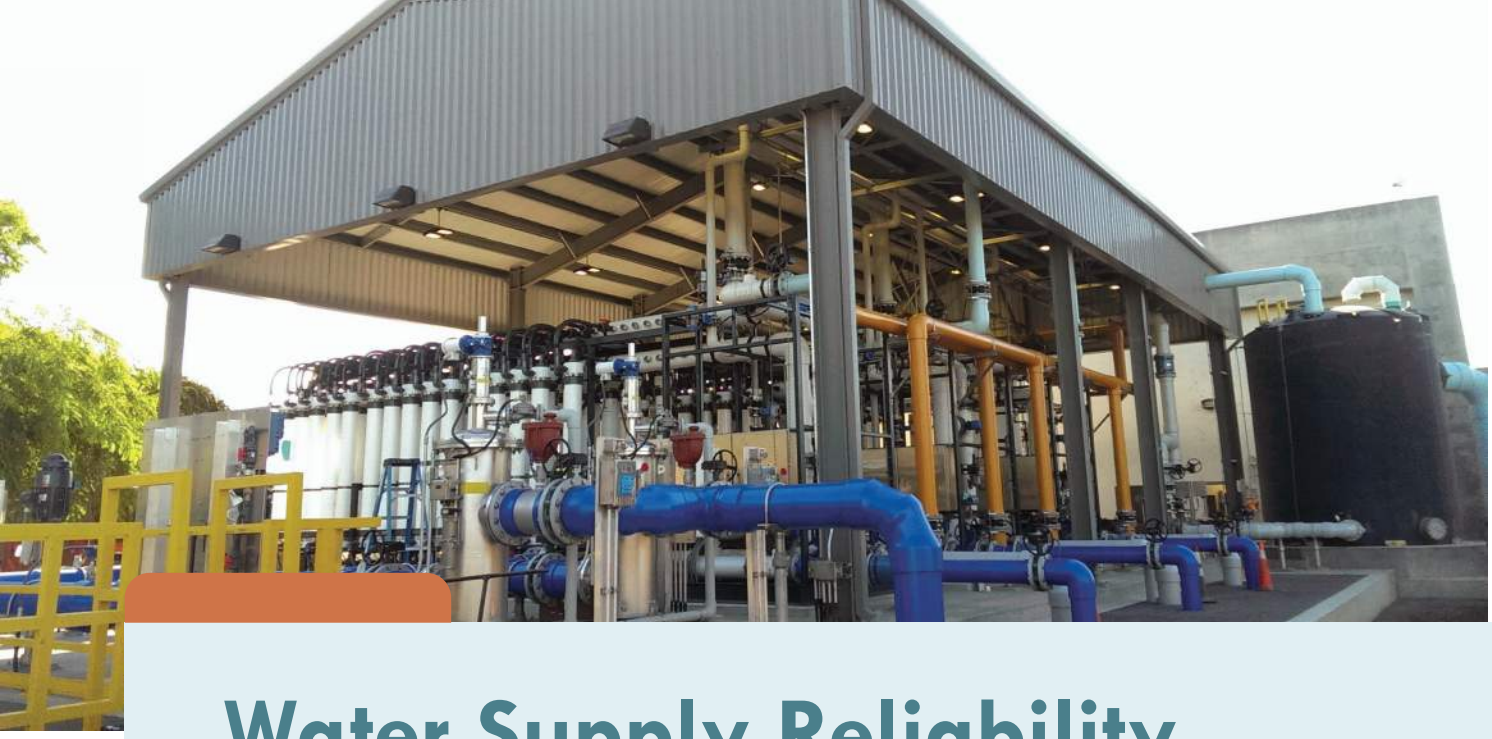
- ***Gibraltar Reservoir:*** The City has pre-1914 water rights to divert water from the Santa Ynez River. Construction of Gibraltar Dam was completed in 1920. The reservoir had an initial storage capacity of 15,793 AF. As of 2025, siltation has reduced the reservoir capacity to 4,559 AF. Water from the reservoir is conveyed through Mission Tunnel for treatment at Cater WTP.
- ***Devil's Canyon Diversion:*** The City has pre-1914 water rights to divert water from Devil's Canyon Creek and maintains a small diversion works on Devil's Canyon Creek below Gibraltar Dam, which diverts water from Devil's Canyon Creek into Mission Tunnel.
- ***Mission Tunnel Infiltration:*** Mission Tunnel is 3.7 miles long and conveys water from Gibraltar Reservoir through the Santa Ynez Mountains to the City. Infiltration through cracks and fissures into the tunnel from watersheds on both sides of the mountains contributes to the City's water supply. Infiltration to Mission Tunnel is dependent on rainfall, and averages approximately 942 AFY.

Where Your Water Comes From



ONE WATER
CITY OF SANTA BARBARA

- ***State Water Project (SWP):*** The City's SWP Table A amount is 3,300 AFY. The water is conveyed to Lake Cachuma from SWP facilities in the Central Valley via the Coastal Branch of the California Aqueduct. Once in Lake Cachuma, the water is conveyed along with Cachuma Project water, via the Tecolote Tunnel, to Cater WTP for treatment and distribution.
- ***Supplemental Water:*** The SWP pipeline allows the City to convey supplemental water purchases to augment drought-year supplies. During the recent drought, the City purchased water from other SWP contractors.
- ***Desalination:*** The Charles E. Meyer Desalination Plant was reactivated in 2017 in response to the recent drought. The plant can provide three million gallons per day (MGD) of supply with a design capacity of 3,125 AFY. For conservative planning purposes, the desalination production is assumed to be 2,500 AFY, or 80% of the design capacity.
- ***Groundwater:*** The City pumps potable groundwater from Foothill Basin and Storage Unit 1 to supplement their surface water supplies during droughts and allows the groundwater basins to recover during non-drought periods. The City's sustainable groundwater production is 2,720 AF in the Foothill Basin and 7,000 AF in Storage Unit I over a 10-year period.
- ***Recycled Water:*** Recycled water is produced at the El Estero Water Resource Center. Recycled water is distributed through the City's recycled water system for irrigation of large landscapes and toilet flushing at a handful of public locations. Under normal conditions, the existing recycled water customer demand is ranges from 700 to 900 AFY plus approximately 250 AFY of process water used internally for treatment operations at El Estero WRC.

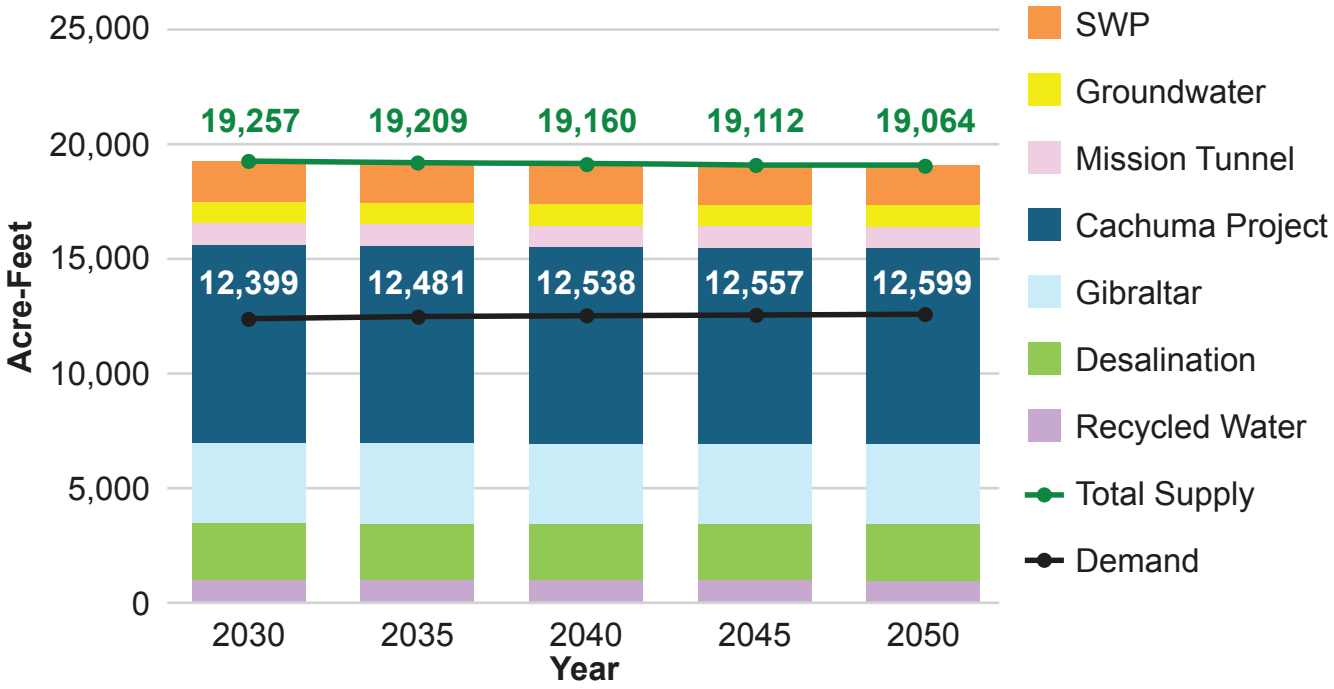


Water Supply Reliability

Water supply reliability reflects the City's ability to meet the water needs of its customers with water supplies under plausible hydrological variability, climate conditions, and other factors that affect the City's water supply and demand. The diversity of the City's water supply portfolio and the ability to store multiple years of water demand in Lake Cachuma are key factors in assessing the reliability of the water supply under a variety of hydrologic conditions.

In normal conditions, the City's primary water supply is surface water from Lake Cachuma (including carryover storage from unused previous Cachuma allocations), Gibraltar Reservoir, and desalination. These supplies are augmented with groundwater production that is typically preserved by the City for droughts and emergencies, SWP deliveries, and recycled water. As shown in Figure ES-3, the City has sufficient supplies in normal years and would use available supplies to prepare for dry periods. For example, unused Cachuma Project water could be stored for use in future years as carryover water. Also, a safety margin of 10% is maintained, consistent with City water supply policies, in case of unanticipated added demand, such as in the case of annexations or supply shortages.

Figure ES-3: Projected Potable Water Supplies vs Demand, Normal Year



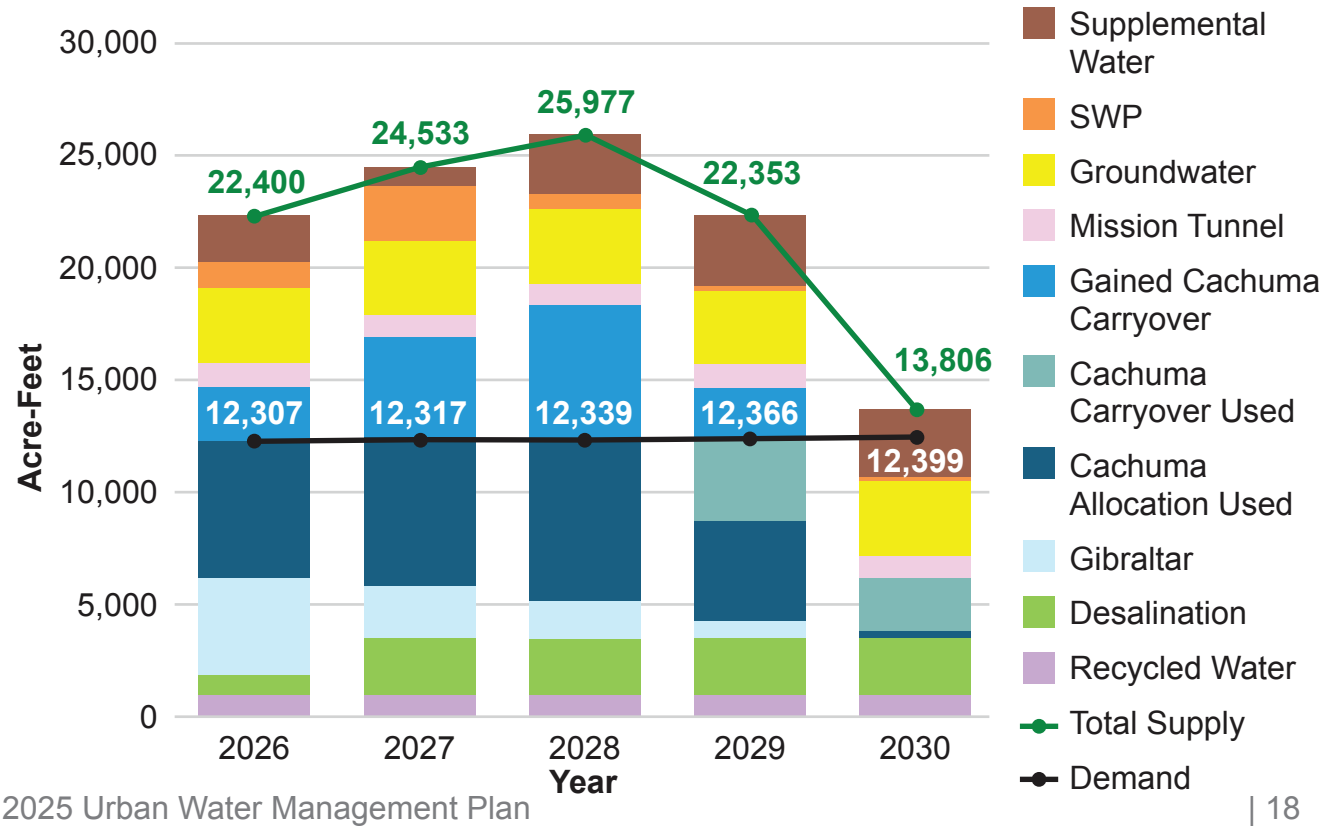
A single dry year (such as 2016) has little effect on availability of Cachuma supplies since the multiyear reservoir typically has storage available from previous years. However, available supply from Gibraltar Reservoir could potentially be significantly reduced, because Gibraltar is a much smaller reservoir than Cachuma. In this situation, demand could be met by supplemental SWP water, increased groundwater pumping, or additional use of Cachuma supplies. In the single dry year evaluation conducted for the 2025 UWMP, the impacts of a single dry year were found to be minimized by the City's diverse water supply portfolio and carryover storage at Lake Cachuma.

Due to limited supplies, in Year 5 of a drought, demand is assumed to be reduced by 20% of normal through extraordinary conservation measures, above and beyond those in the City's normal conservation program. During the 2014-2019 extended drought, City customers achieved 40% conservation, so the City is confident that extraordinary conservation can be achieved during an extended drought if necessary.

2026–2030 Drought Risk Assessment

Based on projected demand and available supplies and assuming drought conditions, Figure ES-4 presents the projected supplies used to meet demand and the remaining available supply each year over the next five years. This analysis considers current conditions, including loss of the City's Cachuma carryover water after the January 2026 spill event. With the City's diverse supply portfolio and the assumptions used for the drought risk assessment, the analysis projects that Cachuma carryover volume is gained over the next few years for use in 2029 and 2030 as Cachuma allocations decrease under drought conditions. In this scenario, the City still has supplies available at the end of the five-year drought. Note that these projections contrast with the need to implement extraordinary conservation measures during the 2014–2019 drought due to the reactivation of the desalination facility. The desalination facility provides a reliable annual water supply, and the City is now able to build carryover storage in Cachuma, eliminating the need to implement extraordinary conservation measures.

Figure ES-4: 2026–2030 Drought Risk Assessment, Supply and Demand Projections



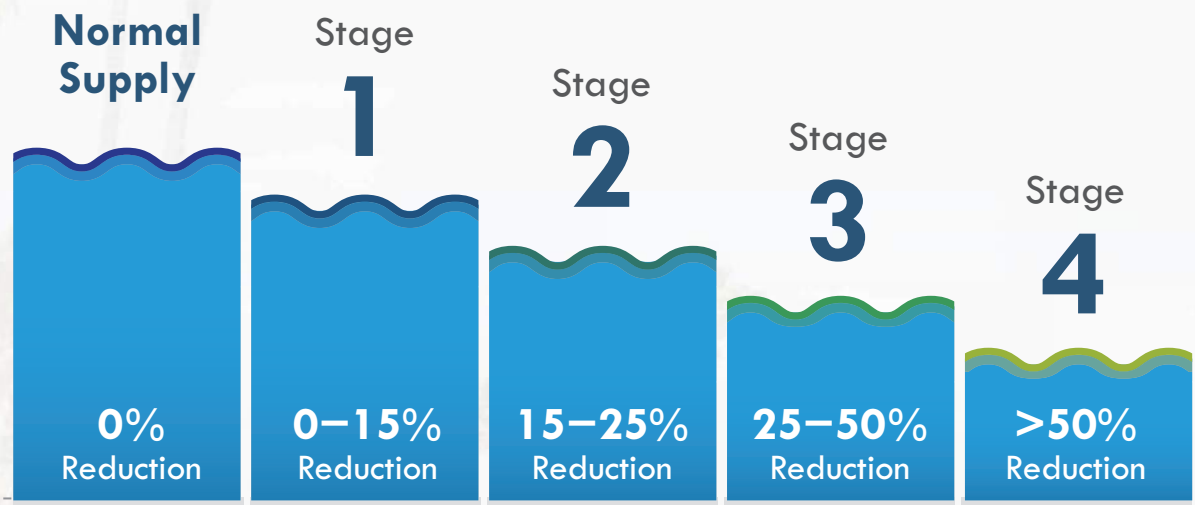
Water Shortage Contingency Plan

The Water Shortage Contingency Plan (WSCP) is a strategic plan that the City uses to prepare for and respond to foreseeable and unforeseeable water shortages.

A water shortage occurs when the water supply available is insufficient to meet the normally expected customer water use at a given point in time. A shortage may occur due to a number of reasons, such as water supply quality changes, climate change, drought, regional power outage, and catastrophic events (e.g., earthquake). Additionally, the State may declare a statewide drought emergency and mandate that water suppliers reduce demands, as occurred in 2014 and 2022. The WSCP serves as the operating manual that the City will use to prevent catastrophic service disruptions through proactive, rather than reactive, mitigation of water shortages.

The WSCP establishes clear shortage stages, decision-making criteria, and response actions to ensure reliable water service, protect public health and safety, and equitably manage limited supplies. Through proactive planning, diversified supplies, and adaptive management, the WSCP provides a framework to maintain resilience under both short-term disruptions and prolonged drought conditions. The WSCP is included as Appendix F and is a standalone document from the UWMP.

Water Shortage Contingency Plan Stages



City Shortage Stage	Normal Supply	Stage 1	Stage 2	Stage 3	Stage 4
Supply Reduction	0% Reduction	0–15% Reduction	15–25% Reduction	25–50% Reduction	>50% Reduction
Coordination for Projections		Water Shortage Watch	Water Shortage Alert	Water Shortage Emergency	Catastrophic Water System Emergency
Water Supply Condition	Full Cachuma entitlement is projected for the coming water year, and there are no extraordinary shortages in other City supplies.	Reduction in Cachuma entitlement is projected for the coming water year, or an extraordinary reduction in other City supplies has been identified.	Low rainfall conditions have resulted in continued decline in Cachuma storage and/or entitlement, or an extraordinary reduction in other City supplies.	Cachuma supplies are projected to be exhausted during the coming water year, or a catastrophic interruption to City water supplies has occurred.	Catastrophic interruption to City water supplies has occurred.
Standard Water Shortage Levels		LEVEL 1 (0–10%) / LEVEL 2 (10–20%)	LEVEL 3 (20–30%)	LV. 4 (30–40%) / LV. 5 (40–50%)	LEVEL 6 (>50%)

Water Efficiency and Conservation

Since the severe drought in the late 1970s, the City has been a leader in implementing progressive water conservation programs that support a growing community while keeping water use efficient. The City's water conservation programs strongly emphasize education and the distribution of incentives and water-saving devices across all customer types. These proactive programs, in conjunction with passive conservation measures such as City ordinances and landscape standards, have resulted in significant reductions in the City's water demand and a low per capita water use.

To promote conservation and reduce water demand, the City offers several water conservation programs, which together represent one component of the City's demand management measures.

Let's Save Together waterWise
City of Santa Barbara

Water Conservation Program Participation from 2021–2025

9,674
School Education Programs
Including K-6 classroom presentations, 6th grade LivingWise kits, field trips, and musical assemblies

138,000+
Water e-Sources Newsletter emails opened
Water Resources Division Newsletter

870
Water Efficient Landscape Standards Reviews
City staff perform plan checks and inspection for land development projects that include new/revised landscaping

413
Mulch Rebates
Rebate of up to two dump truck loads of County mulch delivered per year

259
High-Efficiency Clothes Washer Rebates
$150 rebate for replacing high water using clothes washers with eligible high-efficiency washer models

54
Irrigation and Landscape Rebates
Rebates to replace lawn with water wise plants and/or efficient irrigation

345
Green Gardener Program Graduates
Educates local gardeners in resource-efficient landscape management

211,000+
Educational Video Views
Videos on how to read your meter, check for leaks, adjust sprinklers, design water wise gardens, etc.

42,000+
WaterSmart Leak Alerts
Automated leak alerts sent via email or mail to alert customers of continuous use or burst leaks

1,289
Flume Rebates
Rebate on Flume device to monitor water use down to the minute and catch water leaks quickly

1 Introduction

This section provides a brief overview of the City of Santa Barbara and the purpose of this 2025 Urban Water Management Plan (UWMP). It also describes how the UWMP is organized and its relationship to local and regional planning efforts in which the City is involved.

IN THIS SECTION

- Introduction
- CA Water Code
- UWMP Organization
- UWMPs in Relation to Other Efforts
- Funding Eligibility

1.1 Introduction: City of Santa Barbara

The City of Santa Barbara (City) is responsible for delivering safe and reliable water service to over 93,000 people within its service area, and operates integrated wastewater collection, treatment, and recycling facilities. The City's primary water supply comes from local surface water reservoirs and an ocean desalination facility, with a smaller portion from groundwater, recycled water and imported State Water sources. The City updated their Long Term Water Supply Plan (LTWSP) and 2020 UWMP in 2021, together known as the 2020 Enhanced UWMP, as their guiding water supply planning document (WSC, 2021). The goal of this 2025 UWMP is to fulfill state-wide requirements of assessing the adequacy, reliability, and management of the City's water supply aligning with the City's 2021 LTWSP.

A UWMP checklist, to ensure compliance of this plan with the Urban Water Management Planning Act (UWMP Act) requirements, is provided in Appendix A. In addition, as required by the California Water Code (CWC), standardized tables for the reporting and submittal of UWMP data have been prepared and are included in Appendix B. A selection of these tables is also provided in the body of this plan to present supporting data.

1.2 California Water Code

In 1983, the State of California Legislature (Legislature) enacted the UWMP Act. The law required an urban water supplier providing water for municipal purposes to more than 3,000 customers or serving more than 3,000 acre-feet per year (AFY) to adopt a UWMP every five years. This UWMP must demonstrate water supply reliability under both normal and drought conditions. The UWMP Act applies to wholesale and retail water suppliers.

Since the original UWMP Act was passed, it has undergone significant expansion. Prolonged droughts, groundwater overdraft, regulatory revisions, and changing climatic conditions affect the reliability of each water supplier as well as statewide water reliability overseen by California Department of Water Resources (DWR), the State Water Resources Control Board (SWRCB), and the Legislature. Accordingly, the UWMP Act has grown to address changing conditions. The current requirements are found in Sections 10610-10656 and 10608 of the CWC.

DWR provides guidance for urban water suppliers by preparing an Urban Water Management Plan Guidebook 2025 (Guidebook), conducting workshops, developing tools, and providing program staff to help water suppliers prepare comprehensive and useful water management plans, implement water conservation programs, and understand the requirements of the CWC. Suppliers prepare their own UWMPs and submit them to DWR. DWR then reviews the plans to make sure they have addressed the requirements; they submit a report to the Legislature summarizing the status of the plans for each five-year cycle. The Guidebook, finalized in January 2026, was used to complete this 2025 UWMP.

The purpose of this UWMP is for the City to evaluate long-term resource planning and establish management measures to ensure adequate water supplies are available to meet existing and future demands. The UWMP provides a framework to help water suppliers maintain efficient use

of urban water supplies, promote conservation programs and policies, ensure that sufficient water supplies are available for future beneficial use, and provide a response mechanism during drought conditions or other water supply shortages.

The UWMP is a valuable planning tool used for multiple purposes, including:

- Providing a standardized methodology for water utilities to assess their water resource needs and availability.
- Serving as a resource to the community and other interested parties regarding water supply and demand, conservation, and other water-related information.
- Providing a key source of information for cities and counties when considering approval of proposed new developments and preparing regional long-range planning documents, such as city and county General Plans.
- Informing other regional and Statewide water planning efforts, such as Integrated Regional Water Management Plans and the California Water Plan.

CWC 10632 also includes requirements for suppliers to prepare a Water Shortage Contingency Plan (WSCP). The WSCP documents a supplier's plans to manage and mitigate an actual water shortage condition, should one occur because of drought or other impacts on water supplies. The WSCP is a standalone document that can be updated independently of the UWMP but is referenced and attached to the 2025 UWMP. The WSCP is provided in Appendix F.

1.3 UWMP Organization

The 2025 UWMP is organized as follows:

Section 1 – Introduction and Lay Description

This section provides background information on the UWMP process, new regulatory requirements, and an overview of the information covered throughout the remaining sections.

Section 2 – Plan Preparation

This section provides information on the processes used to develop the UWMP, including coordination and outreach efforts.

Section 3 – System Description

This section describes the City's water system, service area, population demographics, local climate, and land uses.

Section 4 –Water Use Characterization

This section describes and quantifies the current and projected water uses through 2050 within the water service area.

Section 5 – SB X7-7 Baselines, Targets, and 2025 Compliances

This section describes the City's compliance with the requirements of Senate Bill (SB) X7-7.

Section 6 – Water Supply Characterization

This section describes and quantifies the current and projected potable and non-potable water supplies.

Section 7 – Water Supply Reliability

This section describes the water service reliability through 2050 and includes the drought risk assessment for the next five years.

Section 8 – WSCP

This section includes an overview of the standalone WSCP. The complete WSCP is included as Appendix F.

Section 9 – Demand Management Measures

This section describes the City's efforts to promote conservation and reduce water demand, including discussions of specific demand management measures.

Section 10 – Plan Adoption, Submittal, and Implementation

This section describes the City's adoption, submittal to DWR, and implementation of the 2025 UWMP.

1.4 UWMPs in Relation to Other Efforts

This UWMP characterizes water use, estimates future demands and supply sources, and evaluates supply reliability for normal, single-dry, and five consecutive dry years. The UWMP also requires a standalone WSCP, which is summarized in Chapter 8 and provided in Appendix F.

In addition to the 2025 UWMP, the City is involved in several internal and external planning efforts. The City collaborates with a variety of stakeholders to achieve consistency between various planning documents locally and regionally.

Documents that were leveraged in preparation of this UWMP are:

- 2020 Enhanced UWMP
- 2021 LTWSP
- City of Santa Barbara's Water Conservation Strategic Plan: Making Conservation a Santa Barbara Way of Life (0)
- City of Santa Barbara General Plan (City of Santa Barbara, 2011)

1.5 UWMPs and Grant or Loan Eligibility

For a water supplier to be eligible for a grant or loan administered by DWR, the supplier must have a current UWMP on file that meets the requirements set forth by the CWC. A current UWMP must also be maintained by the supplier throughout the term of any grants or loans

received. The City has prepared the 2025 UWMP under guidance from DWR's 2025 UWMP Guidebook.

1.6 Demonstration of Consistency with the Delta Plan

Under the Sacramento-San Joaquin Delta (Delta) Reform Act of 2009, before State and local public agencies propose a covered action in the Delta, they must prepare a written certification of consistency, with detailed findings regarding whether the covered action is consistent with applicable Delta Plan policies and submit that certification to the Delta Stewardship Council. Anyone may appeal a certification of consistency, and if the Delta Stewardship Council grants the appeal, the covered action may not be implemented until the agency proposing the covered action submits a revised certification of consistency and no appeal is filed. However, the Delta Stewardship Council may deny the subsequent appeal.

An urban water supplier that anticipates participating in or receiving water from a proposed covered action, such as a multiyear water transfer, conveyance facility, or new diversion that involves transferring water through, exporting water from, or using water in the Delta, should provide information in its 2015, 2020, and 2025 UWMPs that can then be used in the covered action process to demonstrate consistency with Delta Plan Policy WR P1 — Reduce Reliance on the Delta through Improved Regional Water Self-Reliance.

SB X7-1, which was signed in 2009, reformed Delta policy and governance, including requiring development, adoption, and implementation of a "Delta Plan" and establishing a statewide policy to reduce reliance on the Delta in meeting California's future water supply needs through a statewide strategy of investing in improved regional supplies, conservation, and water use efficiency.

The California DWR does not review this analysis as part of the UWMP approval process; therefore, this information has been prepared as a stand-alone document and is attached as Appendix C. The analysis and documentation provided in Appendix C include the elements described in Delta Plan Policy WR P1 Section (c)(1) that need to be included in a water supplier's UWMP to support a certification of consistency for a future covered action.

2 Plan Preparation

This section provides information on the processes used to develop the UWMP, including efforts in coordination and outreach. This chapter details the importance of plan preparation, the merits of including enhanced material in a UWMP, and it provides specific guidance for preparing the document.

IN THIS SECTION

- Basis for Preparing a Plan
- Regional Planning
- Coordination and Outreach

2.1 Basis for Preparing a Plan

As mentioned in Section 1, CWC requires suppliers with 3,000 or more service connections, or those supplying 3,000 AFY or more of water to prepare a UWMP. Suppliers are required to update UWMPs at least once every five years on or before July 1, in years ending in six and one, incorporating updated and new information from the five years preceding each update. The City's 2025 UWMP must be submitted to DWR by July 1, 2026.

The City is preparing an individual UWMP and is not a member of a Regional Alliance. In 2025, the City served approximately 93,334 people in its service area, through approximately 27,600 potable metered connections, and supplied approximately 8,860 acre-feet (AF) of potable water to customers. The City has included all mandatory 2025 data in the development of this UWMP.

Throughout this UWMP, water volume is represented in units of AF unless otherwise noted. Data in this plan is based on the fiscal year (FY), running from July to June, except where noted. The FY for July 2024 to June 2025 is labeled as FY2025.

2.2 Regional Planning

Lake Cachuma is the City's main source of water supply. City staff coordinate regularly with the Cachuma Operation and Maintenance Board (COMB), a Joint Powers Authority that operates portions of the Cachuma Project and coordinates with the US Bureau of Reclamation (Reclamation) on contract issues and deliveries of project water. The COMB Board meets monthly. An Operating Committee consisting of the Cachuma Member Unit managers and the COMB General Manager, as well as other committees focusing on a variety of topics (including fisheries and public outreach), is scheduled on an as-needed basis.

Additionally, the City coordinates regularly with the Central Coast Water Authority (CCWA) about forecasted water deliveries from the State Water Project (SWP). CCWA is also a Joint Powers Authority. It is composed of eight member agencies and manages and operates Santa Barbara County's local facilities for distribution and treatment of State Water. The City was also an active participant in the development and adoption of the countywide Integrated Regional Water Management Plan, updated in 2019.

Agencies directly or indirectly involved in matters related to the City's water supplies include:

- COMB and its member agencies, including Carpinteria Valley Water District, Goleta Water District, City of Santa Barbara, Montecito Water District, and Santa Ynez River Water Conservation District, Improvement District No. 1
- Cachuma Conservation Release Board (CCRB) and its member agencies, including Goleta Water District, City of Santa Barbara, and Montecito Water District
- CCWA and its member agencies, including City of Santa Maria; City of Guadalupe; City of Buellton; Goleta Water District; City of Santa Barbara; Montecito Water District; Carpinteria Valley Water District; and Santa Ynez River Water Conservation District, Improvement District No. 1; and the following nonmember project participants: La

Cumbre Mutual Water Company (LCMWC), Vandenberg Air Force Base, Raytheon Company, and Morehart Land Company
- Santa Barbara County Water Agency

2.3 Coordination and Outreach

The City coordinated with multiple neighboring and stakeholder agencies to prepare the 2025 UWMP. The coordinated efforts were conducted to 1) inform these agencies of the City's efforts and activities; 2) gather high quality data for use in developing this UWMP; and 3) coordinate planning activities with other related regional plans and initiatives.

CWC Section 10621 requires that suppliers notify cities and counties to which they serve water that the UWMP and WSCP are being updated and reviewed. The CWC specifies that this must be done at least 60 days prior to the public hearing. To fulfill this requirement, the City sent letters of notification of preparation of the 2025 UWMP and 2025 WSCP to all cities and counties within City's service area 60 days prior to the public hearing as indicated in Table 2-1 and attached as Appendix D.

During the preparation of the City's plan, water supply data from CCWA and DWR were reviewed. The City receives wholesale water from the CCWA. The City provided water use projections to CCWA in accordance with CWC, Section 10631. Table 2-1 also lists the agencies that were advised of the opportunity to review the City's draft plan.

Table 2-1. Coordination and Outreach

Agency	Sent Notice of Preparation	Coordination for Projections	Sent a copy of the Public Draft for review
CCWA	X	X	X
COMB	X	X	X
CCRB	X		X
Santa Barbara County Water Agency	X		X
United States Bureau of Reclamation	X	X	X
Goleta Water District	X		X
Montecito Water District	X		X
Carpinteria Valley Water District	X		X
Santa Ynez River Water Conservation District, Improvement District No. 1	X		X

3 System Description

This section describes the City's water system, service area, population, demographics, local climate, and land uses.

IN THIS SECTION

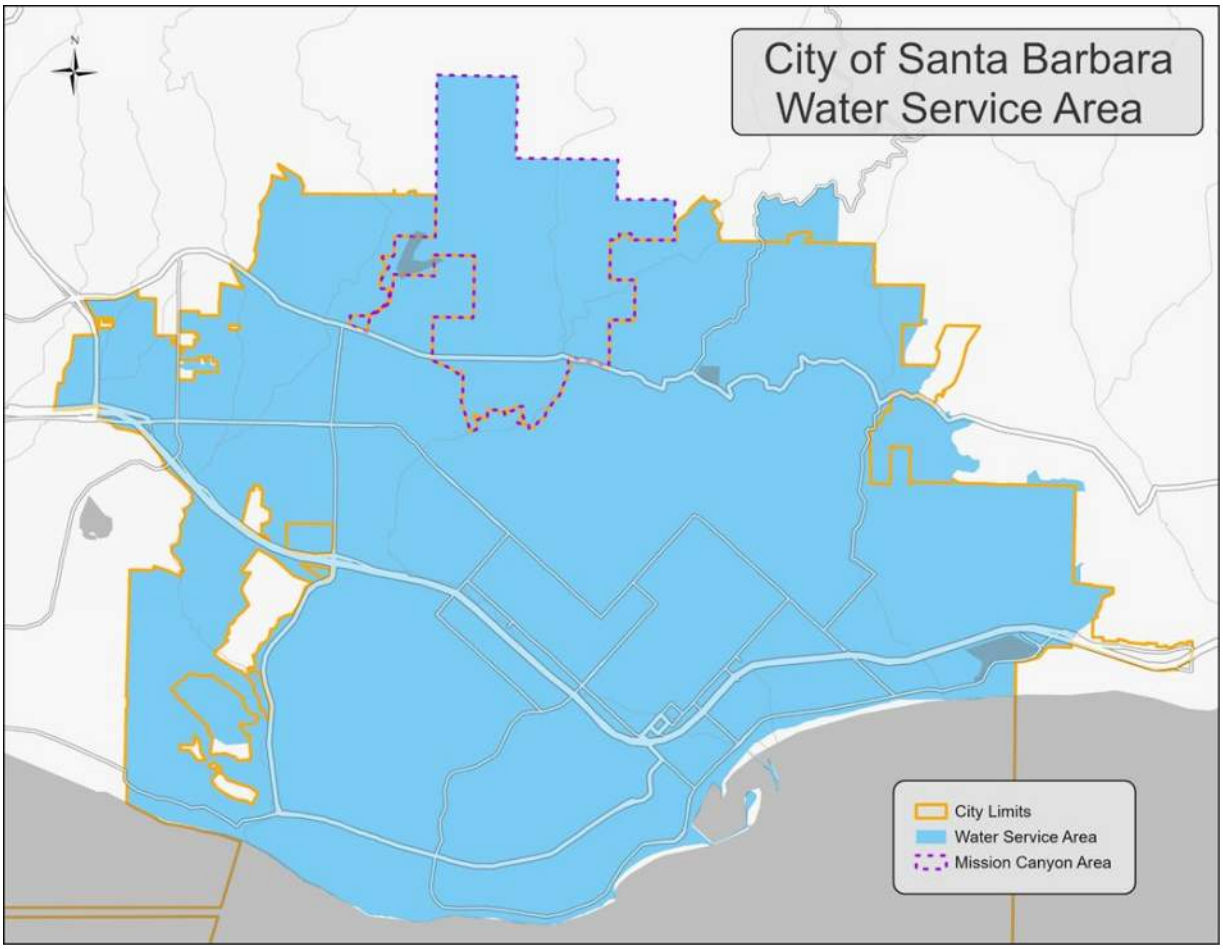
- General Description
- Service Area Boundary Map
- Service Area Climate, Demographics, and Socioeconomics
- Land Uses

3.1 System Description

The City is a coastal community that provides retail water service and wastewater treatment to a population of approximately 93,000, through approximately 27,600 service connections. The City serves varied topography ranging from sea level to 800 feet above sea level.

The City operates a water supply system that serves most of the properties within the City limits (except for the City airport, which is served by the Goleta Water District; and the Coast Village Road and Westmont Road areas, served by Montecito Water District). The City also serves selected areas located outside the City limits, most notably the unincorporated areas known as Mission Canyon and Barker Pass. Figure 3-1 shows the boundaries of the City's water service map and surrounding area. Since the 2020 UWMP, the City became the water supplier for a neighborhood of about 60 homes within the City limits previously served by Lincolnwood Mutual Water Company.

Figure 3-1. City of Santa Barbara Water Service Area

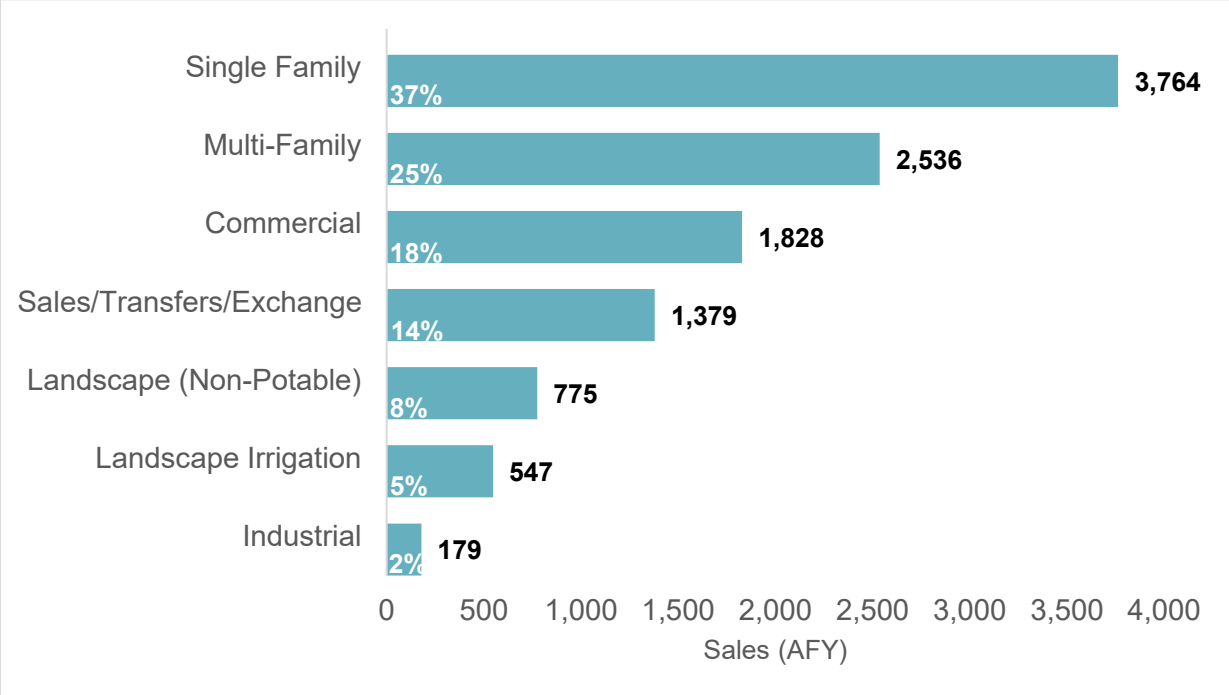


The City's potable water system consists of 330+ miles of distribution mains, 12 storage reservoirs, 16 pumping stations, and 8 production wells. The recycled water system is significantly smaller, and produced approximately 990 AF in 2025 through 13.5 miles of

distribution mains, 2 storage reservoirs, and 4 pumping stations. The City also operates a wastewater collection system consisting of 255 miles of sewer pipe and 7 lift stations. The City's wastewater treatment plant, El Estero Water Resource Center (WRC) has a design capacity of 11 million gallons per day (MGD) and an average flow of 6.15 MGD. El Estero WRC includes 2.5 MGD of tertiary filtration and disinfection capacity to produce recycled water for use at the plant and for the recycled water distribution system. The water and wastewater systems are operated and maintained by the City's Water Resources Department.

Figure 3-2 presents 2025 water sales by sector, to give an overview of the demographic makeup of the City's water service area. Residential use is predominant. The City is largely built out, though it is assumed that infill and redevelopment will continue at roughly the same rate as in the recent past, resulting in a small amount of new demand in the residential and commercial sectors. In 2011, the City Council adopted the Plan Santa Barbara General Plan. It also certified an addendum to the Final Environmental Impact Report (EIR) for Plan Santa Barbara, which sets the range of projected demand growth from new development. The report has been amended eight times since then to address substantial changes to Plan Santa Barbara. The City's Housing Element, which is a component of the General Plan, is updated on an eight-year cycle per state law and was last updated in 2023. The City's Water Resources and Community Development departments coordinated on the Housing Element and are in agreement on planned development and the probable implementation of approved development. Such informed data gathering on important issues is a means of checking the short-term "reality" of official projections. The relative distribution of demand by sector is expected to remain status quo.

Figure 3-2. FY2025 Metered Potable and Recycled Water Sales by Sector



3.2 Service Area Climate

The City is located on the central coast of California, between the Santa Ynez Mountains and the Pacific Ocean. It has a temperate Mediterranean style climate, with cool, wet winters and mild, dry summers. Temperatures only rarely fall below freezing in winter. During the late summer and early fall, hot, dry sundowner winds can create high water demand. An average rainfall of approximately 15 inches per year falls mostly during the winter period between December and March. Figure 3-3 shows the annual and average precipitation since 2000.

Table 3-1 shows the average temperatures, precipitation, and evapotranspiration (ETo) for the City, measured at Santa Barbara California Irrigation Management Information System (CIMIS) Station No. 107. The City bills its budget-based irrigation customers based on ETo data from this CIMIS station.

Figure 3-3. Annual Precipitation from 2000-2025

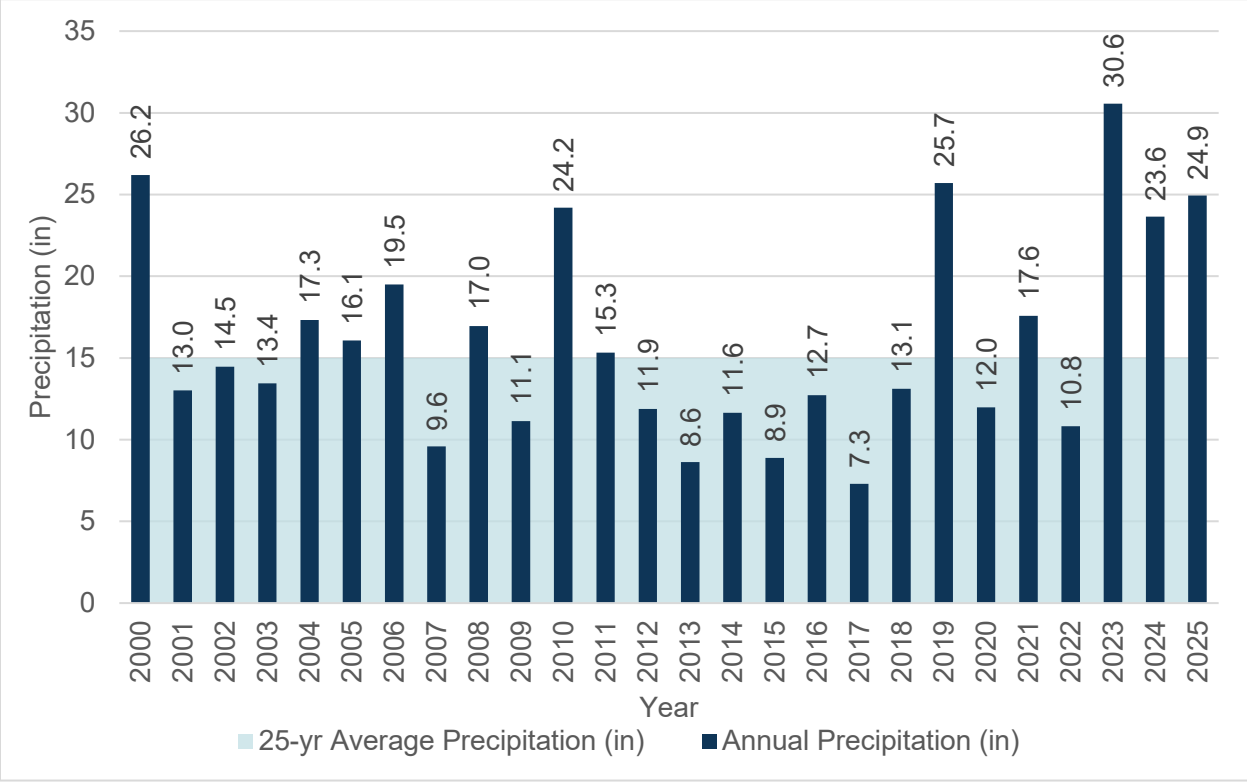


Table 3-1. Climate Data for the City of Santa Barbara, 2000-2025

Month	Average Temp (°F)	Average Precipitation (inches)[1]	Average ETo (inches)[2]
January	54.5	2.46	1.81
February	54.5	2.76	2.36
March	56.8	2.44	3.64
April	58.7	1.01	4.50
May	60.5	0.61	4.88
June	62.4	0.34	4.79
July	65.0	0.21	5.51
August	65.8	0.2	5.22
September	65.2	0.19	4.04
October	62.6	0.74	3.23
November	58.0	1.04	2.14
December	53.7	2.96	1.59
Annual Average:	**59.8**	**15.0**	**43.7**

Source: CIMIS Station No. 107, monthly data from 2000 to 2025 (California Department of Water Resources, 2026)

3.2.1 Climate Change

The City has long supported practical measures to improve energy efficiency and implement renewable energy technologies, including use of solar photovoltaic and cogeneration facilities.

In 2012, the City prepared a Climate Action Plan that addressed climate science findings, policy context and regional efforts, benefits of climate protection measures, carbon emission targets, adaptation strategies, and plan implementation. In 2018, the City prepared an Implementation Status Report for the 2012 Climate Action Plan and the Climate Change Report. It recommended the City prepare an update to the 2012 Climate Action Plan and prepare a comprehensive Climate Adaptation Plan that would help determine how the City will transition to 100% renewable energy use by 2030. In 2019, City Council adopted a Strategic Energy Plan. That plan lays out a road map to meet the City's 100% renewable electricity goal by 2030 and highlights the renewable energy projects, innovative programs, and strategic policies needed to facilitate transition to renewable energy. Also, in 2021, the City completed the City of Santa Barbara Sea-Level Rise Adaptation Plan, which outlines a phased approach to planning for sea-level rise based on monitoring changing shoreline conditions and taking actions to reduce vulnerabilities when defined thresholds are reached.

Most recently, the City developed and adopted the 2024 Climate Action Plan, with the goal of the City being carbon neutral by 2035. The updated Climate Action Plan establishes a 2-year and 10-year city-wide carbon reduction framework with high impact actions and priorities for

building energy use, transportation emissions, the water, wastewater, and solid waste sectors, carbon sequestration, and community potential.

In May 2026, the City Council adopted a Wastewater and Water Systems Climate Adaptation Plan (WSC, 2026) that evaluated impacts on the City's critical water and wastewater systems from hazards worsened by climate change. The plan included an analysis of impacts from flooding, erosion, sea level rise, changing rainfall, wildfire, drought, extreme heat, and groundwater on all parts of the wastewater and water systems with a focus on low-lying coastal areas that face the greatest threat from flooding and erosion. The plan included prioritization of vulnerabilities and recommended actions to improve resilience in phases, based on defined thresholds. The highest risks identified were for the wastewater system from flooding during heavy rainfall events and coastal storms (high ocean waves and storm surge). The largest risk for the drinking water system is from coastal erosion for water lines along the coast, and the plan includes adaptation measures to relocate or protect these lines as erosion thresholds are met in 20 to 50 years.

Climate change impacts on the City's long-term water demand are discussed in Section 4.2.3.3 and impacts on the City's supplies are discussed in Section 6.2.

3.2.2 Service Area Population, Demographics, and Socioeconomics

According to the US Census, the City had a population of approximately 88,665 in 2020 (U.S. Census Bureau, 2021). The City's 2025 population is estimated to be 90,723 based on projected growth rates from 2020 through 2025 in the *Santa Barbara County Regional Growth Forecast 2050* prepared by the Santa Barbara County Associations of Governments (SBCAG, 2019). However, as described in Section 3.1, the City's water service area also includes the adjacent census designated place, "Mission Canyon." The US Census reported population for Mission Canyon was 2,540 in 2020 (U.S. Census Bureau, 2021). To estimate the 2025 Mission Canyon population, the annual growth rate defined in the *Mission Canyon Community Plan — Final EIR* (0.55%) was applied (Santa Barbara County Planning and Development Department, 2014). Resultingly, the estimated Mission Canyon population is 2,611, and the total service area population for 2025 is approximately 93,334.

The City has a mix of housing types, including single-family and multifamily residences. The City is largely built out, though infill and redevelopment will continue, resulting in a small population increase. Population projections were prepared using growth rates from the *Santa Barbara County Regional Growth Forecast 2050* for the City and the *Mission Canyon Community Plan — Final EIR* for Mission Canyon. Table 3-2 shows the current and projected population for the City's water service area.

Table 3-2. Current and Projected Water Service Area Population

Population Served	2025	2030	2035	2040	2045	2050
Santa Barbara	90,723	91,909	93,110	94,326	94,704	95,084
Mission Canyon	2,611	2,683	2,758	2,834	2,913	2,994
Total	**93,334**	**94,592**	**95,868**	**97,160**	**97,617**	**98,078**

Sources: 2020 US Census population (U.S. Census Bureau, 2021), with City projections based on growth rate from SBCAG's *2019 Regional Growth Forecast 2050* (SBCAG, 2019) and Mission Canyon projections based on *Mission Canyon Community Plan — Final EIR* (Santa Barbara County Planning and Development Department, 2014).

Santa Barbara is a popular vacation destination, and tourism is an important part of the local economy. In addition, many people commute from around the County and nearby Ventura County to work in the City. It should be acknowledged that population from tourism and commuters is not factored into the population methodology. However, water use from tourism and jobs is accounted for under nonresidential customer categories in the demand projections in Section 4.2.3.

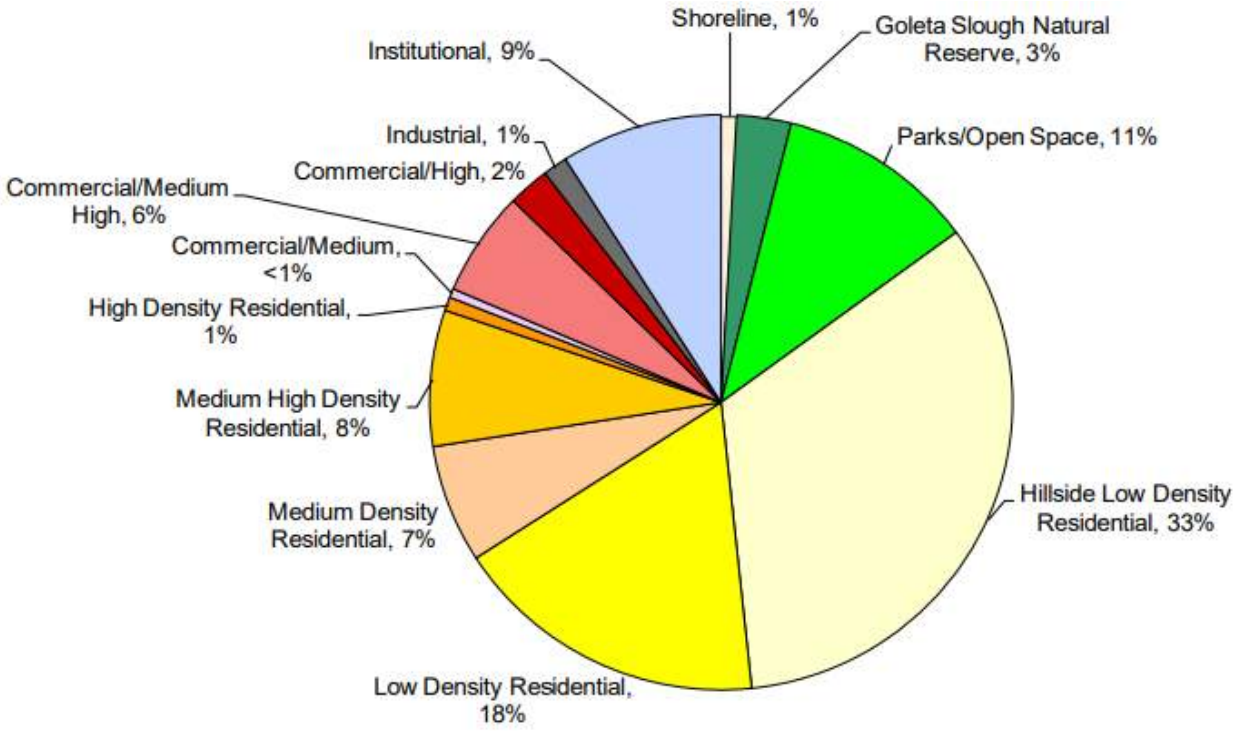
3.3 Land Uses within Service Area

Santa Barbara is predominantly a fully developed urban area characterized by established neighborhoods, minimal vacant parcels, and regulatory measures such as height limitations and architectural design reviews that maintain the city's distinctive visual identity.

Since 1989, the City has implemented deliberate controls on non-residential expansion, capping new development at approximately 3 million square feet through 2009 and an additional 1.35 million net square feet through 2030. These constraints have directed growth toward infill and redevelopment within existing commercial zones, with market trends favoring mixed-use configurations that integrate residential and commercial functions.

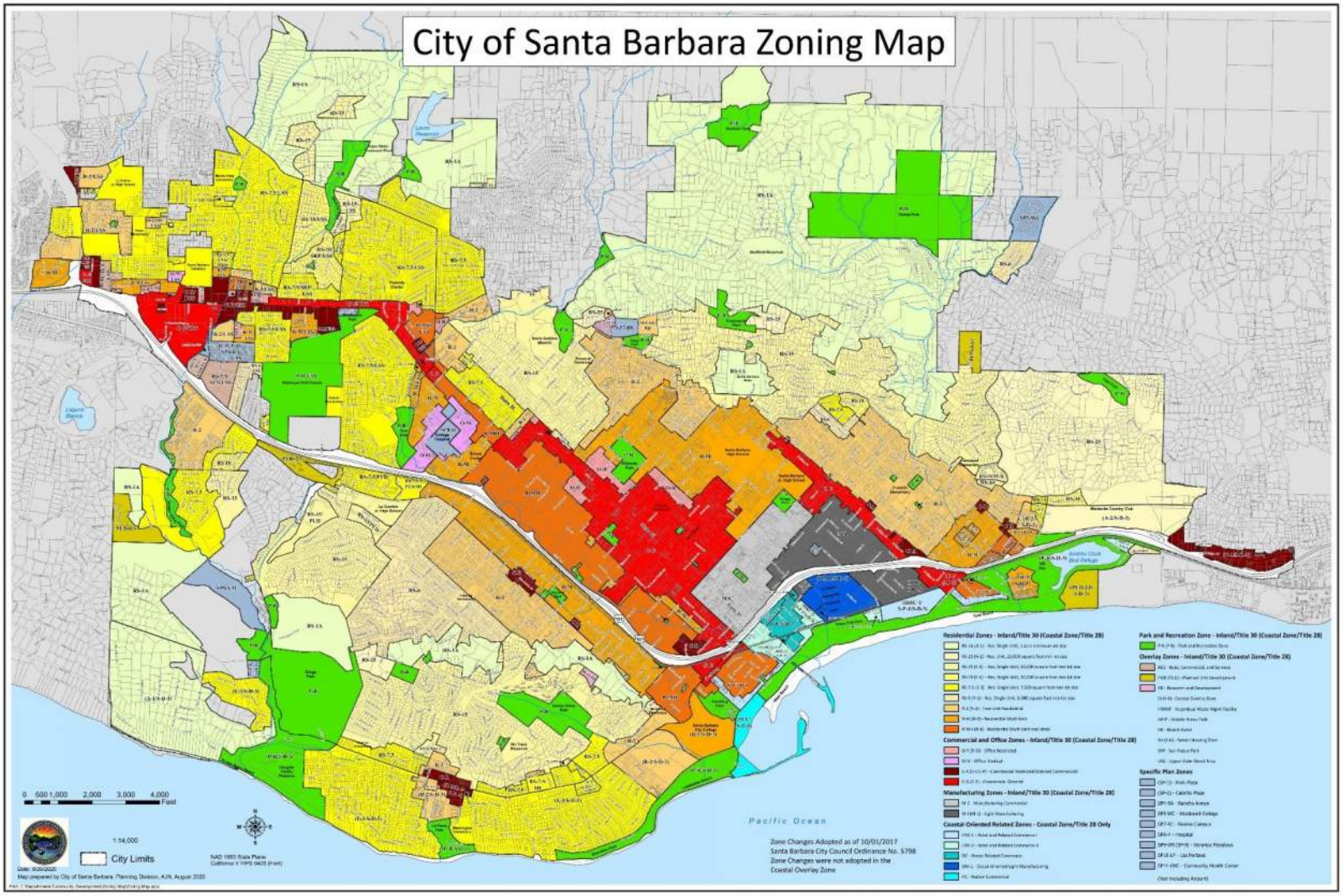
The General Plan Land Use Element has a 20-year planning horizon and was most recently updated by the City in 2011. As shown in Figure 3-4 and Figure 3-5, land use designations in the General Plan reflect: the predominance of Single Family residential areas (51%); followed by Medium to High Density Residential (16%); Parks and Open Space (11%); Commercial and Office (9%); Institutional including public schools (9%); Goleta Slough Natural Reserve and Shoreline (4%); and Industrial (1%).

Figure 3-4. City of Santa Barbara Land Use Distribution



Source: City of Santa Barbara 2011 General Plan - Land Use Element (City of Santa Barbara, 2011)

Figure 3-5. City of Santa Barbara General Plan Map for Inland Areas



Source: City of Santa Barbara Reference Maps (City of Santa Barbara , 2017)

4 Water Use Characterization

This section describes and quantifies the City's past, current, and future water use through 2050. The City provides potable water to all its customers, which are comprised of about 87% residential and 13% commercial accounts.

IN THIS SECTION

- Past, Current, and Projected Water Use by Sector
- Demand Projection Uncertainty
- Water Use for Lower Income Households
- Climate Change Considerations

4.1 Non-Potable Versus Potable Water Use

Total water use within the City's service area consists of potable water and non-potable water demand. In FY2025, recycled water comprised 10% of the City's water use, while potable water encompassed the remaining 90%. The City's recycled water demand includes landscape irrigation and process water used at the City's El Estero WRC. The City's potable demand includes residential, landscape irrigation, industrial, commercial, and sales to other agencies.

4.2 Past, Current, and Projected Water Use by Sector

The following sections describe the City's past, current, and project water use by sector, as defined by the Water Code.

In accordance with Water Code Section 10631(d), urban retail water suppliers are required to categorize water usage by sector. The City identifies its water use sectors as defined in the statute, which include the following:

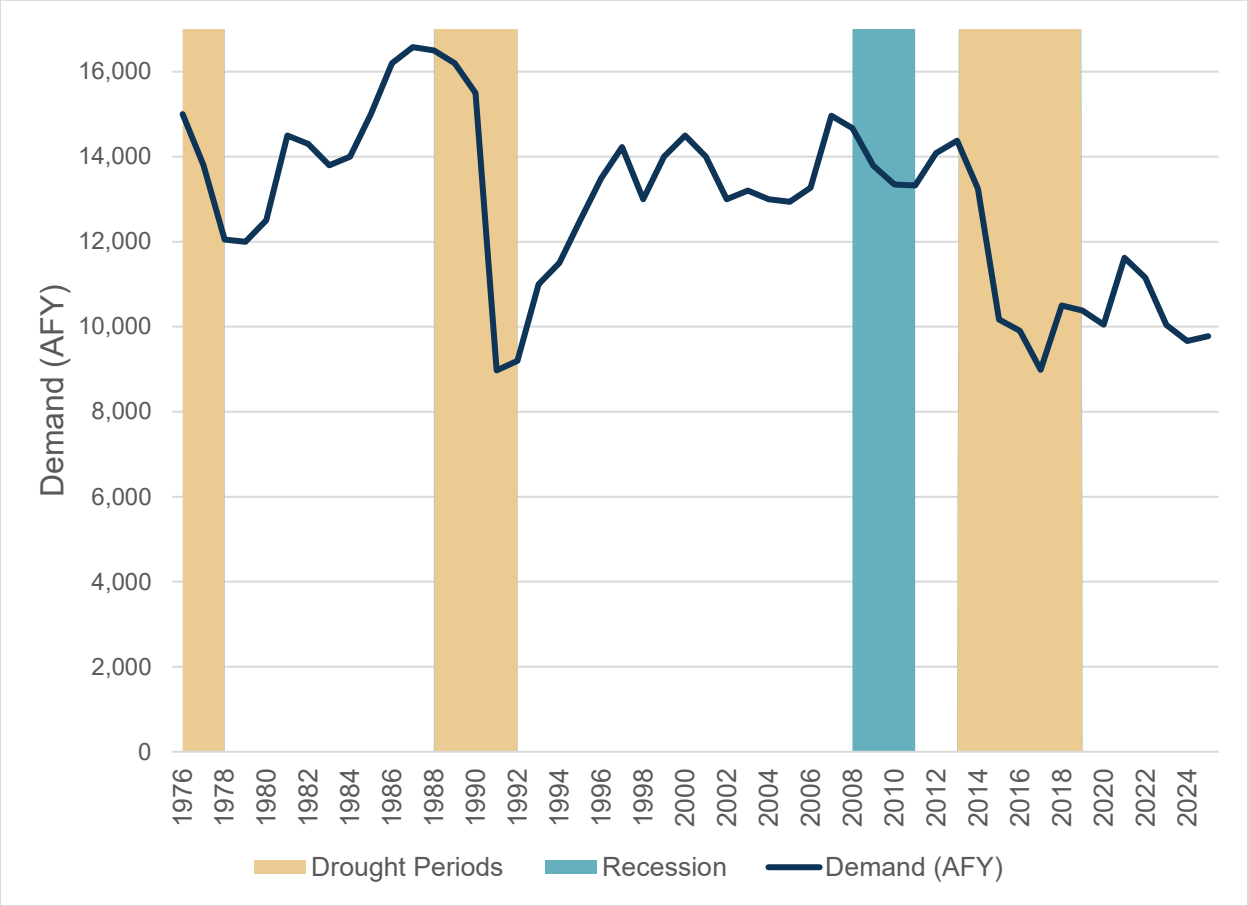
- Single Family
- Multi Family
- Commercial
- Industrial
- Landscape Irrigation
- Sales to other agencies

There are no identified water use sectors in the City's service area in addition to those listed in the Water Code.

4.2.1 Historical Water Use

Figure 4-1 shows the City's water demand history. Produced water is used as the traditional indicator of demand since water is produced to meet the demand. The City tracks total water demand based on production to the potable water and recycled water distribution systems. The combined total is referred to as "system" demand. Figure 4-1 illustrates the response to severe drought in the late 1980s and early 1990s and the partial recovery of demand once drastic conservation measures were no longer needed. Outside of the economic demand drivers of the 2008 recession, variations from 1998 through 2012 are primarily the result of year-to-year variations in weather. Beginning in 2013, the dramatic drop in demand indicates the response to the most recent drought, officially declared by the City in 2014. As shown, demands have partially recovered following the 2014-2019 drought.

Figure 4-1. Historic System Demand



Note: Total water demand (dark blue) is quantified as production to the potable water and recycled water distribution systems.

4.2.2 Distribution System Water Losses

The City, like all water agencies, does have some water loss. In simple terms, water loss is the difference between the amount of water produced and the amount of water billed to customers. The City has been conducting annual water audits of the water distribution system since 2010 using the approach described in the American Water Works Association (AWWA) Manual M36 – Water Audits and Loss Control Programs (AWWA, 2026). The purpose of the audit is to quantify the City's real losses (water physically lost from the system through leaks, breaks, theft, and other means), as well as apparent losses (water lost through meter under registration and data handling errors). In addition to conducting annual water loss audits, beginning in 2017, the City has worked with a third-party validator to complete a level 1 validation of each water audit, as required by SB 555. This ensures the data used to compile the audits are as accurate as possible and helps to identify areas where data collection and quality could be improved.

In response to increased water main breaks in the late 1980s, the City Council created an annual Water Main Improvement Program and established a goal of annually replacing 1%, or

approximately 3 miles, of the City's water mains. This goal was an integral part of the Water Capital Improvement Program for over 30 years. In June 2018, the City Council approved increasing the annual replacement goal to 2%, or approximately 6 miles, of the water mains. This more aggressive replacement goal targets the distribution system's cast iron mains, which were installed between 1900 and 1950, make up 44% of the City's distribution system, and have an average life span of 77 years. Doubling the replacement goal will reduce the number of water main breaks, which will reduce the City's real water losses.

To address water lost during annual maintenance activities, the City invested in a Neutral Output Discharge Elimination System (NO-DES) truck to flush water distribution pipelines. Before the NO-DES truck was in use, the City would have to perform this annual distribution system maintenance work by flushing water from fire hydrants to storm drains. With NO-DES technology, the City can now flush distribution lines by connecting two fire hydrants to a filtration truck that flushes, recirculates, and filters the water before returning it back to the distribution system.

The City has invested in multiple capital projects to manage system losses. The City launched a comprehensive Meter Replacement Program in 2014 with goals to target and replace all 1", 3/4", and 5/8" meters (approximately 25,500 meters) with Advanced Metering Infrastructure (AMI)-compatible meters. To date, this work is essentially complete, with only a few of these smaller meters left to replace. In addition, all but 100 of 2,000 meters sized 1½" and larger have been replaced with AMI-compatible meters that more accurately register lower flows.

The City Council approved an AMI pilot project in November 2018, and subsequently a contract for full implementation in August 2021. The AMI system is fully deployed to all City water customers as of spring 2024. The detailed consumption data provided by AMI offers potential to improve the identification of meter inaccuracies and distribution system leaks, ultimately supporting more effective management of both apparent and real water losses. As the City's AMI data analytics capabilities are further developed, the City will continue to explore these and other potential applications to strengthen system efficiency and water loss management.

Appendix E contains the FY2021 to FY2025 reporting worksheets, and water losses are summarized in Table 4-1. The table shows total water losses (real and apparent loss) range from 35.5 to 14.0 gallons per service connection per day (gpscd) between FY2021 and FY2025. The City's FY2025 Water Loss Audit shows the City's total water losses were 14 gpscd, and real water losses were 10.1 gpscd, which is below the City's real water loss standard of 28.8 gpscd.

As of report writing, the City is currently undergoing an effort to create a Water Loss Control Strategic Plan to increase the City's confidence in its water loss calculations, ensure legislative targets are met, and direct strategic and cost-effect water loss control efforts. The City anticipates the plan will be completed by the end of Fiscal Year 2026.

Table 4-1. Annual Total Water Losses (Real and Apparent Loss)

	FY2021	FY2022	FY2023	FY2024	FY2025
Total Water Loss, AFY	1,148	747	796	1,041	411
Total Water Loss, gpscd	35.5	23.0	26.9	35.3	14.0

Note: Reported losses for years FY2021-FY2025 based on water loss audits.

4.2.3 Current and Projected Water Use

The following sections describe the City's projected water demand from customer sales and other water uses, including water loss. A discussion of projected water demand from low-income households also follows.

The City's demand projections were prepared to accomplish the following:

- Incorporate updated historical and projected population and commercial growth rates
- Evaluate current and future conservation measures using a set of applicable criteria
- Quantify the costs and water savings of the conservation measures

The City's guiding document to meet future conservation goals and implement demand management measures is its Water Conservation Strategic Plan (Maddaus Water Management, 2026). The Plan was updated in conjunction with this UWMP and is included in 0. The City's baseline water demand projection was developed as part of the Water Conservation Strategic Plan, with the most significant assumptions impacting future demand summarized below:

- Baseline customer water use estimated from 2021 to 2024 average water use
- Population growth projections from the Regional Growth Forecast 2050 Santa Barbara County (Santa Barbara County Association of Governments, 2019)
- 2023 Housing Element quantified objectives of 3,083 new units to be constructed between 2023 and 2035, including 162 new multi-family units, 78 accessory dwelling units, and 2 single-family units per year from 2025 to 2035 (City of Santa Barbara, 2023)
- Employment projections from California Employment Development Department for the Santa Maria–Santa Barbara Metropolitan Statistical Area
- Distribution water losses align with the City's water loss standard in gallons per service connection per day and grow with the growth in service connections.
- Estimated water savings from the plumbing code
- The City's existing Water Conservation Program B and plumbing code implementation, with some additional measures

Table 4-2 shows the current and projected baseline demand for the City's water system at five-year intervals. These include metered sales by customer class, sales, and system losses.

Table 4-2. Baseline Water Demand and Total Water Use – Current and Projected (AFY)

Use Type	2025[1]	2030	2035	2040	2045	2050
Single Family	3,764	3,569	3,440	3,336	3,281	3,233
Multi-Family	2,536	2,558	2,644	2,755	2,775	2,805
Commercial, Institutional, Governmental	2,007	2,087	2,201	2,243	2,294	2,349
Irrigation	547	536	533	532	529	527
Water Loss[2,3]	411	1,067	1,080	1,089	1,094	1,100
Unbilled Authorized Consumption[3]	131	132	133	135	135	136
Total Customer Demand	**9,396**	**9,949**	**10,031**	**10,088**	**10,107**	**10,150**
Recycled Water	1,024	1,020	1,020	1,020	1,020	1,020
Total City Service Area Demand	**10,420**	**10,969**	**11,051**	**11,108**	**11,127**	**11,169**
Sales[4]	1,379	1,430	1,430	1,430	1,430	1,430
Total Demand	**11,799**	**12,399**	**12,481**	**12,538**	**12,557**	**12,600**

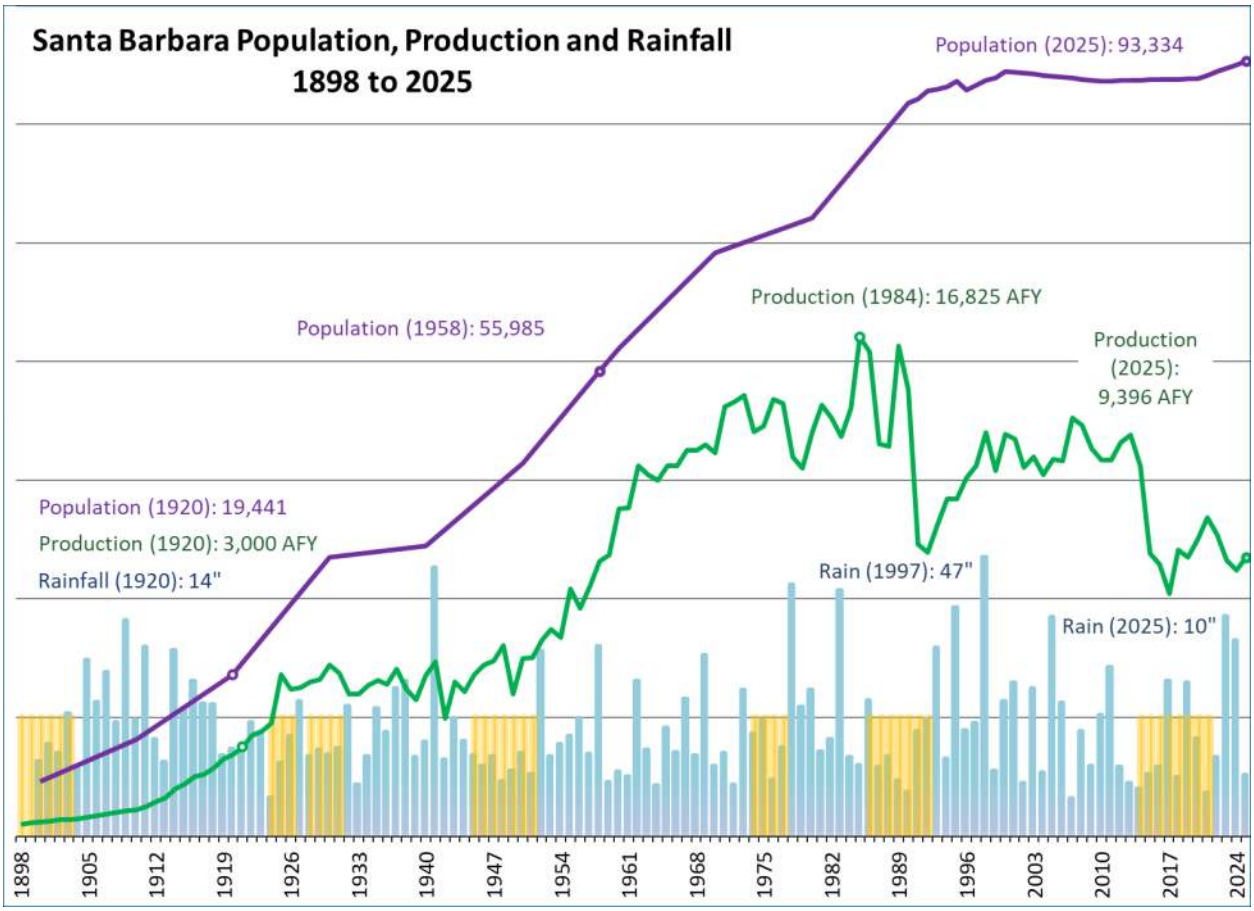
Notes:
1. 2025 is actual water use. 2030-2050 are projected water use.
2. Water Loss includes both real and apparent loss. 2025 reflects actual losses. Out years are projected based on FY21-24 averages.
3. Together, Water Loss and Unbilled Authorized Consumption account for total non-revenue water. The 2025 volume represents the calculation methodology used in the FY24-25 water loss audit and does not include Cater treatment plant process water. Out years are projected based on FY21-24 averages.
4. Sales include the City's Water Sales Agreement with Montecito Water District.

4.2.3.1 Water Use Reduction Plan

The City has been a leader in water conservation since the late 1980s. The City's Water Conservation Program has been successful in reducing the use of potable water supplies, achieving compliance with State and federal conservation requirements, and creating a water efficiency ethic in the Santa Barbara community. The City's long-term commitment to water conservation is evident in reductions in water demand achieved over the past 30 years. As

shown in Figure 4-2, the City's customer potable demand has dropped from approximately 16,600 AFY in the late 1980s to approximately 9,400 AFY in 2025 despite population growth.

Figure 4-2. Historic Population, Production, and Rainfall



Note: Production corresponds to the City customer potable demand.

The Conservation Program allows the City to implement water conservation measures in line with current conditions and proposed future regulations. The Conservation Program considers best management practices (BMP) consistent with best practices in the industry and the Water Conservation Act of 2009 (SB X7-7, which requires urban water agencies to collectively reduce statewide per capita water use by 20% before December 31, 2020). SB 606 and AB 1668 were enacted in 2018, following the most recent statewide drought. These bills are intended to implement "Making Water Conservation a California Way of Life" legislation to better prepare the State for droughts and climate change through the establishment of individualized efficiency goals for each urban water supplier. The "Making Water Conservation a California Way of Life" Regulation became effective January 1, 2025, and requires urban water suppliers to calculate its urban water use objective (UWUO) and demonstrate compliance with the UWUO beginning January 1, 2027. The UWUO includes the following:

- An indoor per-person water use goal of 55 gallons per day until 2025, 47 gallons from 2025 to 2030, and 42 gallons beginning in 2030.

- A standard for residential outdoor and dedicated irrigation meter water use based on climate and landscaped area of the urban water provider. The landscape efficiency factor used to calculate the residential outdoor water budget is 0.8 through 2035, reduces to 0.63 from 2035 to 2040, and is 0.55 beginning 2040. The landscape efficiency factor used to calculate the dedicated irrigation meter water budget are 0.8 from 2028 to 2035, 0.63 from 2035 to 2040, and 0.45 in 2040 and beyond.
- Supplier-specific water distribution system water loss standard. The City's water loss standard is 28.8 gallons per service connection per day (gpscd) for real water losses and 4.6 gpscd for apparent losses.

The "Making Conservation a California a Way of Life" regulation went into effect on January 1, 2025. Pursuant to the regulation, urban water suppliers are required to submit a reporting form to the State Water Resources Control Board (SWRCB) by January 1 of each year. The City has met its calculated objective for the FY23-24 and FY24–25 reporting years and, based on current and projected demands, is expected to continue to meet its calculated objective with continued conservation measures.

The City analyzed and updated its existing conservation program as part of its Water Conservation Strategic Plan update, provided in 0. The analysis includes modeling current and potential water conservation measures by quantifying demand reduction effects of conservation measures along with the effects of plumbing codes and appliance standards.

4.2.3.2 Estimating Water Savings from Codes, Ordinances, and Land Use Plans

The City's demand projections include the impact of plumbing code changes arising from the Federal Energy Policy Acts of 1992 and 2005 and State legislation relating to plumbing fixtures. Recent State legislation, such as Assembly Bill (AB) 715, updated California Code of Regulations Title 20 Appliance Efficiency Regulations adopted by the California Energy Commission on September 1, 2015. This State legislation further increased the efficiency requirements for all toilets, showerheads, urinals, and faucets sold in the State. In addition, the State of California addresses plumbing fixture efficiency through building codes such as the California Green Building Standards Code (CAL Green), which first took effect in 2011. CAL Green updates every three years. The most recent effective version is 2022 CAL Green, which was adopted in January 2023. All of the water savings associated with these pieces of legislation are included in the water conservation and demand modeling shown in Table 4-2.

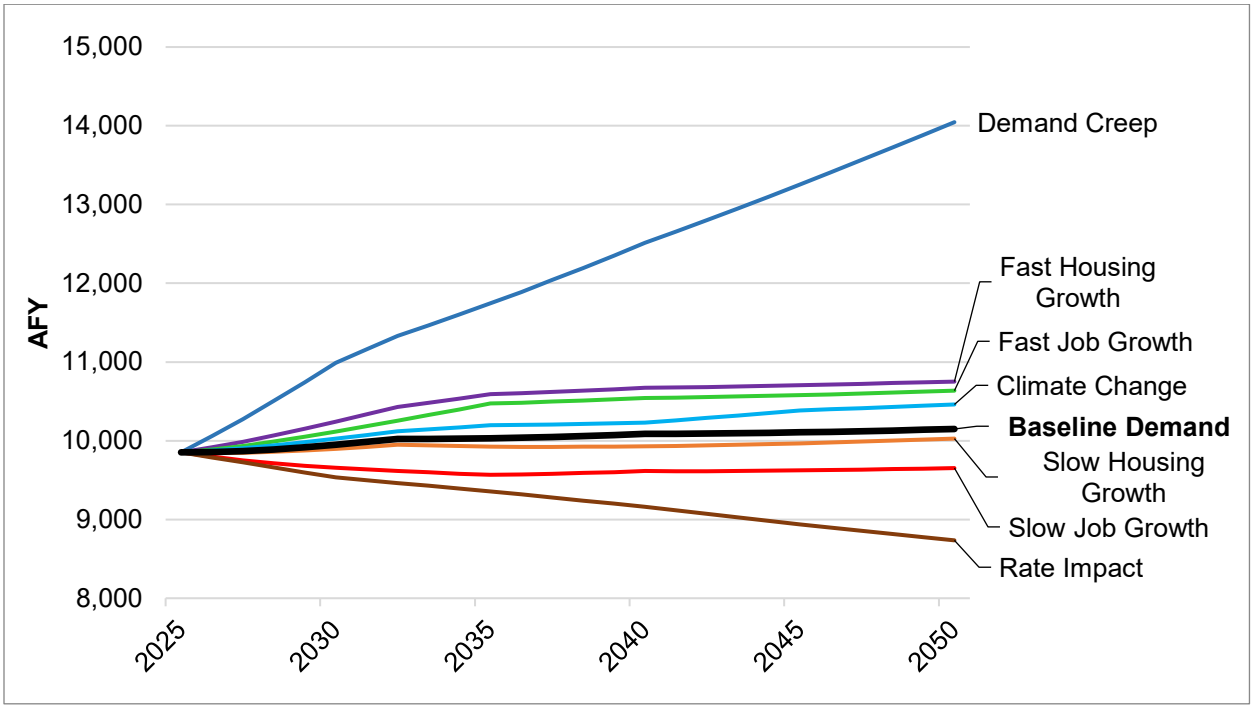
4.2.3.3 Demand Projection Uncertainties

There are uncertainties associated with demand projections in general. The City considered a range of potential future demand scenarios, presented together as a "demand envelope". The demand envelope includes seven scenarios in which various factors have the potential to put upward or downward pressure on the City's future water demand are analyzed. The demand envelope can be thought of as a range of plausible water demand futures that may materialize depending on which pressures occur and influence water demand. For example, higher

population growth would put an upward pressure on water demand, causing demands to increase, while slower population growth would put downward pressure on future water demand, causing demands to decrease. While the scenarios attempt to analyze the effect of specific demand pressures, often several pressures influence actual water demands simultaneously. Each future demand scenario is a function of the baseline demand projection and includes at least one change to assumptions about the underlying demand pressures. The scenarios are described below and shown in Figure 4-3:

1. Higher population growth
2. Slower population growth
3. Faster job growth
4. Slower job growth
5. Demand creep
6. Climate change impact
7. Rate Impacts

Figure 4-3. Demand Scenarios



Note: Demand scenarios include total customer potable demand, excluding recycled water demand and sales to other agencies.

Faster Housing Growth Scenario

The housing growth assumption for baseline demands is from the City's Housing Element, which states that approximately 3,001 housing units could be built from 2025-2035. This housing goal is estimated as most likely based on the needs, resources, and constraints for new

housing in the City. The most recent update to the State's long-term housing goals, known as Regional Housing Needs Allocation (RHNA), for the City was part of the 6th Cycle Housing Element, and includes 8,001 total units from 2023 to 2031. This is a significant increase in new units from previous housing goals, and the State acknowledges that total housing needs identified through the RHNA process may exceed available resources and the community's ability to satisfy this need.

The faster housing growth demand scenario includes higher population and housing growth assuming the City were to meet their projected RHNA goals of 8,001 new units from 2023 to 2035. This scenario includes 689 new housing units per year from 2025 to 2035 compared to the 242 new units per year included in the Baseline Demand scenario, resulting in an approximately 6% demand increase compared to the baseline demand by 2050.

Slow Housing Growth Scenario

The slower population growth scenario assumes external factors slow growth in the City, and the Housing Element goals are extended through 2050 instead of being completed by 2035. This results in 107 new units per year from 2025-2050 compared to the 242 new units included in the Baseline Projection. This scenario results in a 1% lower demand compared to the baseline by 2050.

Fast Job Growth Scenario

The City's employment growth will directly impact water demand. To consider a scenario in which the City experiences fast job growth, a 20% increase is applied to the Baseline Projection commercial population, resulting in a 5% increase in demand by 2050.

Slower Job Growth Scenario

On the other hand, the City may experience slower job growth over the planning period. To consider this scenario, a 20% decrease is applied to the Baseline Projection commercial users, resulting in a 5% decrease in demand by 2050.

Demand Creep Scenario

Since 2021, the City's water use has declined due to conservation efforts and public messaging during the dry years of 2021–2022, followed by wetter conditions from 2023 to 2025 that reduced outdoor water demand. The "demand creep" scenario anticipates a gradual increase in per capita water use, reflecting a return to more typical water year (WY) conditions. Under this scenario, baseline water demand is projected to rise steadily, reaching 110% of 2021 demand levels by 2030. This scenario recognizes that several plausible demand pressures could increase demand at the same time, such as customer consumption that outpaces conservation, fast job growth, increased tourism, and hotter temperatures. The demand creep scenario is the upper bound of the demand envelope, with 38% more water demand than baseline by 2050.

Climate Change

This demand projection applies changes in projected temperature for Santa Barbara developed by Cal Adapt, which is based on analysis in California's Fourth Climate Change Assessment (California Governor's Office of Planning and Research, 2018). Temperature projections used are based on an average of 10 climate models and use the high emission representative concentration pathway 8.5, which assumes "business as usual." Under this scenario, emissions continue to rise strongly through 2050 and plateau around 2100. This results in a projected temperature increase of 1.4 degrees Fahrenheit from 2025 through 2050 for Santa Barabara. Under hotter and drier conditions due to climate change, water needed for outdoor irrigation will increase to maintain healthy plants, evaporative losses will increase, and water use for commercial and industrial cooling is expected to rise. This climate change demand scenario increases outdoor demand by 5% from the baseline for every degree Fahrenheit of temperature rise through the planning period using the simple adjustment factor method described in the AWWA guidebook *Incorporating Climate Change Impacts into Demand Forecasting* (Carollo, 2025). Incorporating projected climate driven impacts results in a 3% increase in water demand through 2050.

Rate Impacts

The City completed a Water Rate Study in 2024 to update water rates through FY28 to meet revenue requirements and cost of water service. The adopted water rates from the rate study include a 10.5% annual increase for 2025 and 2026, and a 10% increase in 2027 and 2028 (HDR, 2024). Water rate increases can lead to reduced customer water use. A literature review of 189 major California utilities evaluated price elasticity of water demand and found price elasticities ranging from -0.2 to -0.51, indicating that a 10% increase in price typically corresponds to a 2.0% to 5.1% reduction in water use (Juhee Lee, 2024). The price elasticity of water is heavily influenced by the agency and rate structure. The City of Santa Barbara is a leader in water use efficiency and conservation in California and should expect price elasticity on the lower range.

From FY24 to FY25 the City implemented the first 10.5% water rate increase and water demand dropped by 1.8%. This results in a -0.17 price elasticity rate if the demand reduction was due only to the rate increase. However, it is likely that the demand reduction from FY24 to FY25 is influenced by the change in water rates, weather, and other external factors, such as the economy.

The City of Santa Cruz evaluated price elasticity following water rate increases in 2018 and found it had a price elasticity of -0.11 (M. Cubed, 2019). Because the City of Santa Barbara and the City of Santa Cruz are both mid-sized coastal California cities with significant investment in long-term water use efficiency and conservation, it was assumed that the -0.11 price elasticity is representative for the City of Santa Barbara as well. A -0.11 price elasticity indicates that for every 1% increase in water rates, water demand is expected to decrease by 0.11%.

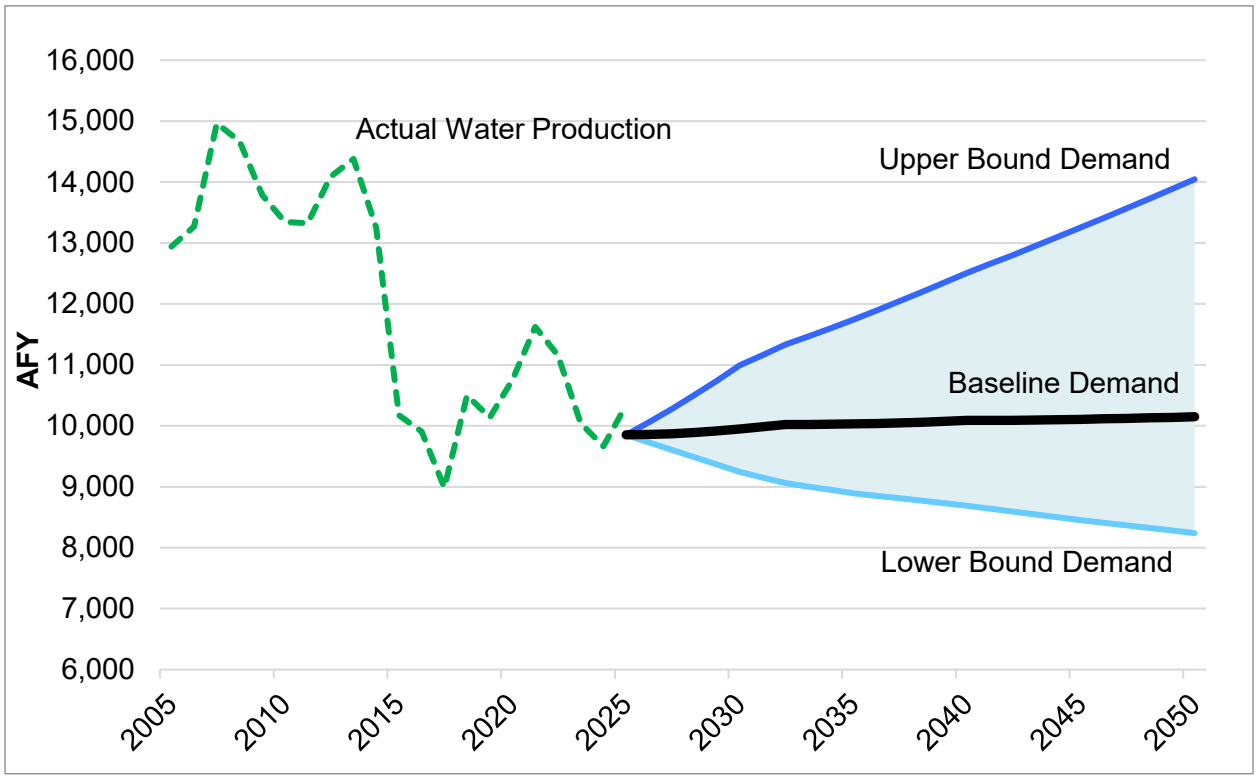
To develop the rate impact demand scenario, the adopted annual rate increases were applied through 2028 and are assumed to ramp down to a 5% annual increase from 2028 through 2050.

The assumed elasticity factor of -0.11 was applied to the projected water rate increases to calculate demand from 2025–2050 for the rate impact scenario. This results in a total decrease in demand of 13.9% by 2050. This scenario should be considered conservative as it likely overpredicts demand decreases in out years; there would likely be demand hardening as customers adapt to higher water rates and implement water efficiency measures.

Uncertainties Analysis

To better understand the demand projection uncertainties, the City defined a demand projection envelope (Figure 4-4) by adjusting the key variables described above, including population, employment, demand creep, climate change, and rate impacts. The upper bound of the demand envelope is the demand creep scenario. The lower bound of the demand envelope combines the two demand scenarios that cause demand to decrease the most, water rate impacts and slower job growth.

Figure 4-4. Actual Water Production and Demand Projection Envelope



Note: City customer potable water demand shown, recycled water demand and sales to Montecito Water District.

Based on the City's demand envelope analysis, housing growth projections, climate change, and employment (commercial, industrial, and institutional) projections have a low impact on demand in 2050, water rate increases have a moderate impact on demand, and demand creep assumptions have a large impact.

The low impact from housing growth assumptions (approximately 6,200 new units is equivalent to a 1% increase in population) is because most new residents are assumed to be housed in multifamily units or accessory dwelling units, which have a relatively low per capita water use.

Employment projections have a low impact (roughly 5% change with a 20% change in employment), attributed to increased commercial and industrial activity, such as at hotels and restaurants, and the associated water use.

The rate impact scenario results in a moderate impact (roughly a 14% decrease in water demand by 2050). This is due to the cumulative impacts of rate increases every year. However, this scenario is conservative, likely over-predicting demand reductions in out years, and it is reasonable to assume that price elasticity would decline over time with demand hardening.

The variable with the largest demand projection impact (roughly a 38% increase) is the water use of existing customers and the extent to which customer water use patterns change over time or creep back to previous patterns. The assumption represents a difference of roughly 1,000 AFY by 2030 and 3,900 AFY by 2050. This scenario highlights the importance of the City's conservation program and demand management measures, which have influenced a culture of water efficiency within the City, discussed in Chapter 9.

The baseline demand projections in Table 4-2 represent the most plausible future demand projection and were used in this plan and the City's updated Water Conservation Strategic Plan. The demand envelope analysis allows the City to track its demand moving forward and understand trends as they unfold within the demand envelope. The UWMP baseline demand projections account for existing and future requirements set by SB 606 and AB 1668, the "Making Water Conservation a California Way of Life" Regulation.

4.2.4 Characteristic Five-Year Water Use

In addition to past and projected uses, the UWMP more closely analyzes anticipated conditions for the next five years (2026 – 2030) as part of a drought risk assessment (DRA) (see Section 7.2). The demand projection over the next five years is shown in Table 4-3, and anticipates a relatively stable demand. The demands are reported without drought conditions (also known as unconstrained demand), so they do not account for potential water shortage measures that the City could enact if an extended drought emerges from recent dry WYs.

Table 4-3. Projected Five Year Water Demand (AFY)

Year	FY26	FY27	FY28	FY29	FY30
Demand	12,307	12,317	12,339	12,366	12,399

4.3 Water Use for Lower Income Households

Table 4-4 projects water needed to serve lower income households, defined as those earning less than 80% of area median income, adjusted for family size. Based on the 2024 American Community Survey, an estimated 15.2% of the City's total population is classified as low income, and this group is assumed to fall within the multi-family water use category (U.S. Census Bureau, 2024). Lower-income demand was calculated by applying the proportion of multi-family residents estimated to be low-income (approximately 30.7%) to the projected multi-family water demand from 2025 through 2050. These demands are included in the overall water demand projections in Table 4-2.

Table 4-4. Existing and Projected Water Demand for Lower Income Households (AFY)

Year	2025	2030	2035	2040	2045	2050
Lower Income Household Demand	780	800	820	850	850	860

5 SB X7-7 2020 Compliance

This section describes the City's compliance in 2020 with SB X7-7.

IN THIS SECTION

- SBX7-7 Compliance

5.1 2020 Target Compliance

SB 7 of Special Extended Session 7 (SB X7-7) was incorporated into the UWMP Act in 2009 and requires that all water suppliers increase water use efficiency with the overall goal to decrease per-capita water consumption within the state by 20% by the year 2020. SB X7-7 required water suppliers to calculate their actual 2020 gross water use to determine whether they had met their 2020 target. Ongoing compliance with the targets set by SB X7-7 is still required as part of the UWMP Act.

As described in the City's 2020 UWMP, the City's 2020 target was 117 gallons per capita per day (gpcd) or less. The City achieved an actual per capita water in 2020 of 92 gpcd, below the 2020 target as shown in Table 5-1.

Additionally, the State's "Making Water Conservation a California Way of Life" legislation uses the 2020 target as a backstop for calculating the Urban Water Use Objective (UWUO), described in Section 4.2.3.1. The City's 2020 target is lower than its calculated UWUO, with a calculated UWUO plus excluded water demand of 13,970 AF compared to the SB X7-7 target of 12,933 AF as reported in the City's FY2024 Annual UWUO and Water Use Report, resulting in a capped UWUO that aligns with the 2020 target (City of Santa Barbara, 2025).

Table 5-1. SB X7-7 2020 Target and Compliance

2020 TARGET (GPCD)	ACTUAL 2020 WATER USE (GPCD)	DID SUPPLIER ACHIEVE TARGETED REDUCTION FOR 2020?
117	92	Yes

6 Water Supply Characterization

This section describes and quantifies the City's current and projected potable and non-potable water supplies. It provides a narrative description of each supply source and quantifies the supply availability for each supply source.

IN THIS SECTION

- Water Supply Overview
- Water Supply Characterization
- Energy Intensity

6.1 Water Supply Overview

The City has invested over several decades to develop a diverse water supply portfolio, which includes the following sources:

- Cachuma Project
- Gibraltar Reservoir
- Devil's Canyon Creek
- Mission Tunnel
- SWP
- Groundwater
- Desalination
- Recycled Water

A summary of each water source is provided in this section.

6.2 Surface Water

6.2.1 Cachuma Project

Reclamation constructed Lake Cachuma and Bradbury Dam as part of the Cachuma Project in the early 1950s. Interim seismic retrofits were completed in 1996, and permanent repairs were deemed substantially complete in 2001. The federally owned and operated dam is located on the Santa Ynez River 25 miles northwest of Santa Barbara. The drainage area for the reservoir is 417 square miles (including the Gibraltar Reservoir drainage area).

Lake Cachuma

Lake Cachuma originally had a storage capacity of 205,000 AF at an elevation of 750.0 feet (NGVD 29 datum) in 1952. In a 2013 bathymetric survey, the storage capacity at an elevation of 750.0 feet was 184,121 AF, indicating about 21,000 AF of storage loss due to sedimentation (Wallace Group, 2014). Gate extensions (flashboards) on the Bradbury Dam spillway gates were installed in April 2004, which raised the maximum elevation to 753.0 feet and increased the storage to 193,305 AF. However, the additional storage is dedicated for water used for fish habitat and does not increase storage for water supply purposes.

The Cachuma Project was completed in 1956 and is currently operated at a total annual supply yield of 25,714 AFY in non-drought periods for the advantage of the five water agencies benefiting from project water. These agencies — referred to collectively as the Cachuma Member Units — are the City of Santa Barbara, Carpinteria Valley Water District, Goleta Water District, Montecito Water District, and Santa Ynez River Water Conservation District, Improvement District No. 1. The City's current share of the annual yield is 32.19%, or 8,277 AFY, in normal years. The City's historic percent allocations of Lake Cachuma are shown in Table 6-1. Water is conveyed from Lake Cachuma through the Santa Ynez Mountains to the South Coast via the 6.4-mile Tecolote Tunnel, through the 24.3-mile South Coast Conduit, and to three regulating reservoirs.

Table 6-1. Historical Cachuma Allocation for the City of Santa Barbara

Water Year	Allocation[1] (%)
2014	55%
2015	0%
2016	0%
2017	0%, 40%
2018	40%
2019	20%, 100%
2020	100%
2021	100%
2022	0%, 70%
2023	100%
2024	100%
2025	100%

Note:

1. Allocations are expressed as a percentage of each agency's contract entitlement (8,277 AFY for the City). Allocations are set based on reservoir storage/hydrology and project operating criteria and may be revised during the water year as conditions change. Where two percentages are shown, they represent the initial allocation and the subsequently updated (final) allocation for that water year.

Cachuma Project Master Contract

Reclamation operates the Cachuma Project pursuant to a water rights permit issued by the SWRCB. Project water, or that portion of the water stored in Lake Cachuma that has been allocated to Cachuma Member Units for water supply purposes, is administered via the Cachuma Master Contract between the Reclamation and the Santa Barbara County Water Agency. In this capacity, the Santa Barbara County Water Agency (SBCWA) acts on behalf of the Cachuma Member Units.

The Cachuma Master Contract was last renewed in 1996 for a 25-year term. Renewal discussions started again in 2017, and in September 2020, Reclamation extended the contract through September 2023, delaying execution of another long-term Master Contract. On September 24, 2020, the Santa Barbara County Public Works Director executed the First Amendment to the City's Cachuma Member Unit Agreement with SBCWA, ensuring continued water deliveries from the Cachuma Project to the City. This agreement mirrors the terms and conditions of the three-year extension in the Master Contract. In 2023, a subsequent short-term extension was adopted, delaying progress on a long-term Master Contract once again. The Second Amendment now extends the agreement through September 30, 2026.

Cachuma Project Carryover Water Storage

Carryover water is annually allocated Cachuma water that has not been used by a Cachuma Member Unit in the year it was allocated. Historically, Cachuma Member Units have been allowed to bank carryover water in Lake Cachuma until the carryover water is used or until the Bradbury Dam spills, which then erases all banked carryover water. The City is also pursuing the ability to store non-project water in the lake, specifically Gibraltar Reservoir pass-through water (see Section 6.2.2). The lake is the City's largest storage option, and Cachuma carryover water is essential to the City's long-term water supply planning. The City's water supplies have been developed around the planned use and storage of Cachuma carryover water. Cachuma carryover water provides an incentive for community conservation, operation of desalination and recycled water systems, and the development of new supplies, such as potable reuse.

Cachuma Project State Water Rights Order

The first water right permit for the Cachuma Project was issued in 1958. On September 17, 2019, the SWRCB adopted an order for a new water rights permit for the Cachuma Project. The current permit is the culmination of nearly 20 years of legal proceedings to protect water rights holders and address long-term declines in native Southern California steelhead populations in the Lower Santa Ynez River (downstream of Bradbury Dam). The new order will result in higher downstream flows during wet years, which will reduce available storage in the Cachuma Reservoir going into normal and dry years, and reduce the supplies available to Cachuma Member Units, including the City.

Cachuma Project Biological Opinion

In 2000, a Biological Opinion (BO) was issued by the National Marine Fisheries Service (NMFS) for the Reclamation's operation and maintenance of Bradbury Dam (the Cachuma Project).

NMFS is the agency that oversees protection of Southern California steelhead, which was listed as endangered in 1997. The BO addresses the effects of the proposed Cachuma Project operations on steelhead and its designated critical habitat in accordance with Section 7 of the Endangered Species Act of 1973.

In 2013, the Reclamation, with support from the CCRB, developed a Biological Assessment (BA) that included proposed revisions to the project operations to improve habitat conditions for steelhead trout while still maintaining water supplies. In 2014, the NMFS formally initiated a re-consultation of the BO, for which the BA served as a basis document. NMFS issued a draft BO in 2016 based on this BA. Reclamation did not agree with certain provisions in the draft and submitted a new proposed operating plan and supporting BA in 2019 that incorporates operating requirements from the 2019 Water Rights Order.

CCRB, of which the City is a member along with Montecito and Goleta Water Districts, is currently assisting Reclamation in responding to NMFS's feedback and requests for additional information regarding the revised BA. Once finalized, NMFS will use this BA to produce a new BO that governs Cachuma Project operations. The desired outcome is a non-jeopardy opinion for steelhead by NMFS. Similar to the State water rights decision, a revised BO is important because it will affect Cachuma Project operations and the amount of water available for water supply purposes.

6.2.2 Gibraltar Reservoir

The City has pre-1914 water rights to divert water from the Santa Ynez River. Gibraltar Dam, which is City owned and operated, is located on the Santa Ynez River, about eight miles north of Santa Barbara and upstream of where Lake Cachuma was subsequently constructed. Construction of Gibraltar Dam was completed in 1920. The dam formed Gibraltar Reservoir, which had an initial storage capacity of 15,793 AF.

From the beginning, siltation in Gibraltar has been an issue, particularly following wildfires. In 1948, siltation had reduced the reservoir's volume by about half, and the dam was raised 23 feet to its current height of 1,400 feet above sea level. Prior to the 2007 Zaca Fire, which burned 60% of the 216-square-mile Gibraltar watershed, the reservoir's volume was 6,786 AF. The additional sediment load resulting from the 2007 Zaca Fire reduced the reservoir's storage capacity by 1,535 AF. The 2016 Rey Fire also burned within the Gibraltar watershed, which resulted in an additional loss of 303 AF. Bathymetric surveys performed on the reservoir since 2017 demonstrate that Gibraltar has suffered an overall reduction of 2,336 AF in storage capacity over the past eight years, leaving the reservoir with a current storage capacity of 4,559 AF (City of Santa Barbara, 2025). Per the LTWSP RiverWare model simulation (1942–2019), the current reliable supply during normal conditions for Gibraltar Reservoir is 3,510 AFY.

In 1989, the City entered into the Upper Santa Ynez River Operations Agreement (Pass-Through Agreement) with other Santa Ynez River water agencies. The City agreed to defer its planned enlargement of the Gibraltar Reservoir in exchange for provisions that would allow the City to "pass through" a portion of its Gibraltar water to Lake Cachuma for storage and delivery through Cachuma Project facilities. Due to the impact of the Zaca Fire on the Gibraltar Reservoir, the City elected to commence this phase of operations and is working with the Reclamation to negotiate a "Warren Act" contract as the preferred approach of accounting for the City's pass-through water.

Source: Mike Eliason from Santa Barbara County Fire

To execute a Warren Act contract, the Reclamation must prepare an environmental assessment under the National Environmental Policy Act. The Reclamation released a draft environmental assessment that has gone through public review. The final environmental assessment has yet to be released by the Reclamation. Staff worked with the Reclamation in 2019 to review and negotiate draft Warren Act contract language. Staff continues to wait for a response from the Reclamation regarding outstanding environmental assessment issues. Reclamation has indicated that they are unlikely to finalize the Warren Act Contract until a new BO is issued by NMFS. The pass-through operations will allow the City to maximize its Gibraltar water rights, while the reservoir continues to lose capacity from sediment settling in the reservoir.

Water from Gibraltar Reservoir is conveyed to the Cater Water Treatment Plant (WTP) for treatment via Mission Tunnel, which is described in Section 6.2.4. Water quality is affected by turbidity during high-flow periods in the Santa Ynez River, which temporarily interrupts diversions. In addition, as described for Cachuma Project supplies above, the Zaca Fire (2007), Rey Fire (2016), and Thomas Fire (2017) temporarily caused increased total organic carbon loading in Gibraltar water following the wildfire events.

6.2.3 Devil's Canyon Creek

The City has pre-1914 water rights to divert water from Devil's Canyon Creek and maintains a small diversion works on Devil's Canyon Creek below Gibraltar Dam, which diverts water from Devil's Canyon Creek into Mission Tunnel. From 1976 to 2025, the annual yield ranged from 0 AFY to 557 AFY and averaged 123 AFY. Devil's Canyon runs dry during periods of low precipitation. Water, when available, is diverted to help improve the quality of Gibraltar's water, as it flows into Mission Tunnel. Diverted water is counted as a part of allowable diversions under the Pass-Through Agreement.

6.2.4 Mission Tunnel

Mission Tunnel

Mission Tunnel conveys water from Gibraltar Reservoir through the Santa Ynez Mountains to the City. The tunnel construction was originally completed in 1910, and rehabilitation work was completed in 1994. The tunnel is 3.7 miles long from the North Portal (located approximately 1,700 feet downstream of Gibraltar Dam) to the South Portal (located along Mission Creek, approximately 3 miles north of downtown Santa Barbara). Infiltration into the tunnel from watersheds on both sides of the mountains contributes to the City's water supply. Water supplies from infiltration to Mission Tunnel have varied from a low of 500 AFY in 1951 to a high of 2,063 AFY in 1979, with an average annual yield of 1,125 AFY based on analysis in the EIR for the Cachuma Project water rights hearings (Impact Sciences, Inc., 2012).

For the 2025 UWMP, Mission Tunnel's average supply yield was estimated as 942 AF using a risk-adjusted projection from the 2021 LTWSP (WSC, 2021). The projection applies a 20% reduction to the baseline average annual yield to reflect anticipated decreases in cumulative infiltration associated with climate-driven factors. Examples of these climate factors include prolonged dry periods and more intense storm events that increase runoff and reduce infiltration.

Tunnel infiltration augments water conveyed from Gibraltar Reservoir and flows to the Cater WTP via the penstock hydroelectric facility and Lauro Reservoir.

6.3 State Water Project

In 1963, the Santa Barbara County Flood Control and Water Conservation District executed a water supply contract with the DWR for delivery of up to 57,700 AFY from the SWP. In 1979, a bond election for construction of in-County facilities to convey the water failed to be passed by the voters. As a result, the County sought financing through agreements with local water purveyors. The contracts with local water purveyors totaled 45,486 AFY. The difference between the initial water supply contract amount (57,700 AF) and the total contract amount from local water purveyors (45,486 AF), is referred to as Suspended Table A water (12,214 AF).

The State Water Contract defines the maximum amount each project contractor is entitled to request each year, which is referred to as the "Table A" amount. The City's SWP Table A amount is 3,300 AFY, including a 10% drought buffer. The City has a share of the pipeline capacity equal to approximately that amount.

In 1991, the CCWA was formed to construct, manage, and operate Santa Barbara County's local facilities for distribution and treatment of State water. Construction of the conveyance facilities was completed in 1997 and includes the 102-mile Coastal Branch of the California Aqueduct and the 42-mile Santa Ynez Extension ending at Lake Cachuma. From Lake Cachuma, State Water is conveyed through Tecolote Tunnel to the City's Cater WTP (similar to the Cachuma Project water).

State Water Project

The State Water Contract with DWR was first executed in 1963 and was initially held by Santa Barbara County. In March 2021, the Santa Barbara County Flood Control and Water Conservation District approved extension of the contract from 2035 to through 2085. In August

2020, DWR and the SWP Contractors implemented the Water Management Amendments to the State Water Contract to improve water transfer flexibility. In June 2021, CCWA and its Member Agencies, including the City, filed a lawsuit regarding the State Water Contract. In September 2025, CCWA approved a settlement, which included the following key terms: the County assigns the State Water Contract to CCWA, the litigation is dismissed, settlement payments are made, and the County may re-acquire up to 1,700 AFY of Suspended Table A water if CCWA pursues a project to reclaim Suspended Table A water. The new contract with CCWA was approved by DWR on December 16, 2025.

6.2.6 SWP Projections

DWR prepares a biennial report to assist SWP contractors and local planners in assessing the availability of supplies from the SWP. In December of 2025, DWR issued its most recent update, the Draft 2025 DWR SWP Delivery Capability Report (DCR). In this update, DWR provides SWP supply estimates assuming existing SWP facilities for SWP contractors to use in their planning efforts, including their 2025 UWMPs. The 2025 DCR includes DWR's estimates of SWP water supply availability under both existing (2025) and future (2045) conditions (DWR, 2025).

DWR's estimates of SWP deliveries are based on a computer model that simulates monthly operations of the SWP and Central Valley Project systems. Key inputs to the model include the facilities included in the system, hydrologic inflows to the system, regulatory and operational constraints on system operations, and contractor demand for SWP water. In conducting its model studies, DWR must make assumptions regarding each of these key inputs.

For the 2025 DCR existing conditions model scenario, DWR applied the existing facilities, hydrologic inflows to the model based on 100 years of historical inflows (1922–2021), and current regulatory and operational constraints. The 2025 DCR incorporates recent regulatory restrictions including the 2018 Coordinated Operation Agreement Amendment, 2024 BOs of the U.S. Fish and Wildlife Service (USFWS) and the NMFS, the 2024 Incidental Take Permit issues by the California Department of Fish and Wildlife (CDFW), and contractor demand at maximum Table A Amounts. The long-term average allocation reported in the 2025 DCR for the existing conditions study provides an appropriate estimate of the SWP water supply availability under current conditions.

To evaluate SWP supply availability under future conditions, the 2025 DCR includes a model study representing hydrologic and sea-level rise conditions in 2043 for three future scenarios: 50th percentile, 75th percentile, and 90th percentile level of concern. Previous reports only included a single future central tendency scenario, which is generally compatible with the 50th percentile scenario. For the long-term planning purposes of this UWMP, the long-term average allocations reported for the future conditions study from 2025 DCR is the most appropriate estimate of future SWP water supply availability. Because the City uses the SWP as a backup supply source when other local supplies are limited, and to be consistent with previous City water resource planning documents, the 50th percentile level of concern scenario is used to estimate future SWP availability during a Normal Year. This scenario includes a projected

temperature increase of 2.7 degrees Fahrenheit, 1.5% wetter average precipitation, and 15 cm sea level rise in the Delta compared to current conditions (DWR, 2025).

As Table 6-2 shows, the City assumes a straight-line reduction in long-term average allocation from 54% in 2025 to 48% in 2045, based on the 2025 DCR existing and future conditions, respectively. The straight-line reduction is extrapolated to 47% in 2050. The City has confirmed with CCWA its intent to use these estimates for future planning, except as such projections may be modified for sensitivity analysis of future water supply reliability.

Table 6-2. Average Table A Deliveries

Drought Condition	2025	2030	2035	2040	2045	2050
Table A Allocation (%)	54%	53%	51%	50%	48%	47%
Table A Yield	1,784	1,736	1,688	1,639	1,591	1,543

Note: Based on DWR's 2025 SWP DCR, assuming a straight-line reduction in allocation from 2025 to 2050.

DWR's 2025 DCR indicates that the modeled single dry year SWP water supply allocation is 2% under future conditions using 1977 hydrology. However, historically the lowest SWP allocation to the City was 5% in 2014, 2021, and 2022. DWR's 2025 DCR projects that the lowest consecutive six-year period for the SWP system has an average allocation of 14%-15% under future conditions based on 1929 to 1933 hydrology. The SWP projections for a single dry year and multiple dry years provided by CCWA and based on DWR's 2025 DCP are presented in Table 6-3.

Table 6-3. Table A Deliveries in Selected Drought Conditions

Hydrologic Year	Table A Allocation (%)	Table A Allocation (AF)
Single Dry Year		
2015	5%	165
Multiple Dry Years		
1929	15%	495
1930	15%	495
1931	15%	495
1932	15%	495
1933	14%	462

Note: Provided by CCWA and based on DWR's 2025 SWP DCR (DWR, 2025).

6.3.7 Storage and Supplemental Water Purchases

The SWP pipeline provides the City with the ability to convey supplemental water to augment drought-year supplies. During the 2014-2019 drought, the City purchased supplemental water through the CCWA to supplement their supplies when local supplies (Cachuma and Gibraltar) were limited.

SWP water and supplemental water are essential during a drought, but the City's only existing option for storing SWP water is San Luis Reservoir, which is not preferable for long-term storage since the water is lost when the reservoir spills. Additionally, the use of San Luis Reservoir for carryover storage will be severely limited if the Delta Conveyance Project is implemented because of new operating regimes.

SWP water is prohibited from being stored in Lake Cachuma for more than 30 days under normal circumstances. However, the Reclamation granted temporary suspension of this rule during the 2014-2019 drought in response to unprecedented meager water allocations and low lake levels. Long-term reliability of the SWP continues to decline, especially in drought years. The City continues to work with CCWA to identify preferred methods for increasing the certainty of SWP water and supplemental water during extended drought conditions.

6.4 Cater Water Treatment Plant

The City treats water from Lake Cachuma, Gibraltar Reservoir, Devil's Canyon Creek, Mission Tunnel, and the SWP at the City's regional Cater WTP, which has a capacity of 37 MGD. Cater WTP provides treated water to City customers and treated Lake Cachuma and SWP water allocated to Montecito Water District and Carpinteria Valley Water District.

Cater Water Treatment Plant

The water treated at Cater WTP first passes through Lauro Reservoir, which is operated by the City. Water from Lake Cachuma via the Tecolote Tunnel, including SWP water, and water from Gibraltar Reservoir, Devil's Canyon Creek, and Mission Tunnel mixes in Lauro Reservoir prior to treatment. Water from Gibraltar Reservoir, Devil's Canyon Creek, and Mission Tunnel passes through the Gibraltar Hydroelectric Facility prior to entering Lauro Reservoir. In normal precipitation years when Gibraltar Reservoir is full, power generated at the hydroelectric facility can offset 100% of Cater WTP's electricity needs.

The City is in the process of constructing a pump station and conveyance pipeline to pump desalination product water to the Cater WTP. The project will improve water supply reliability and resilience for the City and other water agencies in southern Santa Barbara County.

Water Quality

Lake Cachuma and Gibraltar Reservoir historically have had good water quality for drinking water purposes. However, the Zaca Fire (2007), White Fire (2013), Rey Fire (2016), Whittier Fire (2017), and Thomas Fire (2017) have collectively burned significant portions of the Gibraltar and Cachuma watersheds. These fires caused significant short-term impacts to water quality with increased total organic carbon (TOC) levels in Lake Cachuma and even more so in Gibraltar Reservoir. The residual long-term impacts of the fires included sustained elevated levels of TOC requiring enhanced treatment, increased solids production and disposal, and accelerated ongoing sedimentation in the reservoirs, reducing storage capacity. Elevated levels of TOC remained in Lake Cachuma and Gibraltar Reservoir for 16 years until the winter of 2022-2023 when the watersheds experienced 203% of normal rainfall, which filled the reservoirs, exchanging the volume of the reservoirs several times, and finally flushing out the lingering elevated TOC levels back to pre-Zaca Fire levels.

Following the Zaca Fire and stricter regulations on disinfectant by-products in the distribution system, the City installed an ozone pre-treatment system at Cater WTP. Ozone replaced the use of chlorine at the beginning of the treatment process, allowing for significant TOC reduction prior to the addition of chlorine at the end of the process for disinfection compliance. The City is also currently in design of a dedicated chlorine contract basin at the Cater WTP to ensure regulatory disinfection compliance, add storage capacity and redundancy, and allow for operational flexibility at the plant. Seismic upgrades to Cater's existing 5 million gallon reservoir are included in the project, which should improve reliability and enhance resiliency for the distribution of treated water citywide.

COMB previously developed a Lake Cachuma Water Quality and Sediment Management Study in conjunction with agencies that manage, operate, and use the lake and its watershed for drinking water purposes, including the City. The study evaluated management actions, such as sampling, data collection and management, in-lake treatment and monitoring, erosion control, and watershed management for drinking water reservoirs. Some of the lessons learned from the study, such as enhanced data collection and management strategies and real-time nutrient monitoring, could be applied at Gibraltar Reservoir.

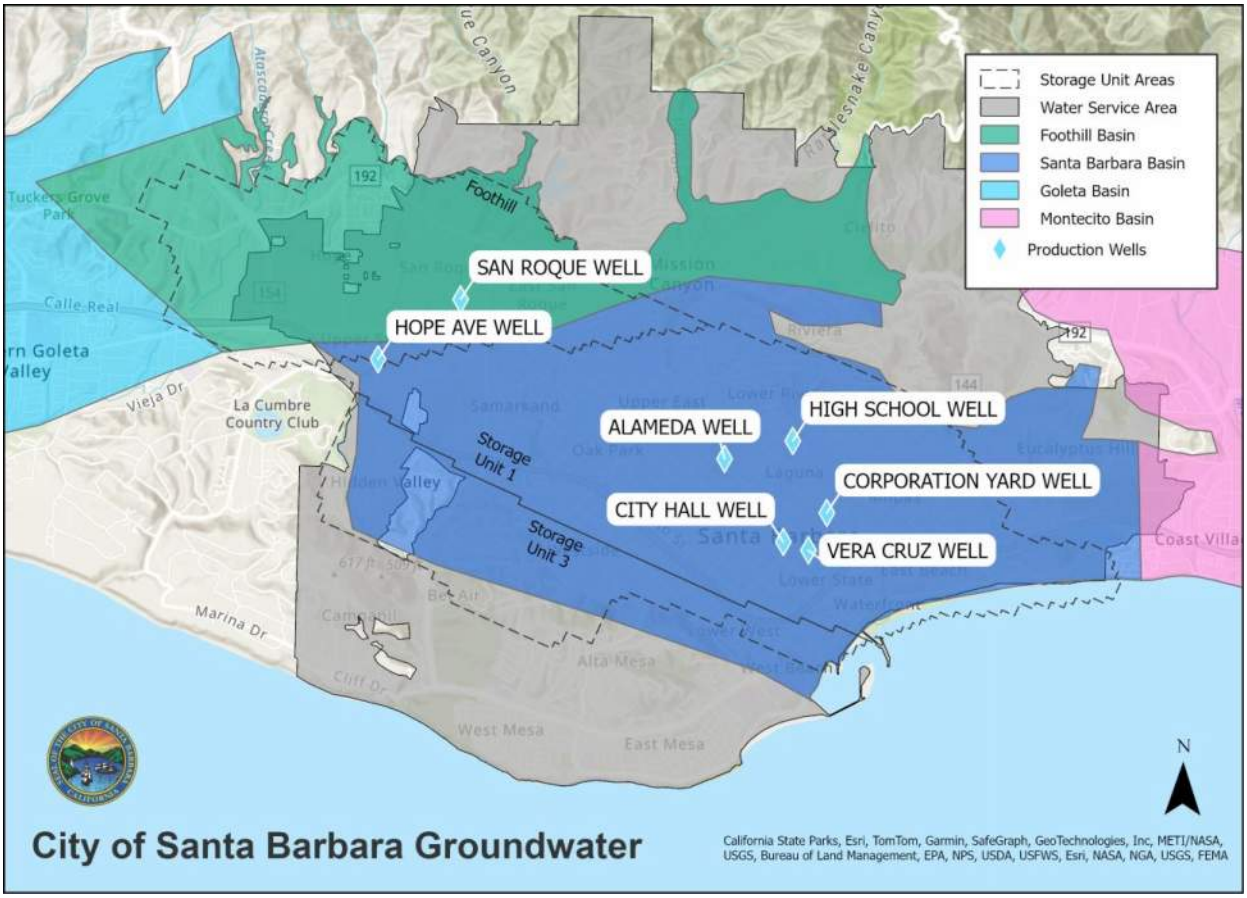
6.5 Groundwater

The City actively implements conservation measures and sustainable management practices to maximize the efficient use of groundwater resources. The City pumps groundwater from two hydrogeologic basins: Foothill Basin and the Santa Barbara Basin, which includes Storage Unit I (Figure 6-1).

Under its a conjunctive use program, the City increases pumping of groundwater during periods of drought or emergency to replace diminished surface water supplies. During normal to wet years, the City reduces groundwater pumping and prioritizes available surface water supplies, allowing the hydrogeologic basins to recharge naturally. The City is also exploring the augmentation of natural recharge by injecting treated surface water into the Foothill Basin. Moving forward, the City is considering limiting groundwater pumping to each basin's sustainable yield to maximize available storage for use during extended drought conditions.

This section provides a description of each basin, along with the City's groundwater management strategies.

Figure 6-1. Groundwater Basins and Well Locations



6.5.1 Foothill Basin

The Foothill Basin, referred to as Basin No. 3-53 in DWR Bulletin 118, is an approximately 4.5-square-mile groundwater basin bounded by tertiary sedimentary rocks of the Santa Ynez Mountains to the north and northeast; the Goleta fault to the northwest; the Modoc, More Ranch, and Mesa faults to the southwest; and the Mission Ridge fault to the southeast. The lower boundary of the basin was formed by tertiary sedimentary rock. The principal aquifer of the basin is the Santa Barbara Formation. This formation is primarily composed of marine sand, silt, and clay and has a maximum thickness of approximately 400 feet. The entirety of the formation is overlain by alluvium, except where it crops out south of the Goleta fault (Freckleton, 1989).

Water quality in the Foothill Basin is relatively good, and only wellhead disinfection is required. The primary pumpers of the basin include the City, which operates two municipal production wells in the basin, and La Cumbre Mutual Water Company, which pumps up to 300 AFY.

The United States Geological Survey (USGS) developed a three-dimensional finite-difference model for the Foothill Basin in 1989 (Freckleton, 1989). The calibrated model estimated recharge was 905 AFY (438 AFY from stream recharge and 367 AFY from aerial recharge). The production from other pumpers in the basin was approximately 450 AFY, leaving about 450 AFY for the City. It is important to note that the 1989 USGS study result of 905 AFY was interpreted as the estimated recharge to the Foothill Basin in the 2015 UWMP, and did not define sustainable yield. The 1989 study noted significant limitations to the finite difference model, including imprecise conceptualization of the natural system, lack of precise data on pumping, recharge water levels, and aquifer hydraulic characteristics.

The USGS has since improved understanding of the Santa Barbara and Foothill Basins and developed a calibrated three-dimensional density-dependent groundwater flow-and-solute transport model that was documented in USGS Scientific Investigations Report 2018–5059: Santa Barbara and Foothill groundwater basins Geohydrology and optimal water resources management — Developed using density dependent solute transport and optimization models (Nishikawa, 2018). In the 2018 report, the USGS defined sustainable yield as the volume of groundwater that can be pumped from storage without causing water-level drawdowns at selected wells. As part of the 2018 USGS study, the USGS developed a multi-objective simulation-optimization model to derive optimal management strategies and estimate the maximum pumping rates. Groundwater modeling analyses performed in the USGS study estimated that the drought yield available to the City from Foothill Basin groundwater storage is 8,100 AF over a 10-year period (Nishikawa, 2018). However, the USGS did not identify a sustainable yield for the Foothill Basin.

From 2022 through 2024 the City collaborated with the USGS again to develop a sustainable yield for the basin, with a management goal to utilize groundwater resources while not depleting the basin. The updated study determines that the Foothill Basin annual sustainable yield is 572 AFY. The City shares the Foothill basin with Lincolnwood Mutual Water Company (LCMWC), which can pump up to 300 AFY. After accounting for LCMWC's groundwater share, the City

could sustainably pump about 272 AFY from the Foothill Basin. The study also refines the sustainable pumping yield to 5,721 AF over 10 years (Stanko, Jachens, 2025). The estimated maximum pumping capacity for the City's two production wells in Foothill Basin is 780 AF per year.

6.5.2 Storage Unit I

Storage Unit I and Storage Unit III (discussed subsequently) are recognized collectively by DWR as the Santa Barbara Basin (and are labeled Basin No. 3-17 in DWR's Bulletin 118). Storage Unit I underlies downtown Santa Barbara and covers approximately seven square miles. It is bounded to the northwest by the Mission Ridge fault; to the northeast by the Santa Ynez foothills at the Sycamore and Lagoon faults; to the southeast by the Mesa fault; to the east by the Montecito Groundwater Basin; and to the southeast by the Pacific Ocean (Martin, 1984).

The unconsolidated deposits range in thickness from less than 200 feet to more than 1,000 feet and have been divided into five zones, including the shallow zone, the upper producing zone, the middle zone, the lower producing zone, and the deep zone. The upper producing and lower producing zones are the main water-producing zones of the basin, with the lower producing zone being the major source of groundwater for wells located within the basin (Martin, 1984).

Corporation Yard Well in Storage Unit I

Groundwater at all of the City's production wells in Storage Unit I requires treatment at the Ortega Groundwater Treatment Plant prior to use as potable water. The Ortega Groundwater Treatment Plant treats naturally occurring constituents, primarily sulfides, iron, and manganese. The City is the only known major pumper in this basin, operating four municipal wells. The Vera Cruz well was the fifth operational well, but has been abandoned due to challenging water treatment requirements.

As with the Foothill Basin, the City increases pumping from Storage Unit I during periods of drought or emergency to replace diminished surface water supplies. During normal to wet years when surface water is available, pumping from the groundwater basins is decreased, and the basins are allowed to recharge. Natural recharge can be augmented by injecting treated surface water at the San Roque Well in Storage Unit I. The City is considering pumping the sustainable yield of the groundwater basins while maximizing available storage for backup during drought.

Seawater intrusion into Storage Unit I is a key concern because the groundwater basin is in contact with seawater from the Pacific Ocean that can flow into the basin during periods of heavy pumping. Under normal periods of little or no pumping, the groundwater flow is toward the ocean, which stops intrusion and pushes the seawater interface seaward. The City works with the USGS regularly to monitor the groundwater quality of Storage Unit I as indicated by measured chloride concentrations. Three of six groundwater monitoring wells located between the ocean and the municipal supply wells have historically shown chloride levels greater than 1,000 milligrams/liter. This is indicative that seawater contamination is linked to heavy pumping in the basin, although no significant degradation of municipal production wells has occurred.

Along with the Foothill Basin, the USGS developed a multi-objective simulation-optimization model in 2018 to estimate pumping levels during a critical drought period that represent a compromise between maximizing production and minimizing seawater intrusion in Storage Unit I. The model estimated a drought yield available to the City from Storage Unit I groundwater storage of roughly 16,100 AF over a 10-year period, depending on level of seawater intrusion that is allowed into the basin (Nishikawa, 2018). As with the findings for the Foothill Basin, this study did not identify a new sustainable yield.

As discussed above, the City and the USGS recently developed updated sustainable yield values for both the Foothill Basin and Storage Unit I. The Storage Unit I basin management goal is to utilize the basin without causing seawater intrusion as measured by chloride concentrations. The City chose to model the effects of pumping and seawater intrusion at its Sentinel Well, the groundwater well that is closest to the Pacific Ocean, about 500 feet from shore. The Storage Unit I sustainable yield was determined to be approximately 7,000 AF over 10 years without increasing chlorides at the Sentinel Well. The City is the primary pumper in Storage Unit I and can sustainably pump approximately 700 AF per year (Stanko, Jachens, 2025). The estimated maximum pumping capacity of the City's groundwater wells in Storage Unit I is 2,540 AFY.

6.5.3 Storage Unit III

As noted above, Storage Unit I and Storage Unit III are recognized collectively by DWR as the Santa Barbara Basin (No. 3-17 in DWR's Bulletin 118). Storage Unit III lies to the southwest of Storage Unit I and covers an area of about 2.5 square miles. Its geology is quite similar to Storage Unit I although it is much smaller. The basin is bounded to the north by the Mesa fault, to the west by an unnamed fault, to the south by the Lavigia fault, and to the east by an offshore fault. Like Storage Unit I, Storage Unit III consists of five zones. The City previously operated a well in this basin, the Valle Verde well, as a supplement to the recycled water system.

Groundwater quality in the basin is quite poor. The major source of water to wells in this unit is the lower producing zone, which ranges from 100 to 140 feet thick (Frechleton, Martin, & Nishikawa, 1998).

The average annual yield is approximately 200 AFY (Frechleton, Martin, & Nishikawa, 1998). Assuming approximately 100 AFY of pumping by other private wells, the City could pump up to 100 AFY. However, the City does not currently operate a well in this basin and potable supply projections assume no use of water from Storage Unit III.

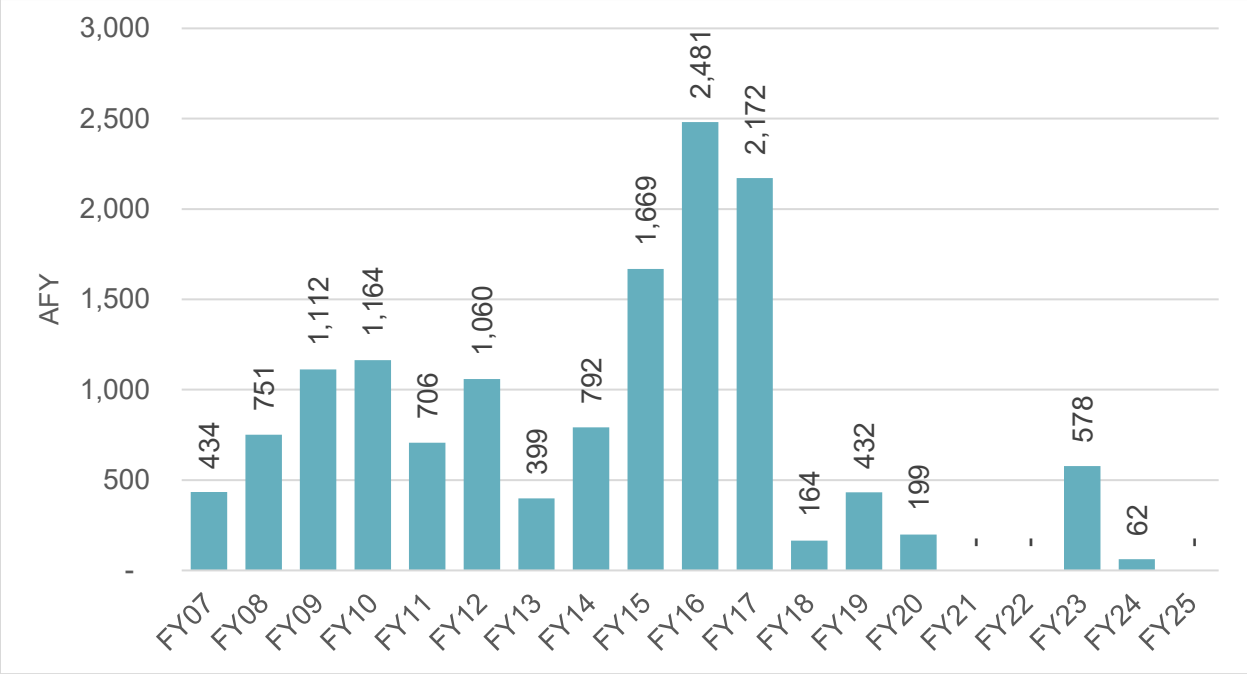
6.5.4 Historical Pumping

Recent pumping by the City, shown in Table 6-4, is based on volumetric meter data. As shown in Figure 6-2, the City substantially increased groundwater pumping in the later years of the 2014-2019 drought and has substantially reduced groundwater pumping since 2018 to allow the basins time to recover.

Table 6-4. Groundwater Pumped by Fiscal Year

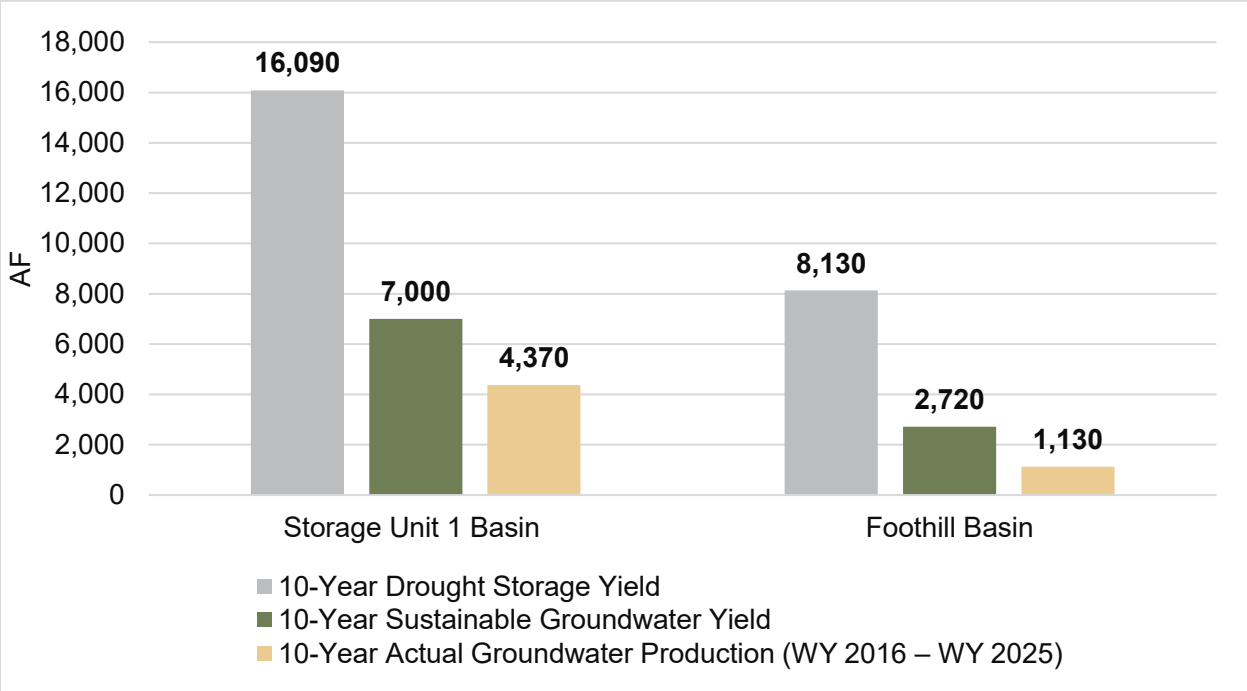
Basin	FY21	FY22	FY23	FY24	FY25
Foothill Basin	0	0	0	62	0
Storage Unit I	0	0	578	0	0

Figure 6-2. Recent Groundwater Pumping for Foothill and SU1



Based on the City's water level and water quality monitoring, groundwater modeling estimates of available yield, and historical pumping records, the groundwater basins are in long-term balance. Figure 6-3 compared the 10-year drought storage yield and sustainable groundwater yield to the City's actual groundwater production over the last ten years.

Figure 6-3. 10-Year Drought Storage, Sustainable Yield, and Groundwater Production



6.5.5 Groundwater Management

The City, in partnership with the USGS, has been the lead water agency studying the Foothill and SU1 basins through data collection and groundwater modeling for decades. The City preserves its groundwater resources by actively employing conservation measures and sustainable management practices, including the use of alternative supplies (described in other sections), with resulting in-lieu recharge, and the following groundwater management actions:

- Groundwater level and water quality monitoring
- Metering and measuring of groundwater pumping
- Groundwater well permitting
- Groundwater modeling to estimate sustainable yield
- Recharge and Conjunctive Use Programs

The City's groundwater basins were rated "very low" priority based on the prioritization analysis by DWR following passage of the Sustainable Groundwater Management Act (SGMA) in 2014. The SGMA requires governments and water agencies within "high" and "medium" priority basins to form Groundwater Sustainability Agencies (GSAs) and develop and implement a Groundwater Sustainability Plan (GSP) to bring groundwater basins into balance within 20 years of implementing their sustainability plans. The City is not required to form a GSA or prepare a

GSP because of the very low priority assigned to local groundwater basins but is considering preparing an abbreviated version of a GSP or a basic groundwater management plan to better facilitate groundwater management.

Groundwater Level and Water Quality Monitoring

In partnership with the USGS, the City has been collecting groundwater monitoring data for several decades. Water level and water quality data are collected at over 24 monitoring wells that are owned and maintained by the City. All data collected, along with maps of monitoring well locations, are available on USGS's website. In addition, the City monitors and reports groundwater levels under the California Statewide Groundwater Elevation Monitoring (CASGEM) program.

Metering and Measuring of Groundwater Pumping

Pumping from all of the City's groundwater production wells is metered and measured, and the City obtains pumping information from LCMWC, the other major pumper in the Foothill Basin. In addition, the City's Municipal Code Chapter 14.32.040 prohibits the construction of new wells in the City's service area unless the parcel cannot be feasibly served by the City's distribution system, and Chapters 14.32.050 and 14.32.055 require that any new private wells that are constructed have metering capabilities and that measured pumping is reported.

Groundwater Well Permitting

The City administers permitting of all new groundwater wells within the City boundaries, and groundwater wells are subject to requirements in the City's Municipal Code Chapter 14.32. Groundwater well permits for wells within the Foothill Basin but outside of City boundaries are administered by the County of Santa Barbara. The City is working to update a comprehensive database of groundwater wells within the basins.

Recharge and Conjunctive Use Programs

To promote groundwater recharge, the City manages its hydrogeologic basins conjunctively with surface water supplies. During normal to wet years, the City prioritizes the use of surface water supplies and reduces groundwater pumping to support natural recharge to its hydrogeologic basins. During droughts and emergencies, the City increases its groundwater pumping to account for diminished surface water supplies. Through these conjunctive use management efforts, the City creates active in-lieu recharge of the groundwater basin.

In addition to natural and in-lieu recharge efforts, the City is exploring artificial replenishment in the Foothill Groundwater Basin through the use of treated surface water injections at the San Roque Well. In 2021, the SWRCB approved pilot testing of the City's Aquifer Storage and Recovery (ASR) project at the well. The ASR pilot project injected potable drinking water into the Foothill Groundwater Basin through the San Roque Well to replenish the aquifer and store water in wet years and recover the water from the basin in drier years. The City piloted the project from spring 2023 through spring 2024 and successfully injected 49 AF of water with no observed changes to groundwater quality at the well site or surrounding monitoring wells. In March 2026, the City was issued a revised notice of applicability and monitoring program for the

SWRCB's General Waste Discharge Requirements for Aquifer Storage and Recovery Projects that Inject Drinking Water into Groundwater (General Permit) for the San Roque Well. On average, the City is permitted to inject 400 gpm per month, with opportunity to inject 506 gpm as a monthly maximum.

Table 6-5 shows the volume of groundwater recharged over the last five years through the ASR project. Demands for the ASR project injection water is not included in the long-term demand projections because the City plans to inject water only in years with available surface water. The demand for the injection water will be determined by City Staff on an annual basis.

Table 6-5. Groundwater Recharge by Fiscal Year

Basin	FY21	FY22	FY23	FY24	FY25
Foothill Basin Recharge (AFY)	0	0	0	49	0

6.6 Wastewater and Recycled Water

This section presents both recycled water supplies and uses, combining aspects of both Chapter 4 (System Water Uses) and Chapter 6 (System Supplies). Refer to DWR's UWMP Standardized Tables, Tables 6-2 through 6-6 in Appendix B. A map of the existing recycled water system is presented in Figure 6-4.

6.6.1 Recycled Water Coordination

The following agencies are responsible for collecting, treating, or discharging municipal wastewater within the City's water service area:

- **City of Santa Barbara**: The City is responsible for collection, treatment, and discharge of municipal wastewater for the vast majority of wastewater created within City limits and portions of the County. The City owns and operates the El Estero WRC and produces recycled water to supply the City's existing recycled water distribution system.
- **Mission Canyon Sewer District**: This district is responsible for collection of wastewater in a portion of the Mission Canyon area of the County that is located outside City limits but within the City's water service area. Wastewater collected by the Mission Canyon Sewer District is conveyed through the City's wastewater collection system to the City's El Estero WRC for treatment.
- **Goleta Sanitary District**: This district is responsible for collection, treatment, and discharge of wastewater for a limited number of parcels on the western edge of the City. Goleta Sanitary District owns and operates its own wastewater treatment plant, which also produces recycled water.

6.6.2 Wastewater Collection, Treatment, and Disposal

The City operates a wastewater collection system consisting of 256 miles of sewer pipe and seven lift stations. The City also owns and operates a treatment plant, El Estero WRC, which has a design capacity of 11 MGD and a long-term average flow of about 6.0 MGD. The treatment process at the City's El Estero WRC includes secondary treatment for all wastewater collected and tertiary treatment for the City's recycled water system. Secondary effluent that does not go through the tertiary treatment process is discharged to the Pacific Ocean.

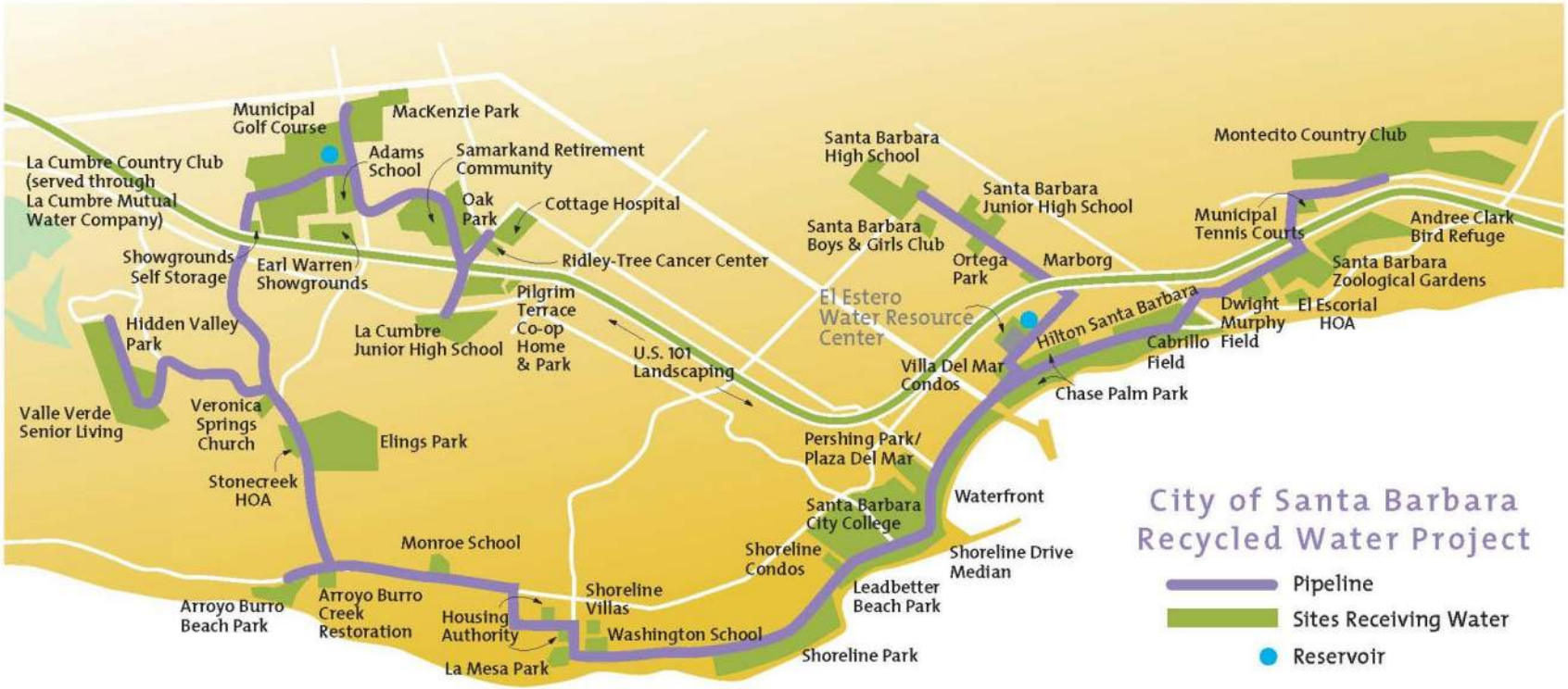
6.6.3 Recycled Water System Description

The City initiated planning for a recycled water project in the early 1980s. Phase I was completed at El Estero WRC in 1989. It included a tertiary treatment plant with carbon filtration and disinfection, a 600,000-gallon distribution reservoir and pumping station, and 5.1 miles of distribution main. Phase II was completed in 1992, which added an additional pumping station, a 1.5- million-gallon reservoir at the Santa Barbara Golf Club, and 8.3 miles of distribution main. In 2015, the City completed upgrades to its tertiary treatment plant to include an ultrafiltration treatment process.

Under normal conditions, the existing recycled water customer demand is ranges from 700 to 900 AFY plus approximately 250 AFY of process water for use at El Estero WRC. The system provides recycled water to over 100 accounts that serve parks, schools, golf courses, and other large landscapes. A limited number of public restrooms have been retrofitted to use recycled water for toilet flushing. Monitoring of salt levels in the soil was conducted twice per year from 1993 through 2003. There was no indication of long-term buildup of salt in soil.

In 2022, the City initiated a 25-year agreement to provide surplus recycled water to LCMWC, delivered to the La Cumbre County Club. The switch from potable water to recycled water for irrigation at the La Cumbre Country Club benefits water supplies for both agencies as they share a mutual groundwater basin. Reduced groundwater pumping from the basin for irrigation will allow more water storage to meet the drinking water needs of the community. Since 2023, the City has sold an average of 72 AFY to LCMWC.

Figure 6-4. Recycled Water System



Recycled Water Treatment Facility

6.6.4 Actions to Encourage and Optimize Future Recycled Water Use

The City has taken action to expand and optimize recycled water through non-potable water use. Additionally, the City completed the Potable Reuse Feasibility Study in 2017 (Carollo 2017) and a Recycled Water Market Assessment Report in 2022 (Carollo, 2022).

Non-Potable Reuse

The City completed the 2022 Recycled Water Market Assessment, which evaluated opportunities for expanding the non-potable recycled water system, assessed the cost-effectiveness of system expansion, and compared non-potable expansion with potable reuse and desalination alternatives. Since the last major study, the City's recycled water system has connected most cost-effective user sites, with a total of 119 accounts and 12 fill stations served and annual deliveries averaging about 1,000 AFY. Recent expansions include sales to LCMWC and on-going process water use at El Estero WRC.

The 2022 assessment identified approximately 184 AFY of potential new recycled water demand through conversion of existing water sites and expansion of existing use sites, primarily for irrigation and commercial laundry use. However, the analysis determined that the new infrastructure required to serve potential users was not cost-effective. Only three sites, including one new commercial user adjacent to the existing recycled water system and two existing users with the potential for irrigation expansion, were found to be cost-effective for expanded recycled water use (Carollo, 2022). The are currently no plans to serve or expand recycled water deliveries to these potential sites.

In summary, the City has largely optimized recycled water use for non-potable demand, with only targeted, cost-effective expansions remaining. Future efforts will focus on readiness for potable reuse, discussed below, and continued evaluation of system economics and reliability under changing conditions.

Potable Reuse

Potable reuse refers to advanced treatment (purification) of recycled water for drinking water purposes. The City completed the Potable Reuse Feasibility Study (Carollo, 2017) that evaluated three types of potable reuse:

- Groundwater augmentation: This entails injecting advanced treated water into local groundwater basins. For the City, injection into the Foothill Basin and Storage Unit I was evaluated.
- Raw water augmentation: This entails delivering advanced treated water into the raw surface water supply upstream of a drinking water treatment facility. For the City, delivery to Lauro Reservoir for blending with surface water from Lake Cachuma and Gibraltar Reservoir prior to treatment at Cater WTP was evaluated.
- Treated drinking water augmentation: This entails producing finished drinking water from an advanced water treatment facility that is permitted as a drinking water treatment facility and directly supplying it to a potable water distribution system. For the City, treating advanced treated water at a new WTP located at the existing desalination facility and delivering to the distribution system was evaluated.

Raw water augmentation was selected for incorporation into the City's 2021 LTWSP water portfolios analysis because it is the City's best potable reuse opportunity. In comparison, the City has limited groundwater augmentation opportunities, and developing treatment and monitoring assumptions for treated drinking water augmentation was too speculative during the planning process prior to a developed regulatory framework.

The 2021 LTWSP recommended that, once raw water augmentation regulations are issued by the State and once the City has a need for a new supply, the City should revisit the project definition assumptions from the Potable Reuse Feasibility Study and cost estimates developed for the LTWSP. California's SWRCB adopted Potable Reuse regulations in 2023 which became effective October 1, 2024.

The 2022 Recycled Water Market Assessment also evaluated the feasibility of direct potable reuse (DPR) as a future supply option. DPR at maximum scale (6.2 MGD) was found to be more cost-effective than smaller-scale DPR or expansion of the non-potable system, and comparable in cost to expanded ocean desalination (Carollo, 2022). The City does not currently have a need for immediate implementation of a new large supply project, and should update its future supply comparison with desalination, recycled water, and conservation measures considering the adopted regulations.

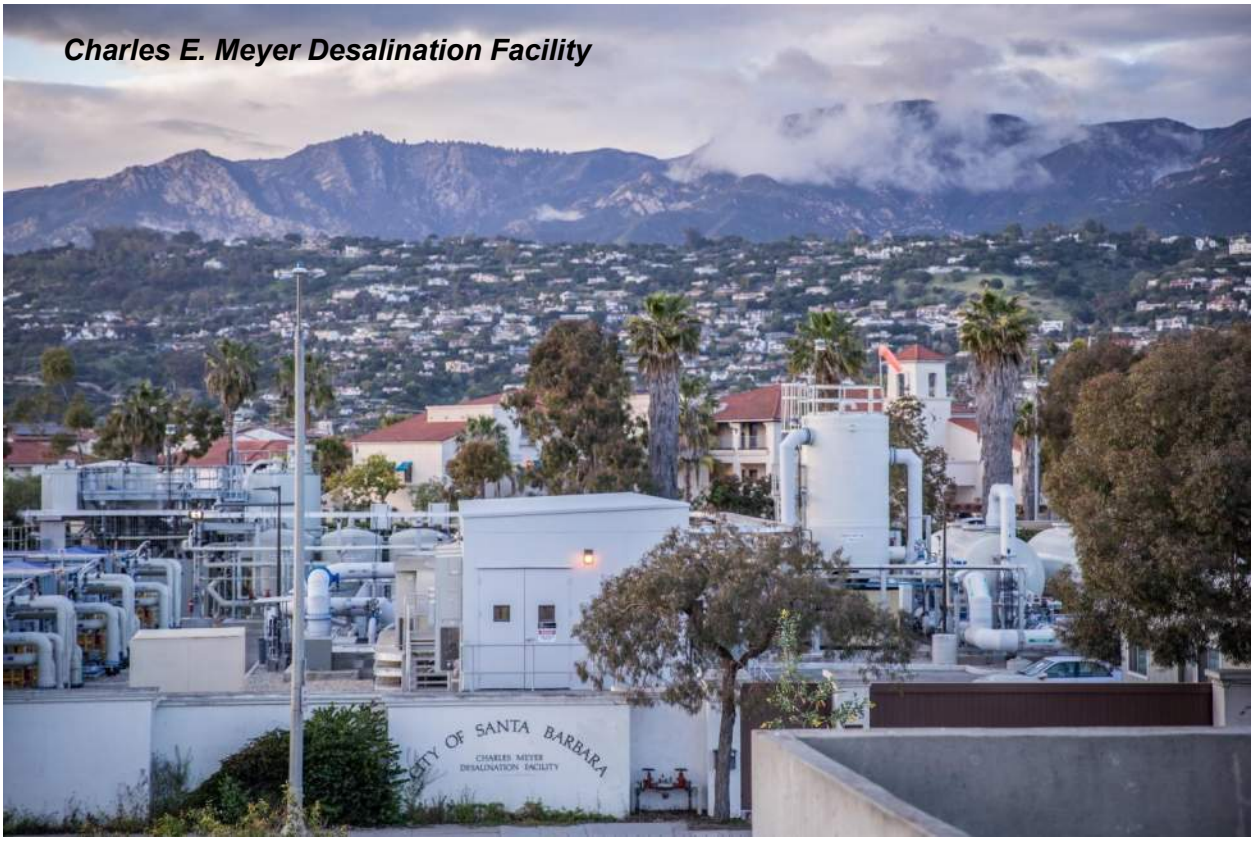
Also, most of the existing recycled water system would be used to deliver potable reuse water to Lauro Reservoir for treatment and distribution with the implementation of DPR, so developing

potable reuse as a new supply would render much of the current non-potable recycled water system obsolete. Maintaining non-potable service to the eastern portion of the existing non-potable system may remain preferable until facilities reach the end of their useful life.

6.7 Desalinated Water

The City constructed the Charles E. Meyer desalination facility, a reverse osmosis seawater desalination facility, as an emergency water supply during the drought of 1987–1992. After the drought ended and surface water was available to meet demand, the facility was put in long-term storage mode to reduce operation and maintenance costs. The City has maintained permits to provide for a desalination supply of up to 10,000 AFY. The facility was reactivated during the recent drought and started producing potable water in May 2017, with a design capacity of 3,125 AFY and nameplate capacity of 3,387 AFY.

The reactivated facility uses an energy recovery process which greatly reduces its electricity usage by 40% and, since 2021, Santa Barbara Clean Energy has provided carbon-free energy to power the plant. The plant uses existing ocean intake pipes, which are equipped with wedge-wire screens and recognized by the SWRCB as a best available technology for screened open ocean intakes. The screens are made of durable copper/nickel alloy and have one-millimeter openings to minimize marine life entrainment and impingement.



Charles E. Meyer Desalination Facility

The City initiated desalination operations as a drought and emergency supply, although it is permitted under various operating scenarios. In February 2021, the City Council adopted a policy recommendation from the 2021 LTWSP to operate ocean desalination as a regular part of Santa Barbara's water supply portfolio to support drought preparedness, response, and recovery. Under this policy, the desalination plant will operate at its current design capacity (3,125 AFY) to protect and optimize the City's other water supplies and to enhance the City's ability to prepare for and respond to future drought conditions. The 2021 LTWSP Adaptive Management Plan does allow the Water Resources Manager to put the desalination plant in standby mode when water supply conditions warrant it. In early 2026, due to full surface water reservoirs and a strong water supply portfolio, the City put the desalination plant in standby mode to reduce energy use, reduce operating costs and perform substantial maintenance otherwise difficult to perform when the plant is online. The plant is scheduled to return to normal production in September 2026.

In addition, the 2021 LTWSP identified expansion of the desalination plant to 5,000 AFY as the City's best-performing next new supply based on the future water supply portfolio evaluation that used a triple-bottom-line analytical approach for considering economic, social, and environmental impacts and benefits. The expansion would only be needed if certain increased demand or decreased supply thresholds occur in the future, as outlined in the 2021 LTWSP Adaptive Management Plan. The 2021 LTWSP also recommended that the City should revisit the project definition assumptions from the Potable Reuse Feasibility Study and cost estimates developed for the LTWSP after raw water augmentation regulations were issued by the State (2023) and once the City has a need for a new supply.

6.8 Stormwater

The City is active in stormwater management through programs run by the Creeks Division of the City's Sustainability and Resilience Department. The Creeks Division administers the City's Stormwater Management Program pursuant to the federal Clean Water Act's National Pollutant Discharge Elimination System (NPDES) Phase II regulations. As part of this responsibility, the City operates as a Municipal Separate Storm Sewer System (MS4) permittee under the oversight of the Central Coast Regional Water Quality Control Board. The City's program identifies, promotes, and/or enforces, as applicable, Best Management Practices (BMPs) to minimize urban runoff to the ocean and local creeks. These include:

- Permanent design elements (known as post construction requirements) which promote storm water capture and infiltration on site for new development projects
- A series of BMPs for use during all construction activities for capturing runoff and other pollutants
- Various educational efforts to encourage voluntary actions to minimize stormwater runoff

In the City, the beneficial effects of stormwater management relate mostly to improved quality of stormwater runoff and some augmentation of groundwater in the shallow groundwater zones, which in turn may augment creek flows, thereby supporting habitat. Groundwater that is part of

the City's urban water supply comes from deeper water-producing zones, which in most areas are separated from the shallow zone by a low permeability layer. Because of the hydrogeology of the City's groundwater basins, there are very few areas where stormwater augmentation has the potential for reaching the deeper producing zones. Some exceptions occur in areas adjacent to creeks that are geologically connected to the lower zones that support the City's water supply, though these areas are limited.

To the extent that captured rainwater is diverted for landscape irrigation use, such as through use of rain barrels and rain gardens on private property, it can offset the use of the City water supplies and help preserve potable resources. However, the amount of rainwater captured and used on private property is difficult to quantify and is not a water supply managed by the City. Because of its potential to reduce demand and preserve the City's potable water supply, the City's Water Conservation Program partners with the Creeks Division to promote voluntary stormwater capture into the soil in ornamental landscapes. The City has a stacked rebate whereby participants can receive an increased dollar amount per square foot and higher property maximum rebate if they replace their lawn with a rain garden. The City also provides rain garden education and outreach through demonstration gardens, training for landscape professionals and homeowners, and online resources.

The City is a regional partner in the updated County-wide Integrated Storm Water Resource Plan (SWRP). A watershed-based plan intended to improve the management of stormwater resources in Santa Barbara County through the identification and prioritization of multiple-benefit infrastructure projects that enhance the reliability of local water supplies, improve surface water quality, and flood management, and provide environmental, educational, and recreational benefits.

6.8.1 Graywater

Graywater is wastewater that originates from household fixtures such as showers, bathtubs, clothes-washing machines, and bathroom sinks; it excludes wastewater from toilets, dishwashers, and kitchen sinks. Graywater is generated onsite and reused for landscape irrigation. It is important not to mistake graywater for recycled water, which is subject to monitored treatment and purification to make it suitable for a range of beneficial uses.

The California Plumbing Code has requirements for graywater, which are enforced by the City's Building and Safety Division of the Community Development Department. The current regulations allow for the following types of graywater systems:

- Laundry to Landscape system: uses only a single domestic clothes-washing machine in a one- or two-family dwelling
- Simple system: discharges 250 gallons or less per day and serves a one- or two-family dwelling
- Complex system: discharges over 250 gallons per day

Laundry to Landscape and simple systems do not require a building permit approved through the City's Building and Safety Division; however, complex systems do require building permits.

To the extent that graywater is diverted and reused for landscape irrigation, it can offset the use of the City's water supplies and help preserve potable resources. However, the amount of graywater captured and used on private property is difficult to quantify and is not a water supply managed by the City. Because of its potential to reduce demand and preserve the City's potable water supply, the City's Water Resources Division promotes such measures as determined feasible by its customers.

6.9 Water Exchanges and Transfers

Under the Water Code, a water transfer refers to a temporary or long-term change in the point of diversion, place of use, or purpose of use resulting from the transfer, sale, lease, or exchange of water or water rights. Temporary transfers typically last one year or less, whereas long-term transfers extend over multiple years.

The City receives an approximate 300 AF annual transfer from Montecito Water District per the Juncal Dam Water Exchange Agreement of 1928. The annual transfer is added to the City's Cachuma Project balance. In September 2020, the City entered a 50-year Water Supply Agreement with Montecito Water District to sell 1,430 AFY of water from the City's desalination facility. This volume is considered a sale, and is included in the City's long term demand projections.

Additionally, the City has an Exchange Agreement with Santa Ynez River Water Conservation District, Improvement District No. 1 to exchange a portion of its SWP water for Cachuma allocation. Over the past five years the City has exchanged an average of 300 AFY with Santa Ynez River Water Conservation District, Improvement District No. 1, ranging from 130 AFY to 458 AFY.

6.10 Future Water Projects

Future projects are listed in DWR's UWMP Standardized Table 6-7 (Appendix B) and summarized below:

- **Water Conservation Program:** The City recently updated their Water Conservation Strategic Plan, including in 0. The City is planning on implementing the recommended conservation program to meet passive and active conservation savings included in the demand projections.
- **Cachuma Project Carryover Storage:** The 2021 LTWSP recommends that the City preserve the ability to store carryover water in Lake Cachuma and pursue the ability to store non-project water in the lake. The lake is the City's largest storage option, and Lake Cachuma carryover water is essential to the City's long-term water supply planning. The City's water supplies have been developed around the planned use and storage of Lake Cachuma carryover water, which provides an incentive for community conservation and production of desalination and recycled water. Lake Cachuma carryover water plays a critical role in providing a secure drought buffer around which the City can plan its water supplies.

- **Gibraltar Reservoir Pass-Through Operations:** The 2021 LTWSP recommends that the City obtain a Warren Act contract from Reclamation to store Gibraltar Reservoir water in Lake Cachuma to offset diminished Gibraltar Reservoir supplies resulting from continued sedimentation in the reservoir. Such a Warren Act contract is stipulated in the Upper Santa Ynez River Operations Agreement (Pass-Through Agreement). The benefits are primarily for non-drought periods when Gibraltar Reservoir is spilling. However, pass-through water would enable the City to better manage the use of its other supplies and prepare for a drought. The City should also consider preparing a feasibility study to evaluate the viability of slant wells or horizontal directional drilled wells into the historic gravel bed below Gibraltar Reservoir to secure more stable diversions from Gibraltar.
- **Optimized Groundwater Management:** The 2021 LTWSP recommends that the City should prepare an annual report on the current basin conditions to inform annual water supply planning efforts. The City should also consider creating a GSP "light" that meets the City's needs but is outside of SGMA compliance and reporting requirements. Additionally, the City is recently received permitting approval in March 2026 to operate an ASR program to help build drought storage in the Foothill groundwater basin.
- **Increased SWP Delivery Reliability:** The City should continue to work with CCWA and its Member Agencies to optimize the benefit of its SWP allocation, including looking for opportunities to bank or store State water in wet years and secure a more reliable source of State water in dry years.
- **Non-Potable Recycled Water Expansion:** The 2021 LTWSP recommends the City prioritize readiness for DPR, which offers greater long-term value than significant non-potable expansion. Developing potable reuse as a new supply could render recycled water obsolete since much of the existing recycled water distribution system would be used to deliver potable reuse water to Lauro Reservoir for treatment and distribution.
- **Potable Reuse:** The 2021 LTWSP recommends that the City should revisit the project definition assumptions from the 2017 Potable Reuse Feasibility Study (Carollo, 2017) and cost estimates documented in the 2021 LTWSP now that the Potable Reuse Regulation have been adopted. Because of uncertainty with future regulations, both documents relied on many assumptions that should be revisited once regulations are in place. The City can then update its future supply comparison with desalination, recycled water, and projected conservation rates.
- **Desalination Facility Expansion:** The 2021 LTWSP identified expansion of the desalination plant to 5,000 AFY as the City's next new supply, based on the future water supply portfolio evaluation that used a triple–bottom-line method to consider economic, social, and environmental impacts and benefits. The expansion would only be needed if certain increased demand or decreased supply thresholds occur in the future, as outlined in the 2021 LTWSP Adaptive Management Plan. Also, the 2021 LTWSP recommended that the City should revisit the project definition assumptions from the Potable Reuse Feasibility Study and cost estimates developed for the LTWSP once raw

water augmentation regulations are issued by the State and once the City has a need for a new supply because of uncertainty with future regulations.

6.11 Energy Use

The estimated energy use for water management processes in kilowatt-hours per acre-foot (kW-h/AF) is summarized in Table 6-6. The unit energy data are from energy use records from 2023.

Table 6-6. Water Management Processes Energy Consumption

Category	2023 Energy Consumption (kWh)
Water Production & Treatment	9,799,048
Water Distribution	1,364,422
Total Energy Use	**11,163,467**
Total Water Production (2023)	11,257 AFY
Energy Intensity	**992 kWh/AF**

6.12 Summary of Existing and Planned Sources of Water

The actual water supply produced in FY25 and projected supplies through 2050 are summarized in Table 6-7, which shows projected water supplies under normal or long-term average conditions. Some supply in normal years is planned to be reserved to build banked storage and carryover in preparation for a critical drought period. A safety margin of 10% is maintained, which is consistent with City water supply policies, in case of unanticipated added demand such as annexations or supply shortages.

Table 6-7. Actual and Projected Water Supplies (AF)

	Actual Deliveries	Projected Supplies				
Supplies	**2025**	**2030**	**2035**	**2040**	**2045**	**2050**
Cachuma Project	3,178	8,577	8,577	8,577	8,577	8,577
Gibraltar Reservoir	4,480	3,510	3,510	3,510	3,510	3,510
Mission Tunnel	1,374	942	942	942	942	942
Desalination	1,663	2,500	2,500	2,500	2,500	2,500
Groundwater	0	972	972	972	972	972
SWP	0	1,740	1,690	1,640	1,590	1,540
Recycled Water	1,024	1,020	1,020	1,020	1,020	1,020
Total Supply	**11,719**	**19,260**	**19,210**	**19,160**	**19,110**	**19,060**
Total Demand		**12,400**	**12,480**	**12,540**	**12,560**	**12,600**
% Supply vs. Demand		**155%**	**154%**	**153%**	**152%**	**151%**

Note: Total values rounded to the nearest 10. Cachuma Project values includes annual transfer of 300 AFY from Montecito Water District per the Juncal Agreement. The conservative assumption of desalination supply production (2,500 AFY) is 80% of the 3,125 design capacity.

7 Water Service Reliability and Drought Risk Assessment

This section describes the water service reliability through 2050. As required by the UWMP Act, the assessment must compare total projected water supply and demands over the next 20 years in five-year increments under normal, single dry WYs, and multiple dry WYs. This section also includes the drought risk assessment, which provides a snapshot of the anticipated surplus or deficit if a drought were to occur in the next five years.

IN THIS SECTION

- Water Service Reliability Assessment
- Drought Risk Assessment

7.1 Water Service Reliability Assessment

This section describes the reliability of the City's water supply. Water service reliability is determined based on the security of both the water supply and water infrastructure. The supply reliability assessment discusses factors (i.e., climatic, environmental, water quality and legal) that could potentially limit the expected quantity of water available from the City's current and projected sources of supply through 2050. Multiple drought scenarios are considered and the quantitative impacts of the aforementioned factors on water supply and demand are discussed, as well as possible methods for addressing these issues.

Evaluating the water service reliability is critical for water management as it can help identify potential problems before they happen. Water managers can then take proactive steps to mitigate shortages by encouraging water use efficiency, securing new water supplies and/or investing in infrastructure.

7.1.1 Constraints on Water Sources

The City's water sources and their constraints are described in detail in Chapter 6. The primary constraint on availability of water supplies has been extreme drought conditions. The City's 2021 LTWSP analyzed the most impactful risks and uncertainties associated with the City's supply projections, listed in Table 7-1. This analysis compared supply and demand with "risk-adjusted" supplies to understand reliability under potential future conditions. Also, resilience scenarios, such as temporary loss of one or more supplies from an earthquake, were analyzed. The result of the analysis was a series of recommendations, described in Section 6.10, and an Adaptive Management Plan for the City to implement when supply or demand conditions change in the future.

Table 7-1. Supply Risks

Risk	Description
Climate Variability	More extreme droughts, increased irrigation demand, reduced yield, more intense rainfall/flooding, and higher variability from surface water supplies
Lake Cachuma Increased Releases	An update to the 2000 Biological Opinion may lead to a reduction in Lake Cachuma supplies and the City's annual yield.
Gibraltar Reservoir High Sedimentation	Increased rate of sedimentation due to wildfires reduces the Gibraltar Reservoir storage volume and annual yield. Obtaining a Warren Act contract with Reclamation per the Pass-Through Agreement would shift lost Gibraltar Reservoir storage capacity to Lake Cachuma.
Megadrought[1]	A prolonged drought lasting two decades or longer

Risk	Description
Surface Water Quality Degradation	Surface water quality degradation due to wildfires and warmer temperatures impact Lake Cachuma and Gibraltar Reservoir, making them susceptible to algae blooms, which negatively impact water quality.
Ocean Water Quality Degradation	Ocean water quality degradation scenarios from algae blooms, debris flows, oil spills, and sewage spills would temporarily prevent intake of seawater for desalination.
Desalination Regulations	Permanent loss or reduction of desalination supply due to changes in laws or regulatory policy would return the City to supply conditions prior to the desalination plant activation in 2017.
SWP Yield	SWP annual allocations are highly variable, and average yield projections have declined with each successive DCR from DWR. The City does not benefit from average and wet year supplies due to lack of storage beyond limited carryover water in San Luis Reservoir. Delta Conveyance Project construction would further reduce the reliability of SWP water since San Luis Reservoir will spill more frequently and the City loses its carryover water after spill events.

[1]Per Williams et al., "Global warming has pushed what would have been a moderate drought in southwestern North America into megadrought territory." Williams et al. used a combination of hydrological modeling and tree-ring reconstructions of summer soil moisture to show that the period from 2000 to 2018 was the driest 19-year span since the late 1500s and the second driest since 800 CE. "This appears to be just the beginning of a more extreme trend toward megadrought as global warming continues." (Williams, A. Park, et al., 2020)

7.1.2 Year Type Characterization

In accordance with CWC Section 10635(a), every urban water supplier must provide their expected water service reliability for a normal year, single dry year, and five consecutive dry years for 2030, 2035, 2040, 2045, and optionally 2050.

DWR defines these years as:

- **Normal Year:** This condition represents a single year or an averaged range of years that most closely represents the average water supply available. An average was used for this analysis.
- **Single Dry Year:** The single dry year is recommended to be the year that represents the lowest water supply available.
- **Five-Consecutive Year Drought:** The driest five-year historical sequence for the supplier, which may be the lowest average water supply available for five years in a row.

7.1.3 Supply Basis

The supply basis for the water service reliability analysis varies by supply source, described below:

- **Cachuma Project:** Average and historic allocations, described in Section 6.2.1
- **Cachuma Project Carryover:** Historic carryover
- **Gibraltar Reservoir:** Results from the City's updated the RiverWare model[1] of the Santa Ynez River system
- **Mission Tunnel:** Average and historic supplies, described in Section 6.2.4
- **Desalination:** Conservative production capacity of 2,500 AFY (80% of 3,125 AFY design capacity), described in Section 6.7
- **Groundwater:** Groundwater safe yield and maximum pumping capacity, described in Section 6.5
- **SWP:** Average deliveries per the SWP DCR, described in Section 6.3, and historic allocations
- **Recycled Water:** Average deliveries, described in Section 6.6

7.1.4 Supply and Demand Comparison

Results of the water supply and demand analysis for normal, single dry, and five-year consecutive drought are shown in the following sections. Each section describes the supply basis for each year type. The City expects to meet demands under all WY scenarios. However, the City is committed to continuing water conservation efforts to ensure reliability and resiliency in the future.

7.1.4.1 Normal Year

The diversity of the City's water supply portfolio and the ability to store multiple years of demand in Lake Cachuma are important factors in assessing the reliability of the water supply under a variety of hydrologic conditions.

In normal conditions, the City's primary water supply is surface water from Lake Cachuma and Gibraltar Reservoir, including carryover storage from unused Cachuma allocations, and desalination. These supplies are augmented with limited groundwater production (which is typically preserved by the City for droughts and emergencies), SWP deliveries, and recycled

[1] The RiverWater Model was updated for the City's LTWSP to simulate operations and potential diversions from Gibraltar Reservoir and Lake Cachuma using historical hydrology, existing facilities, and current operational agreements. The model represents coordinated operations of Gibraltar and Cachuma reservoirs, including contractual deliveries to Cachuma Member Units, fishery release requirements, and water rights obligations under SWRCB Order 89-18. Pass Through Operations under the Upper Santa Ynez River Operations Agreement are explicitly modeled. Simulations were performed on a daily time step for WY 1942 through 2017.

water. These additional supplies typically offset any reduced inflows to Lake Cachuma and Gibraltar Reservoir that would occur in a single year of average rainfall conditions.

For normal year conditions, the following supply availability assumptions were applied:

- **Cachuma Project:** 100% allocation plus 300 AFY from Montecito Water District per the Juncal Agreement—8,577 AFY
- **Gibraltar Reservoir:** Average yield from RiverWare model simulation (1942–2019) per the LTWSP—3,510 AFY
- **Mission Tunnel:** Average of historical deliveries with an anticipated 20% reduction due to climate change per the LTWSP—942 AFY
- **Desalination:** 2,500 AFY production (80% conservative assumption of 3,125 AFY design capacity)
- **Groundwater:** Sustainable yield—972 AFY; refer to Section 6.4 for more information
- **SWP:** 2025 DCR simulation—1,780 AFY to 1,540 AFY (see Section 6.3)
- **Recycled water:** 1,020 AFY; refer to Section 6.6 for more information

Based on these assumptions, the City has sufficient supplies in normal years (Table 7-2) and would use available supplies to prepare for dry periods. For example, unused Cachuma Project water could be stored for use in future years as carryover water.

Table 7-2. Supply and Demand Comparison, Normal Year

Supplies	2030	2035	2040	2045	2050
Cachuma Project	8,580	8,580	8,580	8,580	8,580
Gibraltar Reservoir	3,510	3,510	3,510	3,510	3,510
Mission Tunnel	940	940	940	940	940
Desalination	2,500	2,500	2,500	2,500	2,500
Groundwater	970	970	970	970	970
SWP	1,740	1,690	1,640	1,590	1,540
Recycled Water	1,020	1,020	1,020	1,020	1,020
Total Supply	**19,260**	**19,210**	**19,160**	**19,110**	**19,060**
Total Demand	**12,400**	**12,480**	**12,540**	**12,560**	**12,600**
Supply vs. Demand Difference	6,860	6,730	6,620	6,560	6,470
% Supply vs. Demand	155%	154%	153%	152%	151%

Note: Refer to supply assumptions in the text above the table. Values are rounded to the nearest 10.

7.1.4.2 Single-Dry Year

A single dry year (such as 2016) has little effect on the availability of Cachuma supplies since the multiyear reservoir typically has storage available from previous years. However, because Gibraltar is a much smaller reservoir than Cachuma, available supply from Gibraltar Reservoir

could potentially be significantly reduced, depending on how dry the year is. In this situation, the City's annual water supply assessment will determine whether to offset the deficiency with added SWP deliveries, increased groundwater pumping, or additional use of Cachuma supplies.

Local supply (Cachuma, Gibraltar, Mission Tunnel, Desalination, and Groundwater) availability for single dry year is based on 2016 supplies, which represented the City's lowest year of local supply availability. Imported and purchased water supply (SWP) availability for a single dry year is based on 2021 allocations, which represents the City's lowest year of SWP availability. Assumptions for the single dry year scenario include:

- **Cachuma Project:** No allocation but 300 AFY from Montecito Water District per the Juncal Agreement—300 AFY
- **Cachuma Project Carryover:** 2016 balance—1,410 AFY
- **Gibraltar Reservoir:** No yield
- **Mission Tunnel:** 2016 yield—574 AFY
- **Desalination:** 2,500 AFY production (80% conservative assumption of 3,125 AFY design capacity)
- **Groundwater:** Maximum pumping capacity during extended drought periods—3,320 AFY
- **SWP:** 2021 allocation of 5%—165 AFY
- **Supplemental Water:** Assumed to be purchased up to a maximum of 3,300 AFY based on the City's capacity in Central Coast SWP conveyance facilities
- **Recycled Water:** 1,020 AFY; refer to Section 6.6

In a single dry year, demand is assumed to be reduced by 5% beginning in 2035 through extraordinary conservation measures, which are above and beyond the City's normal conservation program. As shown in Table 7-3, the impacts of a single dry year are minimized from the City's diverse water supply and carryover storage at Lake Cachuma.

Table 7-3. Supply and Demand Comparison, Single Dry Year

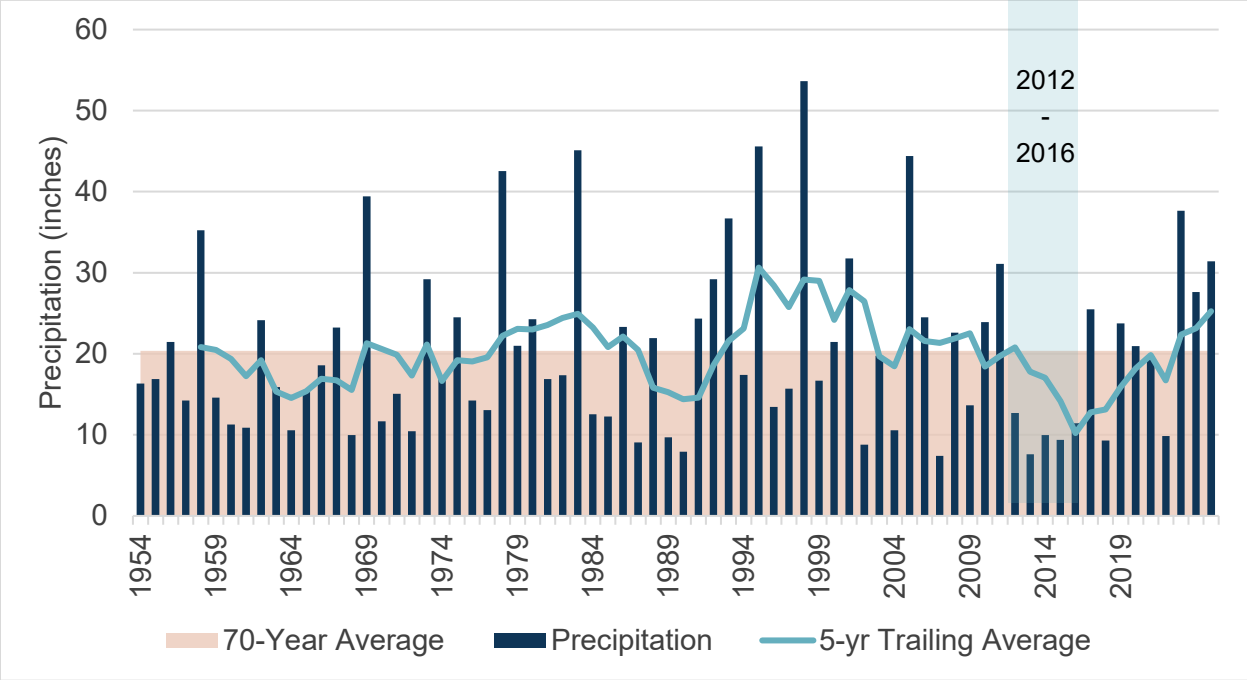
Supplies	2030	2035	2040	2045	2050
Cachuma Project	300	300	300	300	300
Cachuma Project Carryover	1,410	1,410	1,410	1,410	1,410
Gibraltar Reservoir	0	0	0	0	0
Mission Tunnel	570	570	570	570	570
Desalination	2,500	2,500	2,500	2,500	2,500
Groundwater	3,320	3,320	3,320	3,320	3,320
SWP	170	170	170	170	170
Recycled Water	1,020	1,020	1,020	1,020	1,020
Water Available for Purchase	3,140	3,140	3,140	3,140	3,140
Total Supply	**12,420**	**12,420**	**12,420**	**12,420**	**12,420**
Total Demand[1]	**12,400**	**11,980**	**12,030**	**12,050**	**12,090**
Supply vs. Demand Difference	20	440	390	370	330
% Supply vs. Demand	100%	104%	103%	103%	103%

Note: Refer to supply assumptions in the text above the table. Values are rounded to the nearest 10.
1. Extraordinary conservation measures, which are above and beyond the City's adopted conservation program, are assumed to be implemented to reduce demand by 5% beginning in 2035 so demand does not exceed projected supplies.

7.1.4.3 Five Consecutive Dry Years

The critical drought period for the City's local water supply occurs when there are multiple consecutive years of below-average rainfall. This is due to the hydrology of the Santa Ynez River, where little or no inflow to Lake Cachuma occurs until at least average rainfall occurs. When the condition of average or less rainfall continues for multiple years in succession, the storage level of Lake Cachuma drops and shortages in deliveries occur. As shown in Figure 7-1, the 2012–2016 period had the lowest average rainfall recorded at Lake Cachuma's Bradbury Dam. Therefore, local water supply conditions from 2012 to 2016 were used in the multiyear drought analysis.

Figure 7-1. 70-Year Historical Annual Precipitation at Lake Cachuma



The drought period for the City's imported water supply occurs when there are multiple consecutive years of low SWP allocations. As shown in Figure 7-2, the imported water supply from 2018-2022 is the historic lowest 5-consective years over the last 10-years; therefore, imported water supply conditions from 2018-2022 were used for analysis.

Figure 7-2. 10-Year Historical SWP Allocations

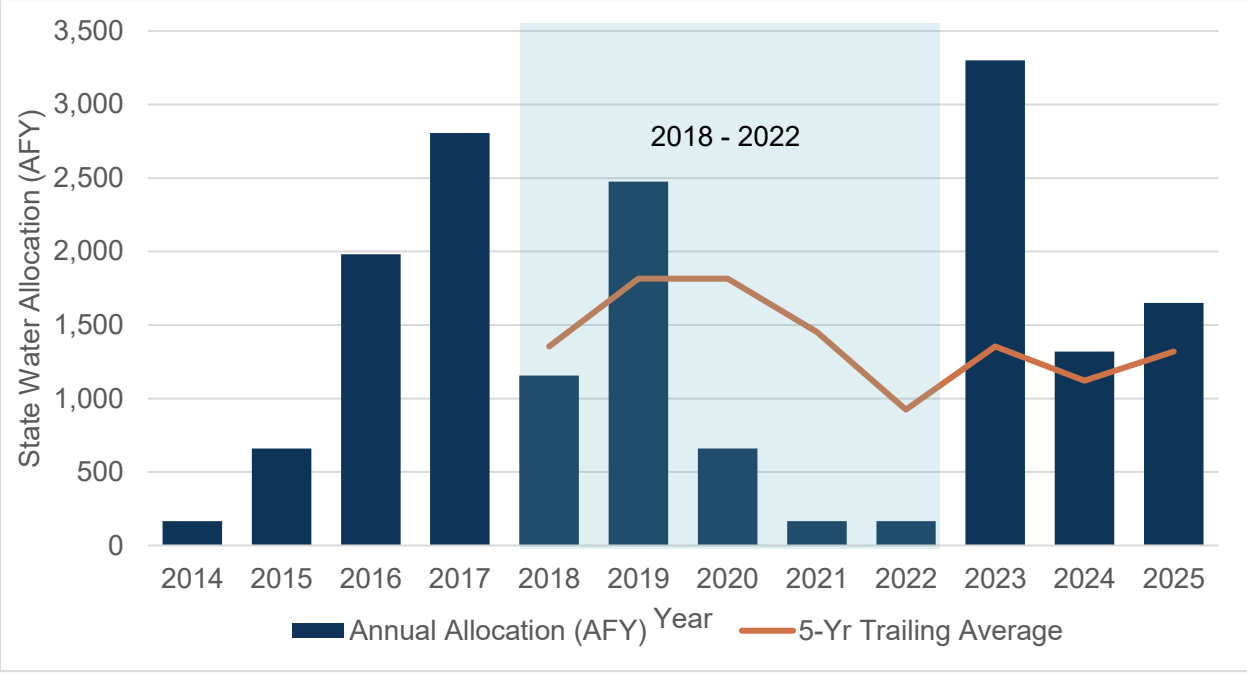


Table 7-4 presents the multiple dry years supply and demand projections. The supply assumptions include:

- **Cachuma Project:** 2012 to 2016 allocations—100%, 100%, 80%, 50%, 0%, respectively—plus 300 AFY from Montecito Water District per the Juncal Agreement
- **Cachuma Project Carryover:** 2016 starting balance for first year (1,410 AFY). For years 2–5, the carryover balance is determined by the remaining Cachuma supply after recycled water, desalination, and the annual Cachuma supply is used. Carryover is exhausted by year 4.
- **Gibraltar Reservoir:** 2012 to 2016 yield ranged from 0 AFY to 2,343 AFY
- **Mission Tunnel:** 2012 to 2016 yield ranged from 574 AFY to 987 AFY
- **Desalination:** 2,500 AFY production (80% conservative assumption of 3,125 AFY design capacity)
- **Groundwater:** Maximum pumping capacity (3,320 AFY) during extended drought periods, up to 24,200 AF of total drought storage
- **SWP:** 2018 to 2022 allocations ranged from 5% to 75%, or 165 AFY to 2,475 AFY
- **Supplemental Water:** Assumed to be purchased up to a maximum of 3,300 AFY based on the City's capacity in Central Coast SWP conveyance facilities
- **Recycled Water:** 1,020 AFY; refer to Section 6.6

Due to limited supplies, demand is assumed to be reduced by 20% of normal in Year 5 through extraordinary conservation measures, which are above and beyond the City's normal conservation program. During the 2014-2019 extended drought, City customers achieved 40% conservation, so the City is confident that extraordinary conservation can be achieved during an extended drought, if necessary. The City's WSCP, outlined in Chapter 8, includes staged demand-reduction measures, potential supply augmentation, operational drought-response actions, emergency protocols, financial mitigation tools, and adaptive monitoring to meet required demand reduction and ensure reliable service.

Table 7-4. Supply and Demand Comparison, Multiple Dry Years

Year	Supplies	2030	2035	2040	2045	2050
First Year	Supply Totals	23,460	23,460	23,460	23,460	23,460
	Demand Totals	12,400	12,480	12,540	12,560	12,600
	Difference	**11,060**	**10,980**	**10,920**	**10,900**	**10,860**
	Supply vs. Demand %	189%	188%	187%	187%	186%
Second Year	Supply Totals	22,450	22,370	22,310	22,290	22,250
	Demand Totals	12,400	12,480	12,540	12,560	12,600
	Difference	**10,050**	**9,890**	**9,770**	**9,740**	**9,650**
	Supply vs. Demand %	181%	179%	178%	178%	177%
Third Year	Supply Totals	19,440	19,270	19,160	19,120	19,040
	Demand Totals	12,400	12,480	12,540	12,560	12,600
	Difference	**7,040**	**6,790**	**6,620**	**6,570**	**6,440**
	Supply vs. Demand %	157%	154%	153%	152%	151%
Fourth Year	Supply Totals	15,700	15,700	15,700	15,700	15,700
	Demand Totals	12,400	12,480	12,540	12,560	12,600
	Difference	**3,310**	**3,220**	**3,170**	**3,150**	**3,100**
	Supply vs. Demand %	127%	126%	125%	125%	125%
Fifth Year	Supply Totals	11,010	11,010	11,010	11,010	11,010
	Demand Totals[1]	10,410	10,480	10,520	10,540	10,570
	Difference	**600**	**540**	**490**	**480**	**440**
	Supply vs. Demand %	106%	105%	105%	105%	104%

Note: Refer to supply assumptions in the text above the table. Values are rounded to the nearest 10.

1. Extraordinary conservation measures, which are above and beyond the City's adopted conservation program, are assumed to be implemented to reduce demand by 20% in Year 5.

7.2 Drought Risk Assessment

CWC Section 10635 (b) requires a drought risk assessment (DRA). The DRA provides a quick snapshot of the anticipated surplus or deficit if a five-consecutive year drought were to occur in the next five years. The DRA can be modified or updated outside of the UWMP five-year plan cycle, so a description of the data, methodology, and basis for shortage conditions is included in this 2025 UWMP. The DRA evaluates each water supply's reliability and compares available water supplies and projected demands during a five-consecutive dry years scenario. This short-term analysis can help water suppliers foresee undesired risks, such as upcoming shortages,

and provide time to evaluate and implement the necessary response actions needed to mitigate shortages in a less impactful manner to the community and environment.

Since 1998, the City has prepared an annual Water Supply Management Report[2] that summarizes:

- Status of water supplies at the end of the report's WY
- Drought outlook
- Water conservation and demand
- Major capital projects that affect the City's ability to provide safe, clean water
- Significant issues that affect the security and reliability of the City's

The report is presented to the City's Water Commission and City Council, and the WY2025 report was adopted by City Council on February 4, 2026. Table 7-5, which is from the WY2025 report, summarizes the status of the City's water supplies as of the end of WY2025 (September 30, 2025).

Table 7-5. Status of City Water Supplies, End of WY2025 and early WY2026

Source of Supply	Supply Status
Lake Cachuma	Total Capacity: 192,978 AF (2021 capacity revision surcharged to 753 feet spill elevation for fish release water) End of Year Storage: 149,845 AF (78% of total capacity) Due to early-season rains, Cachuma filled and began spilling in January 2026 The City's share of the Cachuma Project's normal annual entitlement is 8,277 AF. The City's WY2026 allocation is 100%.
Cachuma Carryover	Carryover Volume: 0 AF WY2025 ended on September 30, 2025, and then rainfall in late 2025/ early 2026 resulted in Lake Cachuma spilling and losing all Carryover Storage The DRA assumes no carryover beginning in year 1.
Gibraltar Reservoir	Total Capacity: 4,490 AF (September 2024 survey) End of Year Storage: 982 AF (21% of Total Capacity) as of September 30, 2025 Gibraltar Reservoir typically fills and spills two out of every three years. Due to early-season rains, Gibraltar filled and began spilling in December 2025.
Mission Tunnel	Groundwater in Mission Tunnel is an important City water supply. It's long-term average yield historically has been 1,020 AFY.

[2] The WY2025 report can be found at: https://santabarbaraca.gov/sites/default/files/2025-12/2025_Water_Supply_Mgmt_Report-Draft_Public.pdf

Source of Supply	Supply Status
State Water Project	The City has a 3,300 AF Table A allotment (with drought buffer), subject to availability. At the end of WY2025 SWP Table A allocation was 50% .
Desalination	The design capacity is 3,125 AF, with a conservative assumption of 2,500 AFY (80% of design capacity). The City plans to turn the desalination plant offline from February to September in 2026 to reduce energy use, operating costs, and perform substantial maintenance.
Groundwater	The City conjunctively manages its groundwater with its surface water supplies, providing for groundwater replenishment during wet years. The City allowed the basins to recover the last five years. Groundwater levels in the Foothill Basin are showing signs of recovery and are back to early 1990s levels. Storage Unit I is monitored for chloride concentrations, which have been declining over the past year.
Recycled Water	The City's recycled water system serves parks, schools, golf courses, other large landscapes, and some public restrooms. In 2026, the City plans to continue to meet demand of roughly 1,020 AFY. The City plans to turn the recycled water plant offline while spill conditions remain at Lake Cachuma, customers will be served with potable water during this time.

Note: The WY runs from October 1 through September 30. All data are as of September 30, 2025.

The annual Water Supply Management Report also includes a three-year supply and demand projection assuming extended drought conditions and no additional flows into Lake Cachuma or Gibraltar Reservoir. The DRA is a five-year supply and demand projection, so it builds upon the analysis in the annual Water Supply Management Report. Projection assumptions for each supply are listed below and summarized in Table 7-6:

- **Cachuma Project:** Uses 2013 to 2016 allocations for 2026 to 2029 and assumes no allocation in 2030 based on no lake inflows; Plus 300 AFY from Montecito Water District per the Juncal Agreement.
- **Cachuma Project Carryover:** Starting balance of 0 AF following January 2026 spill event.
- **Gibraltar Reservoir:** Starting balance of full capacity (4,330 AF) followed by 2013 to 2016 yield ranging from 0 AFY to 2,343 AFY
- **Mission Tunnel:** Assumes a constant infiltration of 1,020 AFY
- **Desalination:** 833 AF production in year 1 with the desalination plant turned off most of the year. Year 2 through 5 uses 2,500 AFY (80% conservative assumption of 3,125 AFY design capacity)
- **Groundwater:** Production is limited by existing pumping capacity of roughly 3,320 AFY.
- **SWP:** 2018 to 2022 allocations ranged from 5% to 75%, or 165 AFY to 2,475 AFY between 2018 to 2022 as the lowest consecutive five-year allocations.

- **Supplemental Water:** Assumed to be purchased up to a maximum of 3,300 AFY based on the City's reliability capacity in Central Coast SWP conveyance facilities.
- **Recycled Water:** Assumes recycled water use remains constant at 1,020 AFY.

Table 7-6. 2026-2030 DRA Supply Availability Projections

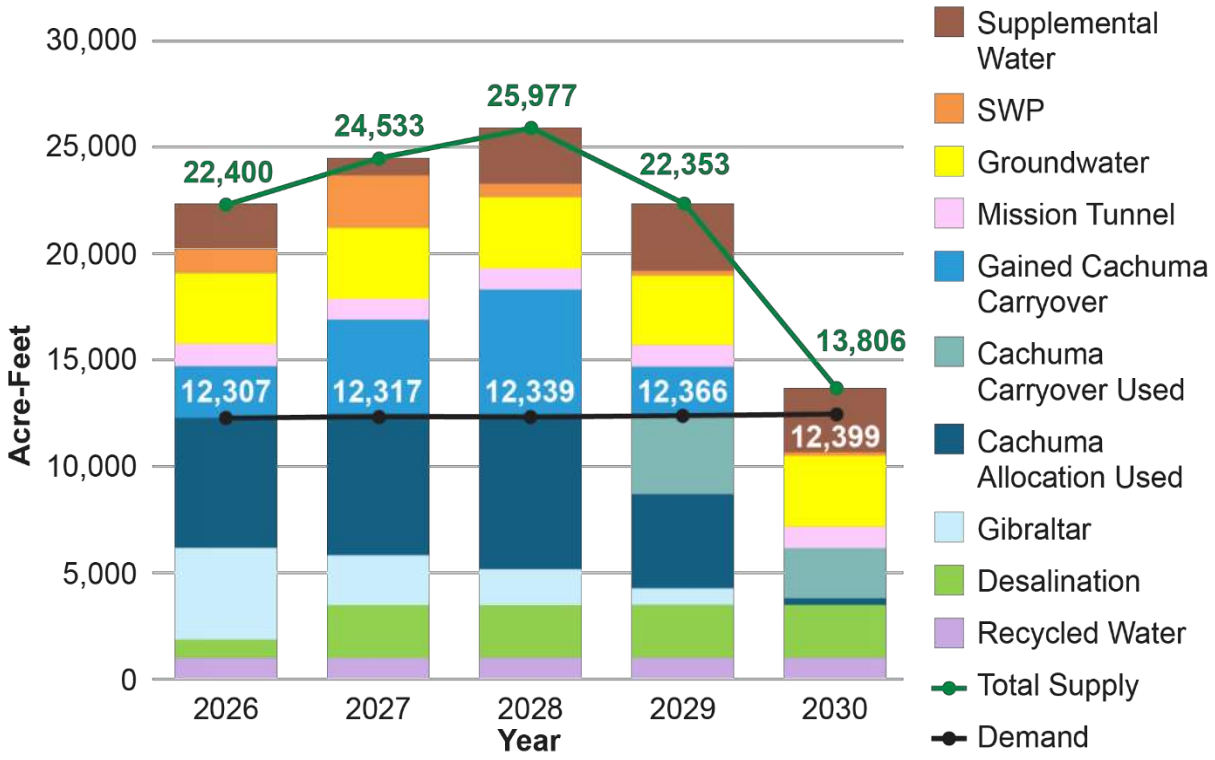
Supplies	2026	2027	2028	2029	2030
Cachuma Project	8,580	8,580	8,580	4,440	300
Cachuma Project Carryover	0	2,450	4,580	6,000	2,350
Gibraltar Reservoir	4,330	2,340	1,660	760	0
Mission Tunnel	1,020	1,020	1,020	1,020	1,020
Desalination	830	2,500	2,500	2,500	2,500
Groundwater	3,320	3,320	3,320	3,320	3,320
SWP	1,160	2,480	660	170	170
Recycled Water	1,020	1,020	1,020	1,020	1,020
Water Available for Purchase	2,150	830	2,640	3,140	3,140
Total Supply	**22,400**	**24,530**	**25,980**	**22,350**	**13,810**
Projected Demand	**12,310**	**12,320**	**12,340**	**12,370**	**12,400**
Supply Surplus	**10,090**	**12,220**	**13,640**	**9,990**	**1,410**

Note: Refer to supply assumptions in the text above the table. Values are rounded to the nearest 10.

Based on the projected demand and available supplies, Figure 7-3 presents the projected supplies used to meet demand and the remaining available supply each year. By the end of the five-year drought, the City still has supplies available and does not anticipate any supply shortages.

Note that the 2014-2019 drought prompted the City to implement extraordinary conservation measures. With the reactivation of the desalination facility providing a reliable, base-loaded annual water supply, the City is now able to build carryover storage in Cachuma, eliminating the need to implement extraordinary conservation measures in the DRA.

Figure 7-3. 2026-2030 DRA, Supply and Demand Projections



8 Water Shortage Contingency Plan

The WSCP is a detailed plan for how the City intends to act in the case of an actual water shortage condition. This allows for management of a shortage with predictability and accountability. This section provides an overview of the contents of the City's WSCP. The standalone WSCP is included in Appendix F.

IN THIS SECTION

- Overview of WSCP Components

8.1 Introduction

CWC Section 10632 requires that every urban water supplier shall prepare and adopt a standalone WSCP as part of its UWMP. The City's WSCP is included as Appendix F and will be separately submitted to DWR. The WSCP is developed independently of the City's 2025 UWMP and can be amended, as needed, without amending the UWMP.

The WSCP is a strategic plan that the City uses to prepare for and respond to foreseeable and unforeseeable water shortages. A water shortage occurs when the water supply available is insufficient to meet the normally expected customer water use at a given point in time. A shortage may occur due to a number of reasons, such as water supply quality changes, climate change, drought, regional power outage, and catastrophic events (e.g., earthquake). Additionally, the State may declare a statewide drought emergency and mandate that water suppliers reduce demands, as occurred in 2014 and 2022. The WSCP serves as the operating manual that the City will use to prevent catastrophic service disruptions through proactive, rather than reactive, mitigation of water shortages.

The WSCP provides a process for an annual water supply and demand assessment and structured steps designed to respond to actual conditions. This level of detailed planning and preparation provides accountability and predictability and will help the City maintain reliable supplies and reduce the impacts of any supply shortages and/or interruptions.

The WSCP must be updated based on new requirements every five years and will be adopted as a current update for submission to DWR.

8.2 Overview of WSCP Components

The Water Code establishes several prescriptive elements that must be included in a retail water supplier's WSCP. Each element and its location within the WSCP is described below.

Water Supply Reliability Analysis: Summarizes the City's water supply analysis and reliability and identifies any key issues that may trigger a shortage condition.

Annual Water Supply and Demand Assessment Procedures: Describes the key data inputs, evaluation criteria, and methodology for assessing the system's reliability for the coming year and the steps to formally declare any water shortage levels and response actions.

Shortage Stages: Establishes water shortage levels to clearly identify and prepare for shortages.

Shortage Response Actions: Describes the response actions that may be implemented or considered for each stage to reduce gaps between supply and demand.

Communication Protocols: Describes communication protocols under each stage to ensure customers, the public, and government agencies are informed of shortage conditions and requirements.

Compliance and Enforcement: Defines compliance and enforcement actions available to administer demand reductions.

Legal Authorities: Lists the legal documents that grant the City the authority to declare a water shortage and implement and enforce response actions.

Financial Consequences of WSCP Activation: Describes the anticipated financial impact of implementing water shortage stages and identifies mitigation strategies to offset financial burdens.

Monitoring and Reporting: Summarizes the monitoring and reporting techniques to evaluate the effectiveness of shortage response actions and overall WSCP implementation. Results are used to determine if additional shortage response actions should be activated or if efforts are successful and response actions should be reduced.

WSCP Refinement Procedures: Describes the factors that may trigger updates to the WSCP and outlines how to complete an update.

Special Water Feature Distinctions: Identifies exemptions for decorative features aside from pools and spas.

Plan Adoption, Submittal, and Availability: Describes the process for the WSCP adoption, submittal, and availability after each revision.

The WSCP was prepared in conjunction with City of Santa Barbara's 2025 UWMP and is a standalone document that can be modified as needed. The document is compliant with the CWC Section 10632 and incorporates guidance from the DWR UWMP Guidebook.

9 Demand Management Measures

This section describes the City's efforts to promote water use efficiency, reduce demand on the water supply, and prepare for future requirements.

IN THIS SECTION

- Existing Demand Management
- Reporting Implementation

9.1 Introduction

Santa Barbara has a long history of water conservation; the City's Water Conservation Program began as a response to drought in the late 1970s. In 1988, the Water Conservation Program was enhanced in accordance with recommendations from the City's Five-Year Water Policy Action Plan. As a result of the 1987–1991 drought, the City accelerated implementation of the Water Conservation Program. The City's 1994 LTWSP identified a goal of 1,500 AFY of additional water conservation, a target that was met and exceeded.

In December 1990, the Santa Barbara County Regional Water Efficiency Program (RWEP) was established as a collaboration among the many local water purveyors and the County of Santa Barbara Water Agency. RWEP promotes the efficient use of water countywide and provides information and assistance to the 16 local water purveyors within the county, including the City. RWEP members coordinate cooperative water conservation efforts among purveyors, co-fund projects and programs, act as a clearinghouse for information on water efficiency, manage specific projects and programs, and monitor local, State, and national legislation related to efficient water use.

In January 1992, the City joined the California Urban Water Conservation Council, now the California Water Efficiency Partnership, by signing the Memorandum of Understanding Regarding Urban Water Conservation. Since that time, the City has been actively implementing the BMPs and additional water conservation measures. In addition, implementing the BMPs satisfies contractual requirements with the Reclamation for the Cachuma Project.

The City's Water Conservation Program aims to minimize the use of potable water supplies, meet BMP requirements, and achieve compliance with SB X7-7's 20% by 2020 per capita water use reduction requirements, and the "Making Water Conservation as a California Way of Life" legislation and adopted State efficiency standards by making water conservation a Santa Barbara way of life. Water conservation measures are evaluated for cost-effectiveness based on the avoided cost of additional water supplies.

Water use efficiency in the City is supported by a coordinated effort of City and RWEP initiatives to create a holistic approach to providing the needed water conservation tools to both the water system and each customer within the service area. The City requires water efficiency in building codes and standards as a result of State-guided mandates as well as local ordinances.

The City recently updated its Water Conservation Strategic Plan, which includes a recommended water conservation program (0). The demand management measures recommended in the Water Conservation Strategic Plan are described in the following sections.

9.2 Existing Demand Management Measures

This section describes the City's existing demand management measures.

9.2.1 Utility Operations Programs

Utility operations measures encompass preventing water waste, reducing water loss, and addressing water efficiency in development projects.

- **Water Waste Prevention**: City Ordinance No. 4558, adopted in February 1989, prohibits the waste of water, which is defined as any excessive, unnecessary, or unwarranted use of water, including, but not limited to: 1) any use which causes significant runoff beyond the boundaries of property served by a meter; 2) failure to repair any leak or rupture in any water pipes, faucets, valves, plumbing fixtures, or other water service appliances within 72 hours after notice by the City; and 3) irrigation during and for a period of 48 hours after a measurable rainfall event. The City makes educating the community on water waste practices a high priority. The City's water waste ordinance can be found in the City's municipal code SBMC §14.20.007, Prohibition Against Waste of Water. Enforcement of the City's water waste ordinance is found in SBMC §14.20.226, Penalties and Charges.
- **Water Loss Control**: Refer to Section 4.2.2 for a description of the City's water loss control efforts.
- **Water Efficient Landscape Standards**: For development projects, the City has adopted Water Efficient Landscape Standards that are more stringent than California's Model Water Efficient Landscape Ordinance. The City reviews plans and conducts inspections to ensure compliance with design standards, including a water wise plant palette, efficient irrigation, proper pressure regulation, smart irrigation controllers, mulch, and more. The landscape design standards were originally adopted by the City Council in 1989 and updated in 2008. The City has submitted an annual report to the state since December 2015 that includes the total number of approved projects and square feet of new/revised landscape for that year.
- **Metering**: The City currently meters all water services. The City has also implemented AMI on their customer meters. As part of the AMI Project, the City launched the customer-facing water use and billing portal, WaterSmart, in March 2024. Through WaterSmart, customers can monitor water use by the hour, day, and month; receive automated leak alerts; pinpoint reasons behind a high bill; customize alerts for unusual water use; and sign up for autopay and paperless billing. As of March, 2026, there were 18,662 accounts registered, 61% of total utility accounts.

9.2.2 Conservation Pricing

The City's adopted water rates include tiered rates to promote conservation. Residential water rates include a fixed monthly service charge and a volumetric rate with three tiers of pricing for the first 4 hundred cubic feet (HCF), an increased rate for usage between 5-16 HCF, and the highest volumetric rate for all water use beyond 16 HCF per month. Additionally, commercial and dedication irrigation meters include a fixed monthly service charge and a base allotment or water budget for volumetric usage, with increasing pricing for volumetric usage beyond the base allotment or water budget.

9.2.3 Public Education and Outreach

The City attempts to raise awareness among all customer types regarding the importance of efficient and responsible water use. The City effectively works to foster a culture of conservation within the community and affect impactful behavioral changes. Components of the City's public education program include the following:

- **Providing information on methods and opportunities for reducing consumption**: The City engages customers in water efficiency through its website, the WaterSmart customer portal, newsletters, informational videos, social media, printed materials, public presentations, workshops, and more. The City promotes the use and maintenance of water-efficient WaterSense products, practices, and services.
- **Delivering consistent, persistent messages and media campaigns**: The City delivers consistent messaging through radio messages, TV commercials, print advertising, social media messaging, digital advertising, and more, including messaging for both indoor and outdoor water use efficiency. Messages are delivered year-round and are tailored to the season (i.e., "turn it down" in the fall and "sprinkler spruce up" in the spring).

9.2.3.1 Current Public Information Programs

- **Water Conservation Phone Line**: The Conservation Line provides callers with information on how to check for leaks, analyze water use patterns, investigate high water use, provide recommendations for water efficiency, explain rate structure, participate in rebate programs, register for the WaterSmart portal, and direct customers to rebates and resources.
- **WaterSmart Customer Portal and Automated Leak Alerts**: As part of the Automated Metering Infrastructure (AMI) project, the City has a customer-facing water use and billing portal called WaterSmart. Through WaterSmart, customers can monitor water use by the hour, day, and month; receive automated leak alerts; pinpoint reasons behind a high bill; customize alerts for unusual water use; and sign up for autopay and paperless billing.
- **Website**: The City maintains a Water Conservation Program website, and it contributes to and promotes the website for RWEP.
- **Conservation Videos**: Informational videos on sustainable landscaping, leak detection, efficient irrigation, water supply, and more are available on the City's water conservation YouTube channel.
- **Media Campaign**: Spring, summer, and fall media campaigns are implemented by the City, often in conjunction with RWEP to expand reach. Advertisements are placed online, on TV, in movie theaters, in print publications, and on the radio.
- **Water Bill Messages/Bill Inserts/e-Newsletters**: Monthly water conservation messages are printed directly on water bills and are customized by customer classification. A monthly water bill insert is mailed with all water bills and available electronically for online bill pay customers. A Water Resources e-newsletter is sent out

quarterly, and a citywide "City News in Brief" e-newsletter is sent out weekly, with a water efficiency section included every week.

- **Social Media**: Outreach on water conservation actions and events are posted on the Nextdoor website and often on the City's Facebook and X accounts.
- **Demonstration Gardens**: The Water Conservation Program has many beautiful water-wise demonstration gardens to showcase sustainable landscaping, including Alice Keck Park Memorial Garden, in conjunction with the Parks Department; the Firescape Garden, in conjunction with the Fire Department; Spencer Adams Park, in conjunction with the Parks Department and via a Surfrider Foundation Whale Tail Grant; the El Estero Recycled Water Garden; the Water Wise Home Garden, in conjunction with the Santa Barbara Botanic Garden; and the Santa Barbara Association of Realtors Rainwater Garden, in conjunction with the Association of Realtors.
- **Public Events**: City staff set up tables and displays and engage the public in water efficiency information at local events such as Earth Day, local irrigation stores, the Santa Barbara Botanic Garden events, various school science nights, and neighborhood association meetings.
- **"Garden Wise" TV show**: "Garden Wise" is a 30-minute quarterly TV show about designing and maintaining sustainable landscapes. Featured segments include Plant Rant, What Tree is That?, Crimes Against Horticulture, and Design a Water-Wise Garden featuring local designers. This program is coordinated and co-funded through RWEP.
- **Water-wise Gardening for Santa Barbara County Website**: This robust website of gardening information is tailored to the Santa Barbara climate with an extensive plant database of over 1,000 water wise plants, more than 300 photos of local gardens, and guidance on gardening design and practices. It is available at WaterWisegardeningSB.org. This program is coordinated and co-funded through RWEP.

9.2.3.2 Current School Education Programs

- **Classroom Presentations**: This program involves fun and engaging K-6 presentations about Santa Barbara's water supply, the water cycle, water conservation, and wastewater treatment. Songs, photos, and videos are used, based on the age group. Sixth grade presentations include the Living Wise kit and curriculum— a take-home kit with water and energy fixtures and activities to conduct at home. Presentations are tailored to grade or class objectives and are aligned to California content standards and the Education and the Environment Initiative Curriculum.
- **Field Trips**: Water facilities such as the El Estero Water Resource Center, Cater Water Treatment Plant, Charles E. Meyer Desalination Plant, Sheffield Reservoir, and the Firescape Garden are available for school and community group tours, with City personnel to lead and educate attendees.
- **Musical Assemblies**: Musical-comedy education shows about water supplies, the value of water, groundwater, and water efficiency are part of this program, which is coordinated and co-funded through RWEP.

- **WaterWise High School Video Contest**: This annual countywide contest encourages high schoolers to create and submit a 30-second public service announcement for water efficiency, in English or Spanish. Winning videos are used for TV and movie theater advertising. This program is coordinated and co-funded through RWEP.
- **WaterWise Science Fair Award**: This special award is part of the larger Santa Barbara County Science Fair for junior and senior science fair projects that address water efficiency, water supplies, or water treatment. This program is coordinated and co-funded through RWEP.

9.2.4 Outdoor Water Use Efficiency

The City's outdoor water use efficiency programs are intended to promote the "new normal" of water wise landscaping through proper design, installation, and maintenance of new and existing landscapes and irrigation systems.

- **Sustainable Lawn Replacement Program**: Rebates are available to help offset the cost of replacing water-thirsty lawns and irrigation with water-wise plants and efficient irrigation. Rebate amount is based upon square footage of lawn removed and can also be stacked with the rain garden rebate from the Creeks Division for a higher dollar per square foot and higher rebate maximum.
- **Irrigation Efficiency Rebates**: Rebates are available for smart irrigation controllers, spray to drip system conversions, spray to low-precipitation nozzle conversions, and laundry to landscape graywater systems.
- **Irrigation Budgets for Dedicated Irrigation Meters**: The City has budget-based rates for accounts with dedicated irrigation meters to incentivize water efficiency. For the City's over 750 irrigation meters, the monthly water budget is determined by the property's irrigated landscaped area, the water requirements of plants, and the current weather conditions. The purpose of providing a monthly water budget is to bill based on the water needs of the landscaping; water use that exceeds the budget is billed at a higher rate. Customers can track their water use compared to their budget in the WaterSmart portal.
- **Green Gardener Program**: Taught through Santa Barbara City College School of Extended Learning, gardeners are trained in resource efficiency and pollution prevention landscape maintenance practices. Gardeners attend a 15-week course taught in both English and Spanish covering irrigation design and maintenance, fertilization, soil health, integrated pest management, pruning, and green waste reduction. This program is coordinated and co-funded through RWEP.
- **Mulch Delivery Rebate**: The City will rebate a portion of the cost of up to two dump truck loads per year of county mulch deliveries to reduce evaporation and increase water retention in the soil.
- **WaterWise Garden Recognition Contest**: Residential front gardens are evaluated for water efficiency, design elements, and sustainability. The winning garden is submitted to the countywide contest for the top prize. Winning properties receive an engraved

sandstone boulder and are highlighted in public outreach to encourage water wise practices. This program is coordinated and co-funded through RWEP.

9.2.4.1 Rainwater and Graywater Activities within the City

The City's Water Conservation Program and Creeks Division support and incentivize onsite water capture and reuse through various rainwater and graywater programs available to water customers and landscape professionals:

- Offers rebates on mulch for rain gardens and graywater systems
- Offers rebates on rain barrels, pavement removal, and disconnected downspouts
- Offers rebates on replacing lawns with rain gardens
- Offers rebates on graywater materials.
- Develops the Water Wise Home Demonstration Garden in partnership with the Santa Barbara Botanic Garden to showcase graywater, passive rainwater collection, and active rainwater collection
- Sponsors the Qualified Water Efficient Landscaper and the Watershed Wise Landscape Professional Certification trainings, US Environmental Protection Agency WaterSense certified programs to certify landscape professionals in site evaluation, rain garden installation, efficient irrigation, and maintenance
- Online resources such as sample plan sets, Graywater 101 and Rainwater 101 class recordings, guidance documents, and more.

More information on all programs can be found at www.SantaBarbaraCA.gov/Graywater.

9.2.5 Residential Programs

In addition to the programs previously listed, the following programs are geared toward residential customers:

- **High-efficiency Washing Machine Rebate Program**: The Smart Rebates Program is coordinated by the California Water Efficiency Partnership for participating water suppliers throughout California. The City participates with high-efficiency clothes washer rebates for residential customers who replace an existing high water use washing machine with a qualifying high-efficiency model.
- **Flume Smart Home Water Monitor Rebate**: The City offers a direct distribution rebate on the Flume smart home water monitoring system. Flume easily attaches to the meter and allows users, through a smartphone app, the ability to monitor water use down to the minute and catch water leaks quickly.

9.2.6 Commercial, Industrial, and Institutional Programs

In addition to the programs previously listed, the following programs are geared toward commercial, industrial, and institutional (CII) customers:

- **CII WaterWise Survey and Incentive Program**: This tailored program for high water use CII customers includes a comprehensive water survey as well as rebate incentives

for making recommended upgrades. The survey includes identifying high water use appliances, searching for hidden leaks, cataloging fixture use and flow rates, and identifying areas for improvement. A summary report includes an analysis of the facility's water use, water and cost-saving recommendations eligible for monetary incentives from the City, and estimated return on investment.

- **Lodging Industry Towel and Linen Cards**: Free linen cards and towel rack hangers are available to encourage patrons to conserve water during their stay by reusing towels and linens.
- **Restaurant Table Cards**: Free table tents are available to inform restaurant customers that water will be served upon request.
- **Green Business Program of Santa Barbara County**: Existing businesses are certified through onsite evaluations from City staff. New and existing certified Green Businesses receive workshops, trainings, resources, and recognition. This program is organized by the California Green Business Network of Santa Barbara County.

9.3 Reporting Implementation

Table 9-1 lists participation levels for the City's active water conservation programs from FY2021 to FY2025.

Table 9-1. Water Conservation Program Participation Numbers, FY 2021 to FY2025

Program	Description	FY21	FY22	FY23	FY24	FY25	Total
School Education Programs	K-6 classroom presentations, 6th grade LivingWise kits, field trips, and musical assemblies	897	835	3,479	1,661	2,802	**9,674**
Water e-Sources	Water Resources Division Newsletter (emails opened)	13,761	28,402	24,579	39,089	32,611	**138,442**
Water Efficient Landscape Standards Review	City staff perform plan checks and inspection for land development projects that include new/revised landscaping	68	151	193	217	241	**870**
Mulch Rebate Program	Rebate of up to two dump truck loads of County mulch delivered per year	111	75	73	76	78	**413**
High-Efficiency Clothes Washer Rebate	$150 rebate for replacing high water using clothes washers with eligible high-efficiency washer models	48	55	29	68	59	**259**
Irrigation and Landscape Rebates	Rebates to replace lawn with water wise plants and/or efficient irrigation	-	-	10	23	21	**54**
Green Gardener Program	Educates local gardeners in resource-efficient landscape management (number of graduates)	66	59	78	72	70	**345**
Educational Videos	Videos on how to read your meter, check for leaks, adjust sprinklers, design water wise gardens, etc. (YouTube views)	39,172	55,179	44,309	35,275	37,142	**211,077**
Water-Smart Leak Alerts	Automated leak alerts sent via email or mail to alert customers of continuous use or burst leaks	-	-	-	4,153	38,246	**42,399**
Flume Rebate	Rebate on Flume device to monitor water use down to the minute and catch water leaks quickly	441	410	260	150	28	**1,289**

10 Plan Adoption, Submittal, and Implementation

This section describes the completed steps taken to make the UWMP publicly available as well as adopt and submit the UWMP in accordance with the Water Code.

IN THIS SECTION

- Completed Steps for UWMP and WSCP

10.1 Completed Steps for UWMP and WSCP

Per Government Code 6066, the public hearing was noticed twice in the Voice Santa Barbara Magazine in May 2026 and more than 14 days before the public hearing. The hearing notices are attached in Appendix D. The public hearing was held on June 16, 2026 at the City Council meeting prior to the UWMP and WSCP adoption. In addition, the City maintained a copy of the 2025 UWMP and WSCP in its office and at https://SantaBarbaraCA.gov/WaterVision prior to the public hearing.

The Draft 2025 UWMP and WSCP was discussed with the Board of Water Commissioners on April 16, 2026. The Commission supported the Plan content and recommendations. The Final 2025 UWMP and WSCP were formally adopted by the City Council at a public meeting on June 16, 2026. A copy of the Adoption Resolution is included in Appendix D.

A hard copy of City's Final 2025 UWMP and WSCP were sent to the California State Library, DWR (electronically using the WUEdata reporting tool), and all cities and counties within City's service area within 30 days of adoption and before the deadline of July 1, 2026.

Should the City need to amend the adopted 2025 UWMP or WSCP in the future, the City will hold a public hearing for review of the proposed amendments to the document. The City will send a 60-day notification letter to all cities and counties within City's service area and notify the public. Notification to the public with be published twice in the newspaper, the first notice being a minimum of two weeks prior to the public hearing. Once the amended document is adopted, a copy finalized version will be sent to the California State Library, DWR (electronically using the WUEdata reporting tool), and all cities and counties within City's service area within 30 days of adoption. The finalized version will also be made available to the public both online and in person at the City's public office during normal business hours.

10.2 Public Availability

To fulfill the requirements of Water Code Section 10642 of the UWMP Act, the City made the Final 2025 UWMP available online at https://SantaBarbaraCA.gov/WaterVision, and at the City's Water Resources Division office during normal business hours, for public review within 30 days of adoption.

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Appendix A UWMP Checklist

A

Order	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	Relevant Submittal Table	2025 UWMP Location
1	Chapter 1	10615	A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, reclamation and demand management activities.	Introduction and overview	n/a	Executive Summary, Page 1-22
1	Chapter 1	10630.5	Each plan shall include a simple description of the Supplier's plan including water availability, future requirements, a strategy for meeting needs, and other pertinent information. Additionally, a Supplier may also choose to include a simple description at the beginning of each chapter.	Plan preparation	n/a	Executive Summary, Page 1-23
2.1	Section 2.1	10620(b)	Every person that becomes a Supplier shall adopt UWMP within one year after it has become a Supplier.	Plan preparation	n/a	Section 2.1, page 2-2
2.5	Section 2.5	10644	Supplier shall report the Public Water Systems number, volume of delivered water, and number of connections that are included in this UWMP.	Plan preparation	2-1	Section 2.1,page 2-2. Public water system ID is in the DWR tables in Appendix B
2.5	Section 2.5	10644	Supplier shall report if this UWMP is an individual UWMP and whether the Supplier belongs to a regional UWMP or regional alliance.	Plan preparation	2-2	Section 2.1, page 2-2
2.5	Section 2.5	10644	Supplier shall report whether the data is in fiscal or calendar years and the units of measure used for reporting water volumes.	Plan preparation	2-3	Section 2.1, papge 2-2
2.4	Section 2.4	10642	Provide supporting documentation that the 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 and contingency plan.	Plan preparation	n/a	Section 2.3, page 2-2 to 2-3
2.4	Section 2.4.2	10620(d)(3)	Coordinate the preparation of its plan with other appropriate agencies in the area, including other Suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.	Plan preparation	n/a	Section 2.3, page 2-2 to 2-3
2.4	Section 2.4.1	10631(h)	Retail Suppliers will include documentation that they have provided their Wholesale Supplier(s)—if any—with water use projections from that source.	Plan preparation	2-4 R	Section 2.3, Table 2-1, page 2-3
2.4	Section 2.4.1	10631(h)	Wholesale Suppliers will provide their Suppliers with identification and quantification of the existing and planned sources of water available from the Wholesale Supplier to the Supplier during various water year types.	Plan preparation	2-4 W	N/A - Only applicable to Wholesalers
3	Chapter 3.0	10631(a)	Describe the Supplier service area.	System description	n/a	Section 3.1, page 3-2, Figure 3-1
3.3	Section 3.3	10631(a)	Describe the climate of the Supplier's service area.	System description	n/a	Section 3.2.2, Page 3-4 to 3-5
3.4	Section 3.4.1	10631(a)	Provide the current and projected service area populations for 2030, 2035, 2040, 2045 and optionally 2050.	System description	3-1	Table 3-2, page 3-7
3.4	Section 3.4.2	10631(a)	Describe other social, economic, and demographic factors affecting the Supplier's water management planning.	System description	n/a	Section 3.2.2, page 3-7
3.5	Section 3.5	10631(a)	Describe the land uses within the service area… include the current and projected land uses within the existing or anticipated service area affecting the Supplier's water management planning. Describe the land uses within the service area.	System description and baselines	n/a	Section 3.3, page 3-7 to 3-9
4.2	Sections 4.2.3 and 4.2.4	10631(d)(1)	Quantify past, current, and projected water use, identifying the uses among water use sectors.	System water use	4-1 and 4-2	Section 4.2, page 4-2 to Page 4-6
4.3	Section 4.3.1	10631(d)(3)(A)	Report the distribution system water loss for each of the five years preceding the plan update.	System water use	4-5	Table 4-1, page 4-5
4.3	Section 4.3.2	10631(d)(3)(C)	Retail Suppliers shall provide data to show the distribution loss standards were met.	System water use	4-6	Section 4.2.2, page 4-5, table 4-1
4.2	Section 4.2.5.4	10631.1(a)	Include projected water use needed for lower income housing projected in the service area of the Supplier.	System water use	4-3	Section 4.3, page 4-14, table 4-4
4.2	Section 4.2.5.3	10631(d)(4)(A)	In projected water use, include estimates of water savings from adopted codes, plans, and other policies or laws.	System water use	4-3	Section 4.2.3.2, page 4-8
4.2	Section 4.2.5.3	10631(d)(4)(B)	Provide citations of codes, standards, ordinances, or plans used to make water use projections.	System water use	4-3	Section 4.2.3, page 4-7 to 4-8
4.2	Section 4.2.5.3	10631(d)(4)(B)(ii)	To the extent that a Supplier reports the information described in subparagraph (A), an urban water Supplier shall… Indicate the extent that the water use projections consider savings from codes, standards, ordinances, or transportation and land use plans. Water use projections that do not account for these water savings shall be noted of that fact.	System water use	4-3	Section 4.2.3.1 and 4.2.3.2, page 4-7 to 4-8
4.2	Section 4.2.5.6	10635(b)	Demands under climate change considerations must be included as part of the drought risk assessment.	System water use	n/a	Section 4.2.3.3, page 4-11, Section 4.2.4, page 4-13
5.1	Section 5.1	10608.36	Wholesale Suppliers shall include an assessment of present and proposed future measures, programs, and policies to help their Retail Suppliers achieve targeted water use reductions.	Baselines and targets	n/a	N/A - Only applicable to Wholesalers

Order	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	Relevant Submittal Table	2025 UWMP Location
5.2	Section 5.2	10608.4	Retail Suppliers shall report on their compliance in meeting their water use targets. Reporting requirements will vary depending on whether the Supplier: - Was considered an urban retail water supplier in 2020, - Met its 2020 target in 2020, or - Was part of a merger or consolidation since 2020. Chapter 5 Subsections 5.2.1, 5.2.2, and 5.2.3 address each of these situations.	Baselines and targets	5-1	Section 5.1, page 5-2
6.1	Section 6.1	10631(b)(2)	When multiple sources of water supply are identified, describe the management of each supply in relationship to other identified supplies.	System supplies	n/a	Chapter 6, Section 6.2 to 6.9
6.1	Sections 6.1 and 6.2	10631(b)(1)	Provide a discussion of anticipated supply availability under a normal, single dry year, and a drought lasting five years, as well as more frequent and severe periods of drought, including changes in supply due to climate change.	System supplies	n/a	Pages 7-2 to 7-10 (Reliability Assessment); Tables 7-2 to 7-4 ; Pages 7-10 to 7-14 (Drought Risk Assessment); Table 7-6 on Page 7-13
6.2	Section 6.2.2	10631(b)(4)(C)	Indicate whether groundwater is an existing or planned source of water available to the Supplier. If groundwater is identified as an existing or planned source of water… (include) a detailed description and analysis of the location, amount and sufficiency of groundwater pumped by the Supplier for the past five years.	Water supplies and recycled water	6-1	Section 6.5, Page 6-13 to 6-20, table 6-5 on page 6-20
6.2	Section 6.2.2	10631(b)(4)(A)	Indicate whether a groundwater sustainability plan or groundwater management plan has been adopted by the Supplier or if there is any other specific authorization for groundwater management. Include a copy of the plan or authorization.	System supplies	n/a	Page 6-13 to 6-18 (Groundwater Management subsection—SGMA discussion; City not required to prepare GSP
6.2	Section 6.2.2	10631(b)(4)(B)	Describe the groundwater basin.	System supplies	n/a	Section 6.5, page 6-13 to 6-18
6.2	Section 6.2.2	10631(b)(4)(B)	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.	System supplies	n/a	N/A. Section 6.5 describes that basin is not adjudicated.
6.2	Section 6.2.2	10631(b)(4)(B)	For unadjudicated basins… (include) information as to whether DWR has identified the basin as a high- or medium-priority basin in the most current official departmental bulletin…	Water supplies and recycled water	n/a	Page 6-13 to 6-18 (Groundwater Management subsection—basins identified as “very low” priority under SGMA discussion).
6.2	Section 6.2.2	10631(b)(4)(B)	For unadjudicated basins… describe efforts by the Supplier to coordinate with sustainability or groundwater agencies to achieve sustainable groundwater conditions.	Water supplies and recycled water	n/a	Section 6.5, pages 6-13 to 6-18
6.2	Section 6.2.2.	10631(b)(4)(C)	If groundwater is identified as an existing or planned source of water… (include) a detailed description and analysis of the location, amount and sufficiency of groundwater pumped by the Supplier for the past five years.	System supplies	n/a	Section 6.5, Page 6-13 to 6-20, table 6-7 on page 6-31
6.2	Section 6.2.2	10631(b)(4)(D)	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	System supplies	6-9	Page 6-13 to 6-18 (basins/locations + pumping capacity discussion); Table 67 (Projected Groundwater Supply) on Page 6-31
6.1	Section 6.1	10631(b)	Identify and quantify the existing and planned sources of water available for 2025, 2030, 2035, 2040, 2045 and optionally 2050.	System supplies	6-8 and 6-9	Page 6-31; Table 67 (Actual and Projected Water Supplies) on Page 6-31
6.2	Section 6.2.7	10631(c)	Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.	System supplies	n/a	Page 6-28 (Section 6.9 Water Exchanges and Transfers)
6.2	Section 6.2.5	10633(a)	Describe the wastewater collection and treatment systems in the Supplier’s service area with quantified amount of collection and treatment and the disposal methods.	System supplies (recycled water)	6-2	Section 6.6.2, page 6-21
6.2	Section 6.2.5	10633(b)	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.	System supplies (recycled water)	6-3	Page 6-20; specific quantities provided in DWR Tables in Appendix B.
6.2	Section 6.2.5	10633(c)	Describe the recycled water currently being used in the Supplier's service area.	System supplies (recycled water)	6-4	Page 6-20 to 6-22; Figure 6-4 (Recycled Water System) on Page 6-22
6.2	Section 6.2.5	10633(d)	Describe and quantify the potential uses of recycled water and provide a determination of the technical and economic feasibility of those uses.	System supplies (recycled water)	6-4	Section 6.6.4, page 6-23 to 6-25

Order	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	Relevant Submittal Table	2025 UWMP Location
6.2	Section 6.2.5	10633(e)	Describe the projected use of recycled water within the Supplier's service area at the end of 5, 10, 15, and 20 years, and describe the actual use of recycled water in comparison to uses previously projected.	System supplies (recycled water)	6-4 and 6-5	Table 6-7 (Actual and Projected Water Supplies) on Page 6-31, DWR tables in Appendix B include comparison to previous projections
6.2	Section 6.2.5	10633(f)	Describe the actions that 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.	System supplies (recycled water)	6-6	Section 6.6.4, page 6-23 to 6-25
6.2	Section 6.2.5	10633(g)	Provide a plan for optimizing the use of recycled water in the Supplier's service area.	System supplies (recycled water)	n/a	Section 6.6.4, page 6-23 to 6-25
6.2	Section 6.2.6	10631(g)	Describe desalinated water project opportunities for long-term supply.	System supplies	6-7	Section 6.7, page 6-25 to 6-26
6.2	Section 6.2.10	10631(f)	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 for a period of drought lasting five consecutive water years.	System supplies	6-7	Section 6.10, page 6-28 to 6-29
6.3	Section 6.3 and Appendix O	10631.2(a)	The UWMP must include energy information, as stated in the code, that a Supplier can readily obtain.	System suppliers, energy intensity	O-1A, O-1B, O-1C, and O-2	Section 6.11, Table 6-6, page 6-30
7.1	Section 7.1	10634	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.	Water supply reliability assessment	n/a	Section 7.1.1, table 7-1, page 7-2
7.2	Section 7.2	10635(a)	Service Reliability Assessment: Assess the water supply reliability during normal, dry, and a drought lasting five consecutive water years by comparing the total water supply sources available to the Supplier with the total projected water use over the next 20 years.	Water supply reliability assessment	7-2, 7-3, and 7-4	Section 7.1.4, page 7-4 to 7-10
7.2	Section 7.2.3	10620(f)	Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	Water supply reliability assessment	n/a	Section 6.12, page 6-30
7.3	Section 7.3	10635(b)	Provide a drought risk assessment as part of information considered in developing the demand management measures and water supply projects.	Water supply reliability assessment	n/a	Section 7.2, Table 7-6, page 7-13
7.3	Section 7.3	10635(b)(1)	Include a description of the data, methodology, and basis for one or more supply shortage conditions that are necessary to conduct a drought risk assessment for a drought period that lasts five consecutive years.	Water supply reliability assessment	n/a	Section 7.2, page 7-12
7.3	Section 7.3	10635(b)(2)	Include a determination of the reliability of each source of supply under a variety of water shortage conditions.	Water supply reliability assessment	n/a	Section 7.1.4, page 7-5 for Normal Year, page 7-6 for single-dry year, and pages 7-8 to 7-9 for five consecutive dry years
7.3	Section 7.3	10635(b)(3)	Include a comparison of the total water supply sources available to the Supplier with the total projected water use for the drought period.	Water supply reliability assessment	7-5	Table 7-4, page 7-10
7.3	Section 7.3	10635(b)(4)	Include considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.	Water supply reliability assessment	n/a	Section 7.1.4, page 7-5 for Normal Year, page 7-6 for single-dry year, and pages 7-8 to 7-9 for five consecutive dry years
8	Chapter 8	10632(a)	Provide a water shortage contingency plan (WSCP) with specified elements below.	Water shortage contingency planning	n/a	Page 8-1 to 8-2 (UWMP WSCP overview); UWMP Appendix F is the WSCP document
8	Chapter 8	10632(a)(1)	Provide an analysis of water supply reliability (from Guidebook Chapter 7) in the WSCP.	Water shortage contingency planning	n/a	Appendix F, WSCP Section 2.1, pages 2-4, Table 2-1 on page 4
8.2	Section 8.2	10632(a)(2)(A)	Provide the written decision-making process and other methods that the Supplier will use each year to determine its water reliability.	Water shortage contingency planning	n/a	Appendix F, WSCP Section 3, pages 7-8
8.2	Section 8.2	10632(a)(2)(B)	Provide data and methodology to evaluate the Supplier's water reliability for the current year and one dry year pursuant to factors in the code.	Water shortage contingency planning	n/a	Appendix F, WSCP Section 3, pages 7-9
8.3	Section 8.3	10632(a)(3)(A)	Define six standard water shortage levels of 10%, 20%, 30%, 40%, 50% shortage, and greater than 50% shortage. These levels shall be based on supply conditions, including percent reductions in supply, changes in groundwater levels, changes in surface elevation, or other conditions. The shortage levels shall also apply to a catastrophic interruption of supply.	Water shortage contingency planning	n/a	Appendix F, WSCP Section 4, page 9, crosswalk on Figure 4-1, page 13

Order	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	Relevant Submittal Table	2025 UWMP Location
8.3	Section 8.3	10632(a)(3)(B)	Suppliers with an existing WSCP that uses different water shortage levels must cross reference their categories with the six standard categories.	Water shortage contingency planning	8-1	Appendix F, WSCP Section 4, page 9-13, crosswalk on Figure 4-1, page 14
8.4	Section 8.4	10632(a)(4)(A)	Suppliers with WSCPs that align with the defined shortage levels must specify locally appropriate supply augmentation actions.	Water shortage contingency planning	8-2	Appendix F, WSCP Section 5.2, Table 5-2, page 19
8.4	Section 8.4	10632(a)(4)(B)	Specify locally appropriate demand reduction actions to adequately respond to shortages.	Water shortage contingency planning	8-3	Appendix F, WSCP Section 5.1, Table 5-1, pages 15-18
8.4	Section 8.4	10632(a)(4)(C)	Specify locally appropriate operational changes.	Water shortage contingency planning	8-2	Appendix F, WSCP Section 5.3, pages 19-20
8.4	Section 8.4	10632(a)(4)(D)	Specify additional mandatory prohibitions against specific water use practices that are in addition to State-mandated prohibitions are appropriate to local conditions.	Water shortage contingency planning	Table 8-3	Appendix F, WSCP Section 5.1, Table 5-1, pages 15-18
8.4	Section 8.4	10632(a)(4)(E)	Estimate the extent to which the gap between supplies and demand will be reduced by implementation of the action.	Water shortage contingency planning	8-2 and 8-3	Appendix F, WSCP Section 5.1, Table 5-1, pages 15-18
8.4	Section 8.4.6	10632.5	The UWMP shall include a seismic risk assessment and mitigation plan.	Water shortage contingency plan	n/a	Appendix F, WSCP Section 5.5, page 24
8.5	Section 8.5	10632(a)(5)(A)	Suppliers must describe that they will inform customers, the public and others regarding any current or predicted water shortages.	Water shortage contingency planning	n/a	Appendix F, WSCP Section 6.0, page 25-26
8.5	Section 8.5	10632(a)(5)(B), 10632(a)(5)(C)	Suppliers must describe that they will inform customers, the public and others regarding any shortage response actions triggered or anticipated to be triggered and other relevant communications.	Water shortage contingency planning	n/a	Appendix F, WSCP Section 6.0, page 25-27
8.6	Section 8.6	10632(a)(6)	Retail Supplier must describe how it will ensure compliance with and enforce provisions of the WSCP.	Water shortage contingency planning	n/a	Appendix F, WSCP Section 7.0, page 27
8.7	Section 8.7	10632(a)(7)(A)	Describe the legal authority that empowers the Supplier to enforce shortage response actions.	Water shortage contingency planning	n/a	Appendix F, WSCP Section 8.0, page 27
8.7	Section 8.7	10632(a)(7)(B)	Provide a statement that the Supplier will declare a water shortage emergency per Water Code Chapter 3. *Water Shortage Emergencies* .	Water shortage contingency planning	n/a	Appendix F, WSCP Section 8.0, page 27
8.7	Section 8.7	10632(a)(7)(C)	Provide a statement that the Supplier will coordinate with any city or county within which it provides water for the possible proclamation of a local emergency.	Water shortage contingency planning	n/a	Appendix F, WSCP Section 8.0, page 27
8.8	Section 8.8	10632(a)(8)(A)	Describe the potential revenue reductions and expense increases associated with activated shortage response actions.	Water shortage contingency planning	n/a	Appendix F, WSCP Section 9.0, page 27-29
8.8	Section 8.8	10632(a)(8)(B)	Provide a description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions.	Water shortage contingency planning	n/a	Appendix F, WSCP Section 9.0, page 27-29
8.8	Section 8.8	10632(a)(8)(C)	Retail Suppliers must describe the cost of compliance with Water Code Chapter 3.3, *Excessive Residential Water Use During Drought* .	Water shortage contingency planning	n/a	Appendix F, WSCP Section 9.0, page 27-29
8.9	Section 8.9	10632(a)(9)	Retail Suppliers must describe the monitoring and reporting requirements and procedures that ensure appropriate data are collected, tracked, and analyzed for purposes of monitoring customer compliance.	Water shortage contingency planning	n/a	Appendix F, WSCP Section 10.0, page 29
8.10	Section 8.10	10632(a)(10)	Describe reevaluation and improvement procedures for monitoring and evaluation the WSCP to ensure risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented.	Water shortage contingency planning	n/a	Appendix F, WSCP Section 11.0, page 29
8.11	Section 8.11	10632(b)	Analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas.	Water shortage contingency planning	n/a	Appendix F, WSCP Section 12.0, page 30
8.12	Section 8.12	10632(c)	Make available the WSCP to customers and any city or county where it provides water within 30 days after adoption of the plan.	Water shortage contingency planning	n/a	Appendix F, WSCP Section 13.0, page 30
9.1	Sections 9.1	10631(e)(1)	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.	Demand management measures	n/a	Section 9.2 and 9.3, pages 9-1 to 9-9, Table 9-1, page 9-9
9.2	Sections 9.2	10631(e)(2)	Wholesale Suppliers shall describe specific demand management measures listed in code, their distribution system asset management program, and Supplier assistance program.	Demand management measures	n/a	N/A - Only applicable to Wholesalers
10	Chapter 10	10608.26(a)	Retail Suppliers shall conduct a public hearing to discuss adoption, implementation, and economic impact of water use targets (recommended to discuss compliance).	Plan adoption, submittal, and implementation	n/a	Section 10.1, page 10-2, Appendix D- notice of public hearing
10.2	Section 10.2.1	10621(b)	Notify, at least 60 days prior to the public hearing, any city or county within which the Supplier provides water that the Supplier will be reviewing the UWMP and considering amendments or changes to the plan.	Plan adoption, submittal, and implementation	10-1	Section 2.3, page 2-3, Section 10.1, page 10-2
10.4	Section 10.4	10621(f)	Each urban water Supplier shall update and submit its 2025 plan to DWR by July 1, 202 6.	Plan adoption, submittal, and implementation	n/a	Section 10.1, page 10-2

Order	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	Relevant Submittal Table	2025 UWMP Location
10.2	Sections 10.2.2, 10.3, and 10.5	10642	Provide supporting documentation that the Supplier made the UWMP and WSCP available for public inspection, published notice of the public hearing, and held a public hearing about the UWMP and WSCP.	Plan adoption, submittal, and implementation	n/a	Section 10.1, page 10-2, Appendix D- notice of public hearing
10.2	Section 10.2.2	10642	The Supplier is to provide the time and place of the hearing to any city or county within which the Supplier provides water.	Plan adoption, submittal, and implementation	10-1	Section 10.1, page 10-2, Appendix D- notice of public hearing
10.3	Section 10.3.2	10642	Provide supporting documentation that the UWMP and WSCP has been adopted as prepared or modified.	Plan adoption, submittal, and implementation	n/a	Adoption and Submittal process described in Section 10.1, page 10-2
10.4	Section 10.4	10644(a)	Provide supporting documentation that the Supplier has submitted their UWMP to the California State Library.	Plan adoption, submittal, and implementation	n/a	Adoption and Submittal process described in Section 10.1, page 10-3
10.4	Section 10.4	10644(a)(1)	Provide supporting documentation that the Supplier has submitted their UWMP to any city or county within which the Supplier provides water no later than 30 days after adoption.	Plan adoption, submittal, and implementation	n/a	Adoption and Submittal process described in Section 10.1, page 10-4
10.4	Sections 10.4.1 and 10.4.2	10644(a)(2)	The UWMP, or amendments to the UWMP, submitted to DWR shall be submitted electronically.	Plan adoption, submittal, and implementation	n/a	Adoption and Submittal process described in Section 10.1, page 10-5
10.7	Section 10.7.2	10644(b)	If revised, submit a copy of the WSCP to DWR within 30 days of adoption.	Plan adoption, submittal, and implementation	n/a	Adoption and Submittal process described in Section 10.1, page 10-6
10.5	Section 10.5	10645(a)	Provide supporting documentation that, not later than 30 days after filing a copy of its UWMP with DWR, the Supplier has or will make the plan available for public review during normal business hours.	Plan adoption, submittal, and implementation	n/a	Adoption and Submittal process described in Section 10.1, page 10-7
10.5	Section 10.5	10645(b)	Provide supporting documentation that, not later than 30 days after filing a copy of its WSCP with DWR, the Supplier has or will make the plan available for public review during normal business hours.	Plan adoption, submittal, and implementation	n/a	Public availability process described in Section 10.2, page 10-8
10.6	Section 10.6	10621(c)	If Supplier is regulated by the Public Utilities Commission, include its plan and contingency plan as part of its general rate case filings.	Plan adoption, submittal, and implementation	n/a	N/A - City is not regulated by the CPUC

Appendix B DWR UWMP Standard Tables

B

Submittal Table 2-1 Retail: Public Water Systems

No	Has there been a change in the number of affiliated Public Water Systems since the 2020 UWMP? (OPTIONAL)		
Public Water System Number	**Public Water System Name**	**Number of Municipal Connections**	**Volume of Water Supplied**
CA4210010	CITY OF SANTA BARBARA WATER DEPARTMENT	27,695	11,799
	Total:	27,695	11,799
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.			
NOTES: Total connections and volume of water include potable and non-potable.			

Submittal Table 2-2: Plan Identification

Select Only One	Type of Plan			
☑	Individual UWMP			
☐	Regional Urban Water Management Plan (RUWMP)		Name of RUWMP Drop down list	If "Other" specify name of RUWMP
NOTES:				

Submittal Table 2-3: Supplier Identification

Type of Supplier (select one or both)	
☐	Supplier is a wholesale supplier
☑	Supplier is a retail supplier
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 date that the fiscal year begins (mm/dd)	
7/1	
Units of measure used in UWMP (select from drop down)	
Unit	AF
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.	
NOTES:	

Submittal Table 2-4 Retail: Water Supplier Information Exchange

The retail Supplier has informed the following wholesale supplier(s) of projected water use in accordance with Water Code Section 10631 (h).
Wholesale Water Supplier Name
Central Coast Water Authority
United States Bureau of Reclamation / Cachuma Operation and Maitenance Board
NOTES:

Submittal Table 3-1 Retail: Population - Current and Projected | Water Code Section 10631(a)

Population Served	2025	2030	2035	2040	2045	2050(opt)
Santa Barbara	90,723	91,909	93,110	94,326	94,704	95,084
Mission Canyon	2,611	2,683	2,758	2,834	2,913	2,994
Total	93,334	94,592	95,868	97,160	97,617	98,078
NOTES:						

Submittal Table 4-1 Retail: Total Uses for Potable and Non-Potable Water - 2025 Actual | Water Code Section 10631(d)(1)

Use Type	Additional Description (as needed)	FY 2024-2025 Actual	
Drop down list May select each use multiple times These are the only use types that will be recognized by the WUE data online		Level of Treatment When Delivered (OPTIONAL) Drop down list	Volume
Single Family	Single-Family	Potable	3,764
Multi-Family	Multi-Family	Potable	2,536
Commercial	Commercial	Potable	2,007
Institutional/Governmental	Included in Commercial Demand	Potable	-
Landscape	Landscape Irrigation	Potable	547
Distribution System Water Loss	Real and Apparent Loss	Potable	411
Other (optional)	Unbilled Authorized Consumption	Potable	131
Sales/Transfers/Exchanges to other	Sales to MWD	Potable	1,379
Landscape	Recycled Water for Irrigation	Non-Potable	771
Industrial	Recycled Water Use at El Estero WRC	Non-Potable	253
		Total:	11,799

DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.
USER TESTING: For reporting of STORAGE, see guidance in email.

NOTES:

Submittal Table 4-2 Retail: Total Uses of Potable, and Non-Potable Water - Projected | Water Code Section 10631(d)(1)

Use Type	Additional Description (as needed)	Projected Water Use (Report To the Extent that Records are Available)					
Drop down list May select each use multiple times These are the only Use Types that will be recognized by the WUEdata online submittal tool		Level of Treatment When Delivered (OPTIONAL) Drop down list	2030	2035	2040	2045	2050 (opt)
Single Family	Single-Family	Potable	3,569	3,440	3,336	3,281	3,233
Multi-Family	Multi-Family	Potable	2,558	2,644	2,755	2,775	2,805
Commercial	Commercial/Institutional/Governmental	Potable	2,087	2,201	2,243	2,294	2,349
Landscape	Landscape Irrigation	Potable	536	533	532	529	527
Distribution System Water Loss	Nonrevenue	Potable	1,067	1,080	1,089	1,094	1,100
Other (optional)	Unbilled Authorized Consumption	Potable	132	133	135	135	136
Sales/Transfers/Exchanges to other Suppliers	Sales to MWD	Potable	1,430	1,430	1,430	1,430	1,430
Landscape	Recycled Water for Irrigation	Non-Potable	720	720	720	720	720
Industrial	Recycled Water Use at El Estero WRC	Non-Potable	300	300	300	300	300
		Total:	**12,399**	**12,481**	**12,538**	**12,557**	**12,600**

DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.
USER TESTING: For reporting of STORAGE, see guidance in email.

NOTES:

Submittal Table 4-3 Retail: Inclusion in Water Use Projections | Water Code Section 10631 (a), 10631 (d)(4)(A), and 10631 (d)(4)(B)	
Are Future Water Savings Included in Projections? **(Refer to Appendix K of UWMP Guidebook)** **Drop down list (y/n)**	Yes
If "Yes" to above: State the section or page number, in the cell to the right, where citations of the codes, ordinances, or otherwise are utilized in demand projections are found. **OPTIONAL** Suppliers may complete Optional Submittal Table 4-4 R to quantify the expected savings.	Section 4.3
Are Lower Income Residential Demands Included In Projections? **(Refer to Appendix K of UWMP Guidebook)** **Drop down list (y/n)**	Yes
OPTIONAL If the method for accounting Lower Income Residential Demands has been included, provide page number where this accounting can be found. (An example is included in Appendix K.)	Section 4.3
NOTES:	

Submittal Table 4-5 Retail: Water Loss Audit Reporting | Water Code Section 10631(d)(3)(A)

Public Water System ID # Reported in Table 2-1 R	Reporting Period	Submitted to DWR Water Loss Audit Program (yes/no)
Report all five years for each Public Water System as available.		
CA4210010	FY 2020 - 2021	Yes
	FY 2021 - 2022	Yes
	FY 2022 - 2023	Yes
	FY 2023 - 2024	Yes
	FY 2024 - 2025	Yes
DWR NOTES: Suppliers will provide a reference to the WUEdata submittals of their Water Loss Audit Reports		
NOTES:		

Submittal Table 4-6 Retail: Progress Towards 2028 Water Loss Standard | Water Code Section 10631(d)(3)(C)

Public Water System ID # Reported in Submittal Table 2-1 R	Did the Water Board Calculate a Water Loss Standard for this Public Water System? (y/n) If no, Supplier will not complete this row.	Real Water Loss					Apparent Water Loss				
		2028 Real Water Loss Standard per Unit per day (as calculated by the Water Board)	Units for Real Water Loss (as used by the Water Board) Drop down list	Number of Units (Connections or Miles corresponding with units selected.)	Volume of Total Real Loss (from AWWA Water Loss Audit)	2025 or Most Recent Year Real Water Loss Per Unit per Day	2028 Apparent Water Loss Standard per Unit per Day (as calculated by the Water Board	Units for Apparent Water Loss	Number of Connections	Volume of Total Apparent Loss (from AWWA Water Loss Audit)	2025 or Most Recent Year Apparent Water Loss Per Unit per Day
CA4210010	Yes	28.8	Gallons per Service Connection per Day (GPSCD)	27,695	296	10	5.1	Gallons per Service Connection per Day (GPSCD)	27,695	116	3.7
Water Board's Calculated Water Loss Standards											
DWR NOTES: Units of measure (AF, CCF, MG) for Water Loss MUST remain consistent with units reported in Submittal Table 2-3. The units reported in Submittal Table 2-3 are used in this table's calculations.											
NOTES:											

Submittal Table 5-1 Retail: SB X7-7 2020 Target Progress | Water Code Section 10608.40

☐	Not an Urban Water Supplier in 2020. Supplier will not complete this table.					
Regional Alliance Target or Individual Target? Drop down list	**2020 Target**	**Actual 2020 GPCD**	**Did Supplier Achieve Targeted Reduction for 2020?**	**Only for suppliers that did not meet the Target in 2020**		
				Was Supplier part of a merger or consolidation since 2020?	**Actual 2025 GPCD (From SB X7-7 Compliance Form)**	**Did Supplier meet the 2020 Target in 2025?**
Individual Target	117	92	Yes			
DWR NOTES: Suppliers calculating a 2025 GPCD will need to complete and submit SB X 7-7 Compliance Tables to verify the use of SB X7-7						
NOTES:						

Submittal Table 6-1 Retail: Groundwater Volume Pumped | Water Code Section 10631(4) and 10631(4)(c)

☐	Supplier does not pump groundwater. The supplier will not complete the table below.
☐	All or part of the groundwater described below is desalinated. (OPTIONAL)

Groundwater Type Drop Down List May use each category multiple times	Water Type (OPTIONAL) Drop down list	Location or Basin Name	FY 2020 - 2021	FY 2021 - 2022	FY 2022 - 2023	FY 2023 - 2024	FY 2024 - 2025
Alluvial Basin	Potable	Foothill Basin	0	0	0	62	0
Alluvial Basin	Potable	Storage Unit #1	0	0	578	0	0
Alluvial Basin	Non-Potable	Storage Unit #3	0	0	0	0	0
		Total:	**0**	**0**	**578**	**62**	**0**

DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.

NOTES:

Submittal Table 6-2 Retail: Wastewater Collected Within Service Area in 2025 | Water Code Section 10633(a)

☐	There is no wastewater collection system. The supplier will not complete the table below.
	Percentage of 2025 service area covered by wastewater collection system (OPTIONAL)
	Percentage of 2025 service area population covered by wastewater collection system (OPTIONAL)

Wastewater Collection		Recipient of Collected Wastewater		
Name of Wastewater Collection Agency	**Wastewater Volume Metered or Estimated? OPTIONAL Drop Down List**	**Volume of Wastewater Collected from UWMP Service Area FY 2024-2025**	**Name of Wastewater Treatment Plant (WWTP) Drop down list**	**Is WWTP Located Within UWMP Area? Drop Down List**
City of Santa Barbara	Metered	6,710	El Estero Water Resource Center	Yes
County Service Area	Metered	160	El Estero Water Resource Center	Yes
Goleta Sanitary District	Estimated	30	Goleta SD WWTP, Place ID 227568	No
Total Wastewater Received from UWMP Service Area in 2025:		**6,900**		

DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.

NOTES: A small amount of parcels on the western edge of the City's water service area receives sewer service the from the adjacent Goleta Sanitary District. These parcels account for 93 accounts out of approximately 25,400 City sewer accounts.
As of 2009, there were approximately 785 parcels connected to on-site septic systems treating an estimated 400 ac-ft per year of flow.
Metered flows to El Estero are assumed to be 2.4% from the CSA, 0.4% from City of Goleta, and 97.2% from City of Santa Barbara.

Submittal Table 6-3 Retail: Wastewater Treatment and End Uses Within UWMP Service Area in 2025 | Water Code Section 10633(a)

☐	No wastewater is treated or disposed of within the UWMP service area. The supplier will not complete the table below.

Wastewater Treatment Plant Name and Place ID Number Drop down list	Does This Plant Treat Wastewater Generated Outside the UWMP Service Area? (OPTIONAL) Drop down list	2025 Volume of Wastewater Received from UWMP Service Area (As Reported in Submittal Table 6-2 R)	Total 2025 Volume of Water Treated	2025 End Uses of Wastewater in UWMP Service Area										
				Recycled Water Within UWMP Service Area		Recycled Water Outside of UWMP Service Area		Wastewater Discharged		Instream Flow Permit Requirements		Wastewater Delivered to Another Entity		
				Recycled Water Standard or Treatment Level Drop down list	Volume	Recycled Water Standard or Treatment Level Drop down list	Volume	Recycled Water Standard or Treatment Level Drop down list	Volume	Recycled Water Standard or Treatment Level Drop down list	Volume	Recycled Water Standard or Treatment Level Drop down list	Volume	Name of other entity
Add additional rows as needed														
El Estero Water Resource Center	No	6,869	6,869	Tertiary	1,024	Tertiary	0	Secondary, Disinfected - 2.2	5,845	Secondary, Disinfected - 2.2	0	Tertiary	0	N/A
Total:		**6,869**	**6,869**		**1,024**		**0**		**5,845**		**0**		**0**	

DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.

NOTES:

Submittal Table 6-4 Retail: Recycled Water Direct Beneficial Uses Within Service Area | Water Code Section 10633 (c)(d)

☐	Recycled water is not used and is not planned for use within the service area of the supplier. The supplier will only complete the column on "Potential Recycled Water Use" and submit an accompanying narrative on the feasibility of that potential recycled water use.

Name(s) of Facility/ies Producing (Treating) the Recycled Water (OPTIONAL) :	El Estero Water Resource Center NPDES, Place ID 222443
Name of Supplier Operating the Recycled Water Distribution System (OPTIONAL) :	City of Santa Barbara
Supplemental Water Added in 2025 (volume) Include units (OPTIONAL) :	13
Source of 2025 Supplemental Water (OPTIONAL) :	

Use Type Drop down list	Water Type (after treatment if treated) (OPTIONAL) Drop down list	Additional Information (as needed)	2025	2030	2035	2040	2045	2050 (opt)	Potential Recycled Water Use	
									Volume	Narrative page number
Commercial use	Non-Potable		17	10	10	10	10	10	184	6-23
Landscape irrigation (exc golf courses)	Non-Potable		340	340	340	340	340	340		
Golf course irrigation	Non-Potable		337	330	330	330	330	330		
Industrial use	Non-Potable	El Estero Process Water	253	280	280	280	280	280		
Other (Description Required)	Non-Potable	Sales	72	50	50	50	50	50		
Other (Description Required)	Non-Potable	Dust Control, flushing sewers, and vactor trucks	5	10	10	10	10	10		
		Total:	**1,024**	**1,020**	**1,020**	**1,020**	**1,020**	**1,020**		

DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.
Potential recycled water use - a description of the feasibility of these uses must be included in the narrative.

NOTES:

Submittal Table 6-5 Retail: 2020 UWMP Recycled Water Use Projection Compared to 2025 Actual | Water Code Section 10633

☐	Recycled water was not used in 2025 nor projected for use in 2020. The supplier will not complete the table below.		
Use Type		**2020 Projection for 2025**	**2025 Actual Use**
Landscape irrigation (exc golf courses)		500	340
Golf course irrigation		400	337
Commercial use		20	17
Industrial reuse		300	253
Other (Description Required)	Sales	0	72
Other (Description Required)	Dust Control, flushing sewers, and vactor trucks	1	5
	Total:	**1,221**	**1,024**
DWR NOTES Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.			
NOTES:			

Submittal Table 6-6 Retail: Methods to Encourage Future Recycled Water Use | Water Code Section 10633 (f)

☑	Supplier does not plan to expand recycled water use in the future. Supplier will not complete the table below but will provide narrative explanation.		
☑	Provide page location of narrative in UWMP: Potable Reuse discussion on Page 6-24		
Name of Action	**Description**	**Planned Implementation Year**	**Expected Increase in Recycled Water Use**
		Total:	
		Total (AF):	**#N/A**
DWR NOTES: Units of measure (AF, CCF, MG) MUST remain consistent with units reported in Submittal Table 2-3. The units reported in Submittal Table 2-3 are used in this table's calculations.			
NOTES:			

Submittal Table 6-7 Retail: Expected Future Water Supply Projects or Programs | Water Code Section 10631 (f)

☐	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.
Section 6.10, page 6-29	Provide page location of narrative in the UWMP

Name of Future Projects or Programs	Joint Project with other suppliers?		Additional Description (as needed)	Water Type (after treatment if treated) (OPTIONAL) Drop Down list	Planned Implementation Year	Planned for Use in Year Type Drop Down List	Expected Increase in Water Supply to Supplier (This may be a range)
	Drop Down List (yes/no)	If Yes, Supplier Name					
Add additional rows as needed							

DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.

NOTES:

Submittal Table 6-8 Retail: Water Supplies — 2025 Actual | Water Code Section 10631 (b)

Water Supply Drop down list May use each category multiple times.These are the only water supply categories that will be recognized by the WUEdata online submittal tool	Additional Description (as needed)	2025		
		Actual Volume	Water Type (after treatment if treated) (OPTIONAL) Drop Down list	Total Right or Safe or Sustainable Yield (OPTIONAL)
Surface water (not desalinated)	Cachuma Project	3,178	Potable	
Surface water (not desalinated)	Gibraltar Reservior	4,480	Potable	
Other (optional)	Mission Tunnel (Infiltration)	1,374	Potable	
Desalinated Water - Surface Water		1,663	Potable	
Groundwater (not desalinated)		0	Potable	
Purchased or Imported Water	State Water Project	0	Potable	
Recycled Water		1,024	Non-Potable	
Total:		**11,719**		**0**
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3. USER TESTING: For reporting of STORAGE, see guidance in email.				
NOTES:				

OPTIONAL Submittal Table 6-8DS: Source Water Desalination by Urban Water Supplier

☐	Supplier does not reduce salinity in either groundwater or surface water prior to distribution.										
Desalination Facility (Drop Down list)	**Plant Capacity**	**Intake Type Drop down list**	**Source Water Type Drop down list**	**Influent TDS**	**Brine Discharge Drop down list**	**Volume of Water Desalinated**					**Name(s) of Agencies that Receive this Water**
						2021	**2022**	**2023**	**2024**	**2025**	
Charles Meyer Desalination Plant	3,125	Open-water intake (screened or unscreened)	Sea water	34,500	Sewer	2,199	2,784	1,930	2,288	1,663	City of Santa Barbara, Montecito Water District
					Total:	2,199	2,784	1,930	2,288	1,663	
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submital Table 2-3.											
NOTES:											

Submittal Table 6-9 Retail: Water Supplies — Projected | Water Code Section 10631 (b)

Water Supply			Projected Water Supply (Report to the Extent Practicable)									
			2030		2035		2040		2045		2050 (opt)	
Drop down list May use each category multiple times.These are the only water supply categories that will be recognized by the WUEdata online submittal tool	Additional Detail on Water Supply	Water Type (after treatment if treated) (OPTIONAL) Drop Down list	Reasonably Available Volume	Total Right or Safe or Sustainable Yield (OPTIONAL)	Reasonably Available Volume	Total Right or Safe or Sustainable Yield (OPTIONAL)	Reasonably Available Volume	Total Right or Safe or Sustainable Yield (OPTIONAL)	Reasonably Available Volume	Total Right or Safe or Sustainable Yield (OPTIONAL)	Reasonably Available Volume	Total Right or Safe or Sustainable Yield (OPTIONAL)
Surface water (not desalinated)	Cachuma Project	Potable	8,277	8,277	8,277	8,277	8,277	8,277	8,277	8,277	8,277	8,277
Surface water (not desalinated)	Gibraltar Reservior	Potable	3,510	3,510	3,510	3,510	3,510	3,510	3,510	3,510	3,510	3,510
Surface water (not desalinated)	Mission Tunnel (Infiltration)	Potable	942		942		942		942		942	
Desalinated Water - Surface Water		Potable	2,500	3,125	2,500	3,125	2,500	3,125	2,500	3,125	2,500	3,125
Groundwater (not desalinated)		Potable	972	3,320	972	3,320	972	3,320	972	3,320	972	3,320
Purchased or Imported Water	State Water Project	Potable	1,736	3,300	1,688	3,300	1,639	3,300	1,591	3,300	1,543	3,300
Transfers	Montecito Water District	Potable	300		300		300		300		300	
Recycled Water		Non-Potable	1,020		1,020		1,020		1,020		1,020	
		Total:	**19,257**	**21,532**	**19,209**	**21,532**	**19,160**	**21,532**	**19,112**	**21,532**	**19,064**	**21,532**

DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.
USER TESTING: For reporting of STORAGE, see guidance in email.

NOTES:

Table O-1B: Recommended Energy Reporting - SINGLE DELIVERY PRODUCT - TOTAL UTILITY APPROACH

Water Delivery Product drop down list (If delivering more than one type of product use Table O-		Urban Water Supplier Operational Control		
Start Date of Reporting Period	1/1/2023	Sum of All Water Management Processes	Non-Consequential Hydropower	
End Date of Reporting Period	12/31/2023			
Is upstream embedded energy in the values reported?	No			
Units of Measure for Water	AF	Total Utility	Hydropower	Net Utility
Volume of Water Entering Process		11,257	0	11,257
Energy Consumed (kWh)		11,163,470	0	11,163,470
Energy Intensity (kWh/vol. converted to MG)		3,043	0	3,043
Quantity of Self-Generated Renewable Energy				
0	kWh			
Data Quality (Estimate, Metered Data, Combination of Estimates and Metered Data)				
Metered Data				
Data Quality Narrative:				
Energy consumption data was sourced from the 2023 billed meter usage of the City's water infrastrcture.				
Narrative:				

OPTIONAL Submittal Table 7-1 Retail: Basis of Water Year Data (Reliability Assessment)

Year Type	Base Year (If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 2024-2025, use 2025)	Available Supplies if Year Type Repeats	
		☐ Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location _____	
		Quantification of available supplies is provided in this table as either volume only, percent only, or both.	
		Volume Available	% of Average Supply
Average Year	2025	19,257	**100%**
Single-Dry Year	2016	12,424	**65%**
Consecutive Dry Years 1st Year	2012	23,457	**122%**
Consecutive Dry Years 2nd Year	2013	22,636	**118%**
Consecutive Dry Years 3rd Year	2014	19,810	**103%**
Consecutive Dry Years 4th Year	2015	15,704	**82%**
Consecutive Dry Years 5th Year	2016	11,014	**57%**

DWR NOTES: Supplier may use multiple versions of Submittal Table 7-1 R if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If a Supplier uses multiple versions of Submittal Table 7-1 R, in the "Note" section of each submittal table, state that multiple versions of Submittal Table 7-1 R are being used and identify the particular water source that is being reported in each submittal table.
Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.

NOTES:

Submittal Table 7-2 Retail: Normal Year Supply and Use Comparison | Water Code Section 10635 (a)

	2030	2035	2040	2045	2050 (Opt)
Supply totals (autofill from Submittal Table 6-9 R)	19,257	19,209	19,160	19,112	19,064
Use totals (autofill from Submittal Table 4-2 R)	12,399	12,481	12,539	12,557	12,600
Surplus/(shortfall)	**6,858**	**6,728**	**6,621**	**6,555**	**6,464**

10635. (a) Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the long-term total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and a drought lasting five consecutive water years.

Submittal Table 7-3 Retail: Single Dry Year Supply and Demand Comparison | Water Code Section 10635(a)

	2030	2035	2040	2045	2050 (Opt)
Supply Totals:	12,424	12,424	12,424	12,424	12,424
Use Totals:	12,399	11,980	12,034	12,052	12,092
Surplus/(shortfall)	**25**	**444**	**390**	**372**	**332**
DWR NOTES : Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.					
NOTES: 5% extraordinary conservation is included begining in 2035 to reduce the water use total.					

Submittal Table 7-4 Retail: Five Consecutive Dry Years Supply and Demand Comparison | Water Code Section 10635(a)

		2030	2035	2040	2045	2050 (Opt)
First Year	**Supply Totals:**	23,457	23,457	23,457	23,457	23,457
	Use Totals:	12,399	12,481	12,538	12,557	12,599
	Surplus/(shortfall)	**11,058**	**10,976**	**10,919**	**10,900**	**10,858**
Second Year	**Supply Totals:**	22,451	22,369	22,312	22,293	22,251
	Use Totals:	12,399	12,481	12,538	12,557	12,599
	Surplus/(shortfall)	**10,052**	**9,887**	**9,774**	**9,736**	**9,652**
Third Year	**Supply Totals:**	19,440	19,275	19,162	19,123	19,039
	Use Totals:	12,399	12,481	12,538	12,557	12,599
	Surplus/(shortfall)	**7,041**	**6,793**	**6,624**	**6,566**	**6,440**
Fourth Year	**Supply Totals:**	15,704	15,704	15,704	15,704	15,704
	Use Totals:	12,399	12,481	12,538	12,557	12,599
	Surplus/(shortfall)	**3,305**	**3,223**	**3,166**	**3,147**	**3,105**
Fifth Year	**Supply Totals:**	11,014	11,014	11,014	11,014	11,014
	Use Totals:	10,409	10,475	10,520	10,536	10,569
	Surplus/(shortfall)	**605**	**539**	**494**	**478**	**445**
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in						
NOTES: 20% extraordinary conservation is included in Year 5 to reduce the water use total.						

Submittal Table 7-5 Retail: Five-Year Drought Risk Assessment | Water Code Section 10635(b)(3)

2026	Total
Total Water Use:	12,307
Total Supplies:	22,400
Surplus/Shortfall w/o WSCP Action	**10,093**
OPTIONAL Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	**0**
WSCP - use reduction savings benefit	**0**
Revised Surplus/(shortfall)	**10,093**
2027	**Total**
Total Water Use:	12,317
Total Supplies:	24,533
Surplus/Shortfall w/o WSCP Action	**12,217**
OPTIONAL Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	**0**
WSCP - use reduction savings benefit	**0**
Revised Surplus/(shortfall)	**12,217**
2028	**Total**
Total Water Use:	12,339
Total Supplies:	25,977
Surplus/Shortfall w/o WSCP Action	**13,637**
OPTIONAL Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	**0**
WSCP - use reduction savings benefit	**0**
Revised Surplus/(shortfall)	**13,637**
2029	**Total**
Total Water Use:	12,366
Total Supplies:	22,353
Surplus/Shortfall w/o WSCP Action	**9,986**
OPTIONAL Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	**0**
WSCP - use reduction savings benefit	**0**
Revised Surplus/(shortfall)	**9,986**
2030	**Total**
Total Water Use:	12,399
Total Supplies:	13,806
Surplus/Shortfall w/o WSCP Action	**1,407**
OPTIONAL Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	**0**
WSCP - use reduction savings benefit	**0**
Revised Surplus/(shortfall)	**1,407**
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.	
NOTES:	

Submittal Table 8-1: Cross-reference for Standard vs Supplier Shortage Levels | Water Code Section 10632(a)(3)(B)

☐	Supplier Uses the Standard Six Levels of Water Shortage. The supplier will not complete this table.		
Standard Shortage Levels	**Percent Shortage Range**	**Suppliers Shortage Levels**	**Percent Shortage Range**
1	Up to 10%	1	0-10%
2	Up to 20%	2	10-25%
3	Up to 30%	3	25-50%
4	Up to 40%	3	25-50%
5	Up to 50%	3	25-50%
6	>50%	4	>50%
NOTES:			

Submittal Table 8-2 Retail: Supply Augmentation and Other Actions | Water Code Section 10632(a)(4)(A),(C) and (E)

Yes	Is the Supplier completing this table using the standard six levels? (yes/no)		
Shortage Level	**Supply Augmentation Methods and Other Actions by Water Supplier Drop down list These are the only categories that will be accepted by the WUEdata online submittal tool**	**How much is this going to reduce the shortage gap? Include units used (volume type or percentage)**	**Additional Explanation or Reference (OPTIONAL)**
Add additional rows as needed			
All	Stored Emergency Supply	Varying	Groundwater is pumped from drought storage volume. The amount is dependent on diminished quantity from City's supply portfolio.
All	Other Purchases	Varying	Amount of water purchased depended on dimished quanity from City's supply portfolio.
NOTES:			

Submittal Table 8-3 Retail: Demand Reduction Actions | Water Code Section 10632(a)(4)(B) and (E)

	Is the Supplier completing this table using the standard six levels? (yes/no)		
Shortage Level	Demand Reduction Actions Drop down list These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.	How much is this going to reduce the shortage gap? Include units used (volume type or percentage)	Additional Explanation or Reference (OPTIONAL)
All	Expand Public Information Campaign	0-5%	Community outreach that includes increased advertising, presentations to community groups, workshops, and enhanced website resources
All	Offer Water Use Surveys	0-1%	Indoor and outdoor water checkups available to all customer classes
All	Provide Rebates on Plumbing Fixtures and Devices	0-1%	Offer or expand rebates on a variety of plumbing fixtures that are high efficiency such as washers, toilets, and urinals
All	Provide Rebates for Landscape Irrigation Efficiency	0-1%	Offer or expand rebates for drip irrigation conversions, smart irrigation controllers, water wise plants, and rain sensors to improve efficiency
All	Provide Rebates for Turf Replacement	0-1%	Offer or expand rebates for community members who wish to replace their turf with a water wise garden
All	Decrease Line Flushing, or Pursue Zero Discharge Flushing Methods	0-1%	The City uses zero discharge water recycling trucks for water main and wastewater collection system cleaning.
All	Other – Leaky device	0-1%	Customers are required to repair any leaky or malfunctioning devices within 72 hours of notification of leak
All	Landscape – Runoff	0-1%	Landscape irrigation in excess leading to runoff onto nearby surfaces is prohibited
All	Other – Post-rainfall prohibition	0-1%	Prohibit irrigation with potable water during and within 48 hours after measurable rainfall
1	Reduce System Water Loss	0-1%	The City increases efforts to correct water system losses, including repairing leaks and eliminating illicit connections.
2	Increase Water Waste Patrols	0-1%	Patrols to discourage water wasting and correct water wasting practices in the community.
2	Other - Nozzles	0-1%	Only hoses with automatic shutoff nozzle fixtures are permitted
2	Other - Prohibit vehicle washing	0-1%	Prohibit washings cars, boats, trailers, aircraft, or other vehicles except with hose shutoff nozzle or at commercial or fleet vehicle washing facilities using water recycling equipment
2	Landscape - Limit landscape irrigation to specific times	0-5%	Prohibit irrigation during the hours when evaporation is highest.
2	CII - Lodging linen service	0-1%	Hotels/motels must provide guests with option to reuse towels and linens for more than one day
2	CII - Restaurants serve water upon request	0-1%	No restaurant, hotel, café, cafeteria, or other public place where food is served shall serve drinking water to any customer unless expressly requested
2	Other	0-1%	Require posting of water shortage notice at restaurants, hotels/motels, and commercial showering & car washing facilities
2	Pools and Spas - Require covers for pools and spas	0-1%	Require covers for swimming pools and spas when not in use
3	Other - Prohibit use of potable water for washing hard surfaces	0-1%	Prohibit use of potable water to wash sidewalks, walkways, driveways, parking lots, open ground, or other hard surfaced areas except where necessary for public health or safety.
3	Landscape - Limit landscape irrigation to specific days	5-10%	Limit to assigned watering days, may depend on seasonal changes as well such as summer and winter.
3	Water Features - Restrict water use for decorative water features	0-1%	Prohibit use of potable water to fill or maintain decorative fountains and water features unless located in indoors or home to aquatic life.
3	Other water feature or swimming pool restriction	0-1%	Restrict draining and refiling of pools
3	Other	0-1%	Limit the use of potable water hydrant meters, except as exempted by the Public Works Director
4	Landscape - Other landscape restriction or prohibition	5-10%	Restrict irrigation to high efficiency methods
4	Landscape - Other landscape restriction or prohibition	5-20%	Restrict irrigation to watering by hand only
4	Landscape - Other landscape restriction or prohibition	5-20%	Prohibit/restrict irrigation of turf
4	Other	20-40%	Prohibit all outdoor water use
4	Other	20-70%	Institute water rationing
4	Moratorium or Net Zero New Demand	0-1%	The City may temporarily limit or ban new water service connections within the service area.

Submittal Table 10-1 Retail: Notification to Cities and Counties | Water Code Section 10621(b) and 10642

City Name	60 Day Notice	Notice of Public Hearing
City of Santa Barbara	Yes	Yes
County Name Drop Down List	**60 Day Notice**	**Notice of Public Hearing**
Santa Barbara County	Yes	Yes
Other	**60 Day Notice**	**Notice of Public Hearing**
Cachuma Operation and Maintenance Board	Yes	Yes
Central Coast Water Authority	Yes	Yes
United States Bureau of Reclamation	Yes	Yes
Goleta Water District	Yes	Yes
Montecito Water District	Yes	Yes
Carpinteria Valley Water District	Yes	Yes
Santa Ynez River Water Conservation District, Improvement District No. 1	Yes	Yes
NOTES:		

Appendix C Consistency with the Delta Plan

C

2025 UWMP APPENDIX C: QUANTIFYING REGIONAL SELF-RELIANCE AND REDUCED RELIANCE ON WATER SUPPLIES FROM THE DELTA WATERSHED

1 Background

Under the Sacramento-San Joaquin Delta Reform Act of 2009, state and local public agencies proposing a covered action in the Delta, prior to initiating the implementation of that action, must prepare a written certification of consistency with detailed findings as to whether the covered action is consistent with applicable Delta Plan policies and submit that certification to the Delta Stewardship Council. Anyone may appeal a certification of consistency, and if the Delta Stewardship Council grants the appeal, the covered action may not be implemented until the agency proposing the covered action submits a revised certification of consistency, and either no appeal is filed, or the Delta Stewardship Council denies the subsequent appeal.

An urban water supplier that anticipates participating in or receiving water from a proposed covered action such as a multi-year water transfer, conveyance facility, or new diversion that involves transferring water through, exporting water from, or using water in the Delta should provide information in their 2015 and subsequent Urban Water Management Plans (UWMPs) that can then be used in the covered action process to demonstrate consistency with Delta Plan Policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (WR P1).

WR P1 details what is needed for a covered action to demonstrate consistency with reduced reliance on the Delta and improved regional self-reliance. WR P1 subsection (a) states that:

> *(a) Water shall not be exported from, transferred through, or used in the Delta if all of the following apply:*
>
> > *(1) One or more water suppliers that would receive water as a result of the export, transfer, or use have failed to adequately contribute to reduced reliance on the Delta and improved regional self-reliance consistent with all of the requirements listed in paragraph (1) of subsection (c);*
> >
> > *(2) That failure has significantly caused the need for the export, transfer, or use; and*
> >
> > *(3) The export, transfer, or use would have a significant adverse environmental impact in the Delta.*

WR P1 subsection (c)(1) further defines what adequately contributing to reduced reliance on the Delta means in terms of (a)(1) above.

> *(c)(1) Water suppliers that have done all the following are contributing to reduced reliance on the Delta and improved regional self-reliance and are therefore consistent with this policy:*
>
> > *(A) Completed a current Urban or Agricultural Water Management Plan (Plan) which has been reviewed by the California Department of Water Resources for compliance with the applicable requirements of Water Code Division 6, Parts 2.55, 2.6, and 2.8;*

> *(B) Identified, evaluated, and commenced implementation, consistent with the implementation schedule set forth in the Plan, of all programs and projects included in the Plan that are locally cost effective and technically feasible which reduce reliance on the Delta; and*
>
> *(C) Included in the Plan, commencing in 2015, the expected outcome for measurable reduction in Delta reliance and improvement in regional self-reliance. The expected outcome for measurable reduction in Delta reliance and improvement in regional self-reliance shall be reported in the Plan as the reduction in the amount of water used, or in the percentage of water used, from the Delta watershed. For the purposes of reporting, water efficiency is considered a new source of water supply, consistent with Water Code section 1011(a).*

The analysis and documentation provided below include all the elements described in WR P1(c)(1) that need to be included in a water supplier's UWMP to support a certification of consistency for a future covered action.

2 Methodology

As stated in WR P1(c)(1)(C), the policy requires that, commencing in 2015, UWMPs include expected outcomes for improved regional self-reliance and measurable reduction in Delta reliance. WR P1 further states that those outcomes shall be reported in the UWMP as the reduction in the amount of water used, or in the percentage of water used, from the Delta. The expected outcomes for City of Santa Barbara's (City's) regional self-reliance and reduced Delta reliance were developed using the approach and guidance described in Appendix C of DWR's Urban Water Management Plan Guidebook 2025 issued in 2026 (Guidebook Appendix C).

The methodology used to determine City's improved regional self-reliance and reduced Delta reliance is consistent with the approach detailed in DWR's UWMP Guidebook Appendix C, including the use of narrative justifications for the accounting of supplies and the documentation of specific data sources. Some of the key assumptions include:

- All data were obtained from the current 2025 UWMP or previously adopted UWMPs and represent average or normal water year conditions.
- All analyses were conducted at the service area level, and all data reflect the total contributions of City and its customers as well as their customers.

To calculate the expected outcomes for improved regional self-reliance and reduced Delta reliance, a baseline is needed to compare against. This analysis uses a normal water year representation of 2010 as the baseline, which is consistent with the approach described in the Guidebook Appendix C. Data for the 2010 baseline were taken from City's 2005 UWMP as the UWMPs generally do not provide normal water year data for the year that they are adopted (i.e., 2005 UWMP forecasts begin in 2010, 2010 UWMP forecasts begin in 2015, and so on).

Consistent with the 2010 baseline data approach, the expected outcomes for improved regional self-reliance and reduced Delta reliance for 2015, 2020, and 2025 were taken from City's 2010, 2015, and

2020 UWMPs, respectively. Expected outcomes for 2030-2050 are from the current 2025 UWMP. Documentation of the specific data sources and assumptions are included in the discussions below.

3 Demonstration of Regional Self-Reliance

Service Area Demands without Water Use Efficiency

In alignment with the Guidebook Appendix C, this analysis uses normal water year demands, rather than normal water year supplies to calculate expected outcomes in terms of the percentage of water used. Using normal water year demands serves as a proxy for the amount of supplies that would be used in a normal water year, which helps alleviate issues associated with how supply capability is presented to fulfill requirements of the UWMP Act versus how supplies might be accounted for to demonstrate consistency with WR P1.

Because WR P1 considers water use efficiency savings a source of water supply, water suppliers such as City that do not explicitly quantify water use efficiency savings in their UWMPs can calculate their embedded water use efficiency savings based on changes in forecasted per capita water use since the baseline.

Agencies that explicitly calculate and report water use efficiency savings in their UWMP will need to make an adjustment to properly reflect normal water year demands in the calculation of reduced reliance. As explained in the Guidebook Appendix C, water use efficiency savings must be added back to the normal year demands to represent demands without water use efficiency savings accounted for; otherwise the effect of water use efficiency savings on regional self-reliance would be overestimated. Table 1 shows the results of this adjustment for City. Supporting narratives and documentation for all the data shown in Table 1 are provided below.

Service Area Demands with Water Use Efficiency

The service area demands shown in Table 1 represent the total water demands for City's service area. The demand data shown in Table 1 were collected from the following sources:

- Baseline (2010): City 2005 UWMP, Figure 9
- 2015: City 2010 UWMP, Table 6
- 2020: City 2015 UWMP, 3
- 2025: City 2020 UWMP, Table 5
- 2030-2050: City 2025 UWMP, Table 4-3

Service Area Population

The population data shown in Table 1 were collected from the following sources:

- Baseline (2010): City 2015 UWMP, Table 2
- 2015: City 2015 UWMP, Table 2
- 2020: City 2020 UWMP, Table 3
- 2025-2050: City 2025 UWMP, Table 3-2

Estimated Water Use Efficiency Since Baseline

Calculated using "Potable Service Area Demands with Water Use Efficiency" divided by "Service Area Population" and then calculating Estimated Water Use Efficiency Since Baseline by comparing with 2010 Per Capita Water Use.

Service Area Water Demands without Water Use Efficiency

Add "Service Area Demands with Water Use Efficiency" to "Estimated Water Use Efficiency Since Baseline."

Supplies Contributing to Regional Self-Reliance

For a covered action to demonstrate consistency with the Delta Plan, WR P1 subsection (c)(1)(C) states that water suppliers must report the expected outcomes for measurable improvement in regional self-reliance. Table 2 shows expected outcomes for supplies contributing to regional self-reliance both in amount and as a percentage. The numbers shown in Table 2 represent efforts to improve regional self-reliance for City's entire service area. Supporting narratives and documentation for all of the data shown in Table 2 are provided below.

Water Use Efficiency

The water use efficiency information shown in Table 2 is taken directly from Table 1.

Water Recycling

The water recycling information shown in Table 2 is taken directly from Table 1.

Advanced Water Technologies

The advanced water technologies data shown in Table 2 represent projected normal year supply of desalination. Prior to the 2020 UWMP, use of desalination was only planned on for extended drought or emergency conditions. Starting during the 2020 UWMP, desalination is now considered part of the City's water supply portfolio to support drought preparedness, response, and recovery. Based on this information, desalination data was estimated from the following sources:

- Baseline (2010): City 2005 UWMP, Page 15
- 2015: City 2010 UWMP, Page 27
- 2020: City 2015 UWMP, Page 48
- 2020: City 2020 UWMP, Table 12
- 2030-2050: City 2025 UWMP, Table 6-6

Local and Regional Water Supply and Storage Programs

The local and regional water supply and storage programs data shown in Table 2 represent average annual supply projections by the City for the Cachuma Project, Gibraltar Reservoir, Mission Tunnel, and Devil's Creek. Based on this information, groundwater pumping data was estimated from the following sources:

- Baseline (2010): City 2005 UWMP, Pages 7 to 10
- 2015: City 2010 UWMP, Table 12
- 2020: City 2015 UWMP, Table 15
- 2025: City 2020 UWMP, Table 12
- 2030-2050: City 2025 UWMP, Table 6-6

Other Programs and Projects the Contribute to Regional Self-Reliance

The Other Programs and Projects the Contribute to Regional Self-Reliance data shown in Table 2 represent groundwater pumping perennial yield estimates by the City for 2010-2025 and the established safe yield for 2030-2050. The City worked with USGS to update the safe yield of their groundwater basins in 2024. Based on this information, groundwater pumping data was estimated from the following sources:

- Baseline (2010): City 2005 UWMP, Page 11
- 2015: City 2010 UWMP, Table 12
- 2020: City 2015 UWMP, Table 15
- 2025: City 2020 UWMP, Table 12
- 2030-2050: City 2025 UWMP, Table 6-6

Conclusions

The results shown in Table 2 demonstrate that City's service area is measurably improving its regional self-reliance, both as an amount of water used and as a percentage of water used. The following provides a summary of the near-term (2030) and long-term (2050) expected outcomes for City's Delta reliance on supplies from the Delta watershed:

- Near-term (2030): Normal water year regional self-reliance increased by 5,400 AF from the 2010 baseline, this represents an increase of 30 percent of 2030 normal water year demands without water use efficiency (Table 2).
- Long-term (2045): Normal water year regional self-reliance increased by 6,000 AF from the 2010 baseline, this represents an increase of 30 percent of 2050 normal water year demands without water use efficiency (Table 2).

4 Demonstration of Reduced Reliance on the Delta

City's service area reduces reliance on the Delta through investments in non-Delta water supplies, local water supplies, and regional and local demand management measures. For reduced reliance on supplies from the Delta Watershed, the data used in this analysis represent the total regional efforts of the City.

Calculation of Reliance on Water Supplies from the Delta Watershed

The calculation of reliance on water supplies from the Delta watershed, shown in Table 3, is based on the following assumptions. City water supplies from the Delta watershed include:

- CVP/SWP Contract Supplies

CVP/SWP Contract Supplies

The supply data shown in Table 3 is for City's SWP Table A allocation and were collected from the following sources:

- Baseline (2010): The 2009 State Water Project Delivery Capability Report that identified an average SWP reliability of 60%. This baseline source is recommended by the Central Coast Water Authority.
- 2015: City 2010 UWMP, Page 25
- 2020: City 2015 UWMP, Table 15
- 2025: City 2020 UWMP, Table 12
- 2030-2050: City 2025 UWMP, Table 6-6

Change in Supplies from the Delta Watershed

Adds "CVP/SWP Contract Supplies" and "Other Water Supplies from the Delta Watershed" to get total Water Supplies from the Delta Watershed and calculates changes from the 2010 baseline.

Percent Change in Supplies from the Delta Watershed

Divides "Water Supplies from the Delta Watershed" by "Service Area Demands without Water Use Efficiency" and calculates changes from the 2010 baseline.

Conclusions

The results shown in Table 3 show that the City is measurably reducing reliance on the Delta, both as an amount of water used and as a percentage of water used. The following provides a summary of the near-term (2030) and long-term (2050) expected outcomes for City's Delta reliance on supplies from the Delta watershed:

- Near-term (2030): Normal water year reliance on supplies from the Delta watershed decreased by 244 AF from the 2010 baseline, this represents a decrease of two percent of 2030 normal water year demands without water use efficiency (Table 3).
- Long-term (2050): Normal water year reliance on supplies from the Delta watershed decreased by 437 AF from the 2010 baseline, this represents a decrease of four percent of 2050 normal water year demands without water use efficiency (Table 3).

5 UWMP Implementation

In addition to the analysis and documentation described above, WR P1 subsection (c)(1)(B) requires that all programs and projects included in the UWMP that are locally cost-effective and technically feasible, which reduce reliance on the Delta, are identified, evaluated, and implemented consistent with the implementation schedule. WR P1 (c)(1)(B) states that:

> *(B) Identified, evaluated, and commenced implementation, consistent with the implementation schedule set forth in the Plan, of all programs and projects included in the Plan that are locally cost effective and technically feasible which reduce reliance on the Delta[.]*

In accordance with Water Code Section 10631(f), water suppliers must already include in their UWMP a detailed description of expected future projects and programs that they may implement to increase the amount of water supply available to them in normal and single-dry water years and for a period of drought lasting five consecutive years. The UWMP description must also identify specific projects, include a description of the increase in water supply that is expected to be available from each project, and include an estimate regarding the implementation timeline for each project or program.

Chapter 6 of City's 2025 UWMP summarizes the implementation plan and continued progress in developing a diversified water portfolio to meet the region's water needs.

Table 1. Calculation of Service Area Water Demands without Water Use Efficiency (UWMP Table C-1 and Table C-2)

Table C-1: Optional Calculation of Water Use Efficiency -To be completed if Water Supplier does not specifically estimate Water Use Efficiency as a supply

Service Area Water Use Efficiency Demands (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045	2050
Service Area Water Demands with Water Use Efficiency Accounted For	14,200	13,310	13,176	12,669	10,480	10,468	10,443	10,405	10,398
Non-Potable Water Demands	800	875	950	1,221	1,020	1,020	1,020	1,020	1,020
Potable Service Area Demands with Water Use Efficiency Accounted For	13,400	12,435	12,226	11,448	9,460	9,448	9,423	9,385	9,378

Total Service Area Population	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045	2050
Service Area Population	91,114 #	93,532	96,027	93,334	94,592	95,868	97,160	97,617	98,078

Water Use Efficiency Since Baseline (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045	2050
Per Capita Water Use (GPCD)	131	119	114	110	89	88	87	86	85
Change in Per Capita Water Use from Baseline (GPCD)		(13)	(18)	(22)	(42)	(43)	(45)	(45)	(46)
Estimated Water Use Efficiency Since Baseline		1,321	1,897	2,278	4,452	4,651	4,866	4,971	5,046

Table C-2: Calculation of Service Area Water Demands Without Water Use Efficiency

Total Service Area Water Demands (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045	2050
Service Area Water Demands with Water Use Efficiency Accounted For	14,200	13,310	13,176	12,669	10,480	10,468	10,443	10,405	10,398
Reported Water Use Efficiency or Estimated Water Use Efficiency Since Baseline	-	1,321	1,897	2,278	4,452	4,651	4,866	4,971	5,046
Service Area Water Demands without Water Use Efficiency Accounted For	14,200	14,631	15,073	14,947	14,932	15,119	15,309	15,376	15,444

Table 2. Calculation of Supplies Contributing to Regional Self-Reliance (UWMP Table C-3)

Table C-3: Calculation of Supplies Contributing to Regional Self-Reliance

Water Supplies Contributing to Regional Self-Reliance (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045	2050
Water Use Efficiency	-	1,321	1,897	2,278	4,452	4,651	4,866	4,971	5,046
Water Recycling	800	875	950	1,221	1,020	1,020	1,020	1,020	1,020
Stormwater Capture and Use									
Advanced Water Technologies	-	-	-	3,125	2,500	2,500	2,500	2,500	2,500
Conjunctive Use Projects									
Local and Regional Water Supply and Storage Projects	14,345	12,503	12,503	12,997	13,029	13,029	13,029	13,029	13,029
Other Programs and Projects the Contribute to Regional Self-Reliance	1,400	1,083	1,083	1,250	972	972	972	972	972
Water Supplies Contributing to Regional Self-Reliance	16,545	15,782	16,433	20,871	21,973	22,172	22,387	22,492	22,567

Service Area Water Demands without Water Use Efficiency (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045	2050
Service Area Water Demands without Water Use Efficiency Accounted For	14,200	14,631	15,073	14,947	14,932	15,119	15,309	15,376	15,444

Change in Regional Self Reliance (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045	2050
Water Supplies Contributing to Regional Self-Reliance	16,545	15,782	16,433	20,871	21,973	22,172	22,387	22,492	22,567
Change in Water Supplies Contributing to Regional Self-Reliance		(763)	(112)	4,326	5,428	5,627	5,842	5,947	6,022

Percent Change in Regional Self Reliance (As Percent of Demand w/out WUE)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045	2050
Percent of Water Supplies Contributing to Regional Self-Reliance	116.5%	107.9%	109.0%	139.6%	147.2%	146.6%	146.2%	146.3%	146.1%
Change in Percent of Water Supplies Contributing to Regional Self-Reliance		-8.6%	-7.5%	23.1%	30.6%	30.1%	29.7%	29.8%	29.6%

Table 3. Reliance on Water Supplies from the Delta Watershed (UWMP Table C-4)

Water Supplies from the Delta Watershed (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045	2050
CVP/SWP Contract Supplies	1,980	1,980	2,001	1,865	1,736	1,688	1,639	1,591	1,543
Delta/Delta Tributary Diversions									
Transfers and Exchanges of Supplies from the Delta Watershed									
Other Water Supplies from the Delta Watershed									
Total Water Supplies from the Delta Watershed	1,980	1,980	2,001	1,865	1,736	1,688	1,639	1,591	1,543

Service Area Water Demands without Water Use Efficiency (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045	2050
Service Area Water Demands without Water Use Efficiency Accounted For	14,200	14,631	15,073	14,947	14,932	15,119	15,309	15,376	15,444

Change in Supplies from the Delta Watershed (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045	2050
Water Supplies from the Delta Watershed	1,980	1,980	2,001	1,865	1,736	1,688	1,639	1,591	1,543
Change in Water Supplies from the Delta Watershed		-	21	(115)	(244)	(292)	(341)	(389)	(437)

Percent Change in Supplies from the Delta Watershed (As a Percent of Demand w/out WUE)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045	2050
Percent of Water Supplies from the Delta Watershed	13.9%	13.5%	13.3%	12.5%	11.6%	11.2%	10.7%	10.3%	10.0%
Change in Percent of Water Supplies from the Delta Watershed		-0.4%	-0.7%	-1.5%	-2.3%	-2.8%	-3.2%	-3.6%	-4.0%

Appendix D Documentation of Public Noticing, Coordination, and Adoption

D

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January 15, 2026

Ray Stokes
Executive Director
Central Coast Water Authority
RAS@ccwa.com

Delivered Via Email

Subject: Notice of Preparation of the 2025 Urban Water Management Plan and Shortage Contingency Plan

Dear Ray Stokes:

The City of Santa Barbara (City) is in the process of preparing its 2025 Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP) in compliance with the Urban Water Management Planning Act. An update of the City's UWMP is required every five (5) years. In addition, the City is preparing an Appendix to the 2025 UWMP to demonstrate consistency with Delta Plan Policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (California Code Reg., tit.23, §5003).

Water Code section 10621(b) requires an urban water supplier updating its UWMP and WSCP to notify cities and counties within its service area of the update at least sixty (60) days prior to holding a public hearing thereby encouraging public involvement and agency coordination. This letter serves as the City's notice that it is preparing and updating its 2025 UWMP and WSCP.

The City's draft 2025 UWMP and WSCP will be available for review prior to the public hearing and adoption meeting at: SantaBarbaraCA.gov/WaterVision.
The City will subsequently hold a noticed public hearing to hear public comments and consider adoption of the plan in 2026. You will be notified when the draft 2025 UWMP is complete and ready for public review and comment.

The City invites you to submit comments and consult with the City regarding its UWMP and WSCP. If you have any questions, comments, or input, please contact Jasmine Showers, Water Resources Analyst, via email at JShowers@SantaBarbaraCA.gov or by phone at (805) 897-2646.

Sincerely,

Dakota Corey.
Water Supply and Services Manager

DC:js

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January 15, 2026

David Beard
Deputy Director of Operations and Engineering
Central Coast Water Authority
DRB@ccwa.com

Delivered Via Email

Subject: Notice of Preparation of the 2025 Urban Water Management Plan and Shortage Contingency Plan

Dear David Beard:

The City of Santa Barbara (City) is in the process of preparing its 2025 Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP) in compliance with the Urban Water Management Planning Act. An update of the City's UWMP is required every five (5) years. In addition, the City is preparing an Appendix to the 2025 UWMP to demonstrate consistency with Delta Plan Policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (California Code Reg., tit.23, §5003).

Water Code section 10621(b) requires an urban water supplier updating its UWMP and WSCP to notify cities and counties within its service area of the update at least sixty (60) days prior to holding a public hearing thereby encouraging public involvement and agency coordination. This letter serves as the City's notice that it is preparing and updating its 2025 UWMP and WSCP.

The City's draft 2025 UWMP and WSCP will be available for review prior to the public hearing and adoption meeting at: SantaBarbaraCA.gov/WaterVision.
The City will subsequently hold a noticed public hearing to hear public comments and consider adoption of the plan in 2026. You will be notified when the draft 2025 UWMP is complete and ready for public review and comment.

The City invites you to submit comments and consult with the City regarding its UWMP and WSCP. If you have any questions, comments, or input, please contact Jasmine Showers, Water Resources Analyst, via email at JShowers@SantaBarbaraCA.gov or by phone at (805) 897-2646.

Sincerely,

Dakota Corey.
Water Supply and Services Manager

DC:js

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January 15, 2026

Janet Gingras
General Manager
Cachuma Operation and Maintenance Board
jgingras@cachuma-board.org

Delivered Via Email

Subject: Notice of Preparation of the 2025 Urban Water Management Plan and Shortage Contingency Plan

Dear Janet Gingras:

The City of Santa Barbara (City) is in the process of preparing its 2025 Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP) in compliance with the Urban Water Management Planning Act. An update of the City's UWMP is required every five (5) years. In addition, the City is preparing an Appendix to the 2025 UWMP to demonstrate consistency with Delta Plan Policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (California Code Reg., tit.23, §5003).

Water Code section 10621(b) requires an urban water supplier updating its UWMP and WSCP to notify cities and counties within its service area of the update at least sixty (60) days prior to holding a public hearing thereby encouraging public involvement and agency coordination. This letter serves as the City's notice that it is preparing and updating its 2025 UWMP and WSCP.

The City's draft 2025 UWMP and WSCP will be available for review prior to the public hearing and adoption meeting at: SantaBarbaraCA.gov/WaterVision.
The City will subsequently hold a noticed public hearing to hear public comments and consider adoption of the plan in 2026. You will be notified when the draft 2025 UWMP is complete and ready for public review and comment.

The City invites you to submit comments and consult with the City regarding its UWMP and WSCP. If you have any questions, comments, or input, please contact Jasmine Showers, Water Resources Analyst, via email at JShowers@SantaBarbaraCA.gov or by phone at (805) 897-2646.

Sincerely,

Dakota Corey.
Water Supply and Services Manager

DC:js

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January 15, 2026

Matt Young
Water Agency Manager
Santa Barbara County Water Agency
mcyoung@countyofsb.org

Delivered Via Email

Subject: Notice of Preparation of the 2025 Urban Water Management Plan and Shortage Contingency Plan

Dear Matt Young:

The City of Santa Barbara (City) is in the process of preparing its 2025 Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP) in compliance with the Urban Water Management Planning Act. An update of the City's UWMP is required every five (5) years. In addition, the City is preparing an Appendix to the 2025 UWMP to demonstrate consistency with Delta Plan Policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (California Code Reg., tit.23, §5003).

Water Code section 10621(b) requires an urban water supplier updating its UWMP and WSCP to notify cities and counties within its service area of the update at least sixty (60) days prior to holding a public hearing thereby encouraging public involvement and agency coordination. This letter serves as the City's notice that it is preparing and updating its 2025 UWMP and WSCP.

The City's draft 2025 UWMP and WSCP will be available for review prior to the public hearing and adoption meeting at: SantaBarbaraCA.gov/WaterVision.
The City will subsequently hold a noticed public hearing to hear public comments and consider adoption of the plan in 2026. You will be notified when the draft 2025 UWMP is complete and ready for public review and comment.

The City invites you to submit comments and consult with the City regarding its UWMP and WSCP. If you have any questions, comments, or input, please contact Jasmine Showers, Water Resources Analyst, via email at JShowers@SantaBarbaraCA.gov or by phone at (805) 897-2646.

Sincerely,

Dakota Corey.
Water Supply and Services Manager

DC:js

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January 15, 2026

Rain Emmerson
Acting Area Manager
United States Bureau of Reclamation
remerson@usbr.gov

Delivered Via Email

Subject: Notice of Preparation of the 2025 Urban Water Management Plan and Shortage Contingency Plan

Dear Rain Emmerson:

The City of Santa Barbara (City) is in the process of preparing its 2025 Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP) in compliance with the Urban Water Management Planning Act. An update of the City's UWMP is required every five (5) years. In addition, the City is preparing an Appendix to the 2025 UWMP to demonstrate consistency with Delta Plan Policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (California Code Reg., tit.23, §5003).

Water Code section 10621(b) requires an urban water supplier updating its UWMP and WSCP to notify cities and counties within its service area of the update at least sixty (60) days prior to holding a public hearing thereby encouraging public involvement and agency coordination. This letter serves as the City's notice that it is preparing and updating its 2025 UWMP and WSCP.

The City's draft 2025 UWMP and WSCP will be available for review prior to the public hearing and adoption meeting at: SantaBarbaraCA.gov/WaterVision.
The City will subsequently hold a noticed public hearing to hear public comments and consider adoption of the plan in 2026. You will be notified when the draft 2025 UWMP is complete and ready for public review and comment.

The City invites you to submit comments and consult with the City regarding its UWMP and WSCP. If you have any questions, comments, or input, please contact Jasmine Showers, Water Resources Analyst, via email at JShowers@SantaBarbaraCA.gov or by phone at (805) 897-2646.

Sincerely,

Dakota Corey.
Water Supply and Services Manager

DC:js

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January 15, 2026

Nicholas Turner
General Manager
Montecito Water District
nturner@montecitowater.com

Delivered Via Email

Subject: Notice of Preparation of the 2025 Urban Water Management Plan and Shortage Contingency Plan

Dear Nicholas Turner:

The City of Santa Barbara (City) is in the process of preparing its 2025 Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP) in compliance with the Urban Water Management Planning Act. An update of the City's UWMP is required every five (5) years. In addition, the City is preparing an Appendix to the 2025 UWMP to demonstrate consistency with Delta Plan Policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (California Code Reg., tit.23, §5003).

Water Code section 10621(b) requires an urban water supplier updating its UWMP and WSCP to notify cities and counties within its service area of the update at least sixty (60) days prior to holding a public hearing thereby encouraging public involvement and agency coordination. This letter serves as the City's notice that it is preparing and updating its 2025 UWMP and WSCP.

The City's draft 2025 UWMP and WSCP will be available for review prior to the public hearing and adoption meeting at: SantaBarbaraCA.gov/WaterVision.
The City will subsequently hold a noticed public hearing to hear public comments and consider adoption of the plan in 2026. You will be notified when the draft 2025 UWMP is complete and ready for public review and comment.

The City invites you to submit comments and consult with the City regarding its UWMP and WSCP. If you have any questions, comments, or input, please contact Jasmine Showers, Water Resources Analyst, via email at JShowers@SantaBarbaraCA.gov or by phone at (805) 897-2646.

Sincerely,

Dakota Corey.
Water Supply and Services Manager

DC:js

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January 15, 2026

Robert T. McDonald
General Manager
Carpinteria Valley Water District
bob@cvwd.net

Delivered Via Email

Subject: Notice of Preparation of the 2025 Urban Water Management Plan and Shortage Contingency Plan

Dear Robert T. McDonald:

The City of Santa Barbara (City) is in the process of preparing its 2025 Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP) in compliance with the Urban Water Management Planning Act. An update of the City's UWMP is required every five (5) years. In addition, the City is preparing an Appendix to the 2025 UWMP to demonstrate consistency with Delta Plan Policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (California Code Reg., tit.23, §5003).

Water Code section 10621(b) requires an urban water supplier updating its UWMP and WSCP to notify cities and counties within its service area of the update at least sixty (60) days prior to holding a public hearing thereby encouraging public involvement and agency coordination. This letter serves as the City's notice that it is preparing and updating its 2025 UWMP and WSCP.

The City's draft 2025 UWMP and WSCP will be available for review prior to the public hearing and adoption meeting at: SantaBarbaraCA.gov/WaterVision.
The City will subsequently hold a noticed public hearing to hear public comments and consider adoption of the plan in 2026. You will be notified when the draft 2025 UWMP is complete and ready for public review and comment.

The City invites you to submit comments and consult with the City regarding its UWMP and WSCP. If you have any questions, comments, or input, please contact Jasmine Showers, Water Resources Analyst, via email at JShowers@SantaBarbaraCA.gov or by phone at (805) 897-2646.

Sincerely,

Dakota Corey.
Water Supply and Services Manager

DC:js

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January 15, 2026

Kelley Dyer
General Manager
Carpinteria Valley Water District
Kelley@cvwd.net

Delivered Via Email

Subject: Notice of Preparation of the 2025 Urban Water Management Plan and Shortage Contingency Plan

Dear Kelley Dyer:

The City of Santa Barbara (City) is in the process of preparing its 2025 Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP) in compliance with the Urban Water Management Planning Act. An update of the City's UWMP is required every five (5) years. In addition, the City is preparing an Appendix to the 2025 UWMP to demonstrate consistency with Delta Plan Policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (California Code Reg., tit.23, §5003).

Water Code section 10621(b) requires an urban water supplier updating its UWMP and WSCP to notify cities and counties within its service area of the update at least sixty (60) days prior to holding a public hearing thereby encouraging public involvement and agency coordination. This letter serves as the City's notice that it is preparing and updating its 2025 UWMP and WSCP.

The City's draft 2025 UWMP and WSCP will be available for review prior to the public hearing and adoption meeting at: SantaBarbaraCA.gov/WaterVision.
The City will subsequently hold a noticed public hearing to hear public comments and consider adoption of the plan in 2026. You will be notified when the draft 2025 UWMP is complete and ready for public review and comment.

The City invites you to submit comments and consult with the City regarding its UWMP and WSCP. If you have any questions, comments, or input, please contact Jasmine Showers, Water Resources Analyst, via email at JShowers@SantaBarbaraCA.gov or by phone at (805) 897-2646.

Sincerely,

Dakota Corey.
Water Supply and Services Manager

DC:js

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January 15, 2026

Paeter Garcia
General Manager
Santa Ynez River Water Conservation District, Improvement District No. 1
pgarcia@syrwd.org

Delivered Via Email

Subject: Notice of Preparation of the 2025 Urban Water Management Plan and Shortage Contingency Plan

Dear Paeter Garcia:

The City of Santa Barbara (City) is in the process of preparing its 2025 Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP) in compliance with the Urban Water Management Planning Act. An update of the City's UWMP is required every five (5) years. In addition, the City is preparing an Appendix to the 2025 UWMP to demonstrate consistency with Delta Plan Policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (California Code Reg., tit.23, §5003).

Water Code section 10621(b) requires an urban water supplier updating its UWMP and WSCP to notify cities and counties within its service area of the update at least sixty (60) days prior to holding a public hearing thereby encouraging public involvement and agency coordination. This letter serves as the City's notice that it is preparing and updating its 2025 UWMP and WSCP.

The City's draft 2025 UWMP and WSCP will be available for review prior to the public hearing and adoption meeting at: SantaBarbaraCA.gov/WaterVision.
The City will subsequently hold a noticed public hearing to hear public comments and consider adoption of the plan in 2026. You will be notified when the draft 2025 UWMP is complete and ready for public review and comment.

The City invites you to submit comments and consult with the City regarding its UWMP and WSCP. If you have any questions, comments, or input, please contact Jasmine Showers, Water Resources Analyst, via email at JShowers@SantaBarbaraCA.gov or by phone at (805) 897-2646.

Sincerely,

Dakota Corey.
Water Supply and Services Manager

DC:js

City of Santa Barbara
Department of Water Resources
SantaBarbaraCA.gov/Water

Main Office
630 Garden Street
PO Box 1990
Santa Barbara, CA
93102-1990

Administration
Tel: (805) 564-5387
Fax: (805) 897-2613

Special Projects
& Desalination
Tel: (805) 564-5571

Wastewater System
Tel: (805) 568-1010

Water Supply & Services
Tel: (805) 564-5460

Water System
Tel: (805) 564-5419

January 15, 2026

David Matson
General Manager
Goleta Water District
dmatson@goletawater.com

Delivered Via Email

Subject: Notice of Preparation of the 2025 Urban Water Management Plan and Shortage Contingency Plan

Dear David Matson:

The City of Santa Barbara (City) is in the process of preparing its 2025 Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP) in compliance with the Urban Water Management Planning Act. An update of the City's UWMP is required every five (5) years. In addition, the City is preparing an Appendix to the 2025 UWMP to demonstrate consistency with Delta Plan Policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (California Code Reg., tit.23, §5003).

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Sincerely,

Dakota Corey.
Water Supply and Services Manager

DC:js

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Water System
Tel: (805) 564-5419

January 15, 2026

Ryan Drake
Water Supply and Conservation Manager
Goleta Water District
rdrake@goletawater.com

Delivered Via Email

Subject: Notice of Preparation of the 2025 Urban Water Management Plan and Shortage Contingency Plan

Dear Ryan Drake:

The City of Santa Barbara (City) is in the process of preparing its 2025 Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP) in compliance with the Urban Water Management Planning Act. An update of the City's UWMP is required every five (5) years. In addition, the City is preparing an Appendix to the 2025 UWMP to demonstrate consistency with Delta Plan Policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (California Code Reg., tit.23, §5003).

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Sincerely,

Dakota Corey.
Water Supply and Services Manager

DC:js

City of Santa Barbara

Department of Water Resources

SantaBarbaraCA.gov/Water

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Water Supply & Services
Tel: (805) 564-5460

Water System
Tel: (805) 564-5413

March 27, 2026

Peter Cantle
Executive Director
Cachuma Conservation Release Board
PCantle@ccrb-board.org

Delivered Via Email

Subject: Notice of Preparation of the 2025 Urban Water Management Plan and Shortage Contingency Plan

Dear Peter Cantle:

The City of Santa Barbara (City) is in the process of preparing its 2025 Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP) in compliance with the Urban Water Management Planning Act. An update of the City's UWMP is required every five (5) years. In addition, the City is preparing an Appendix to the 2025 UWMP to demonstrate consistency with Delta Plan Policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (California Code Reg., tit.23, §5003).

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The City invites you to submit comments and consult with the City regarding its UWMP and WSCP. If you have any questions, comments, or input, please contact Jasmine Showers, Water Resources Analyst, via email at JShowers@SantaBarbaraCA.gov or by phone at (805) 897-2646.

Sincerely,

Dakota Corey.
Water Supply and Services Manager

DC:js

City of Santa Barbara
City Clerk's Office
SantaBarbaraCA.gov

Tel: (805) 564-5309
Fax: (805) 897-2623

City Hall
735 Anacapa Street
Santa Barbara, CA
93101

PO Box 1990
Santa Barbara, CA
93102-1990

PUBLIC NOTICE
City of Santa Barbara

NOTICE IS HEREBY GIVEN that the City Council of the City of Santa Barbara will conduct a Public Hearing on Tuesday, June 16, 2026 during the afternoon session of the meeting which begins at 2:00 p.m. in the Council Chamber, City Hall, 735 Anacapa Street, Santa Barbara. You are invited to attend this hearing and address your verbal comments to the City Council. Written comments are also welcome up to the time of the hearing, and should be addressed to the City Council via the City Clerk's Office via email at Clerk@SantaBarbaraCA.gov, or by mail at P.O. Box 1990, Santa Barbara, CA 93102-1990.

Public comment may be given in person at the meeting or remotely via Zoom. Members of the public who wish to give public comment remotely may do so by completing the Zoom registration at the URL provided on the front page of the agenda.

On Thursday, June 11, 2026 an Agenda with all items to be heard on Tuesday, June 16, 2026, will be available at City Hall, 735 Anacapa Street, and at the Central Library. Agendas and Staff Reports are also accessible online at http://www.santabarbaraca.gov/CAP. The Agenda includes instructions for participation in the meeting. If you wish to participate in the public hearing, please follow the instructions on the posted Agenda.

The hearing is to consider the adoption of the City of Santa Barbara 2025 Urban Water Management Plan and 2025 Water Shortage Contingency Plan, according to the requirements of California Water Code Division 6, Part 2.6, Chapter 3, commencing with § 10620. A copy of the proposed Urban Water Management Plan and Water Shortage Contingency Plan is available for public review online at www.SantaBarbaraCA.gov/WaterVision. The preparation and adoption of the Urban Water Management Plan is exempt from the California Environmental Quality Act under California Water Code § 10652.

In compliance with the Americans with Disabilities Act, if you need auxiliary aids or services or staff assistance to attend or participate in this meeting, please contact the City Administrator's Office at 564-5305. If possible, notification at least 48 hours prior to the meeting will usually enable the City to make reasonable arrangements. Specialized services, such as sign language interpretation or documents in Braille, may require additional lead time to arrange.

(SEAL)

Sarah Gorman, MMC
City Clerk Services Manager
[Date of Posting]

Resolution to be included following adoption.

Appendix E FY21 to FY25 AWWA Water Audits

E

AWWA Free Water Audit Software:
Reporting Worksheet

WAS
American Water Works Association.

Click to access
Click to add a

Water Audit Report for: City of Santa Barbara (CA4210010)
Reporting Year: 2021 7/2020 - 6/2021

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the

All volumes to be entered as: ACRE-FEET PER YEAR

To select the correct data grading for each input, determine the highest grade where the utility meets or exceeds all criteria for that grade and all grades below it.

<---------- Enter grading in column 'E' and 'J' ---------->

Master Meter and Supply Error Adjustments

WATER SUPPLIED

				Pcnt:	Value:	
Volume from own sources:	7	10,972.540	acre-ft/yr	3		acre-ft/yr
Water imported:	n/a		acre-ft/yr			acre-ft/yr
Water exported:	n/a		acre-ft/yr			acre-ft/yr

Enter negative % or value for under-registration
Enter positive % or value for over-registration

WATER SUPPLIED: 10,972.540 acre-ft/yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option

			Pcnt:	Value:	
Billed metered:	5	9,674.090	acre-ft/yr			
Billed unmetered:	n/a		acre-ft/yr			
Unbilled metered:	9	145.390	acre-ft/yr			
Unbilled unmetered:	8	4.810	acre-ft/yr		4.810	acre-ft/yr

Use buttons to select percentage of water supplied **OR** value

AUTHORIZED CONSUMPTION: 9,824.290 acre-ft/yr

WATER LOSSES (Water Supplied - Authorized Consumption)

1,148.250 acre-ft/yr

Apparent Losses

			Pcnt:	Value:	
Unauthorized consumption:		27.431 acre-ft/yr	0.25%		acre-ft/yr

Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

Customer metering inaccuracies:	5	96.030	acre-ft/yr	96.030	acre-ft/yr
Systematic data handling errors:	5	24.185	acre-ft/yr	0.25%	acre-ft/yr

Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed

Apparent Losses: 147.647 acre-ft/yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: 1,000.603 acre-ft/yr

WATER LOSSES: 1,148.250 acre-ft/yr

NON-REVENUE WATER

NON-REVENUE WATER: 1,298.450 acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	9	322.2	miles
Number of active AND inactive service connections:	5	29,014	
Service connection density:		90	conn./mile main

Are customer meters typically located at the curbstop or property line? Yes

Average length of customer service line: (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 data grading score of 10 has been applied

Average operating pressure: 4 119.5 psi

COST DATA

Total annual cost of operating water system:	10	$55,566,205	$/Year
Customer retail unit cost (applied to Apparent Losses):	9	$9.70	$/100 cubic feet (ccf)
Variable production cost (applied to Real Losses):	5	$289.00	$/acre-ft ☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 68 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: Volume from own sources
2: Billed metered
3: Customer metering inaccuracies

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0

American Water Works Association.
Copyright © 2014, All Rights Reserved.

? Click to access definition
+ Click to add a comment

Water Audit Report for: City of Santa Barbara (CA4210010)
Reporting Year: 2022 | 7/2021 - 6/2022

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the input data by grading each component (n/a or 1-10) using the drop-down list to the left of the input cell. Hover the mouse over the cell to obtain a description of the grades

All volumes to be entered as: ACRE-FEET PER YEAR

To select the correct data grading for each input, determine the highest grade where the utility meets or exceeds all criteria for that grade and all grades below it.

<---------- Enter grading in column 'E' and 'J' ---------->

Master Meter and Supply Error Adjustments

WATER SUPPLIED

				Pcnt:	Value:	
Volume from own sources:	7	10,378.880	acre-ft/yr	3		acre-ft/yr
Water imported:	n/a		acre-ft/yr			acre-ft/yr
Water exported:	n/a		acre-ft/yr			acre-ft/yr
WATER SUPPLIED:		**10,378.880**	acre-ft/yr			

Enter negative % or value for under-registration
Enter positive % or value for over-registration

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

				Pcnt:	Value:	
Billed metered:	5	9,489.040	acre-ft/yr			
Billed unmetered:	n/a		acre-ft/yr			
Unbilled metered:	9	136.980	acre-ft/yr			
Unbilled unmetered:	9	6.013	acre-ft/yr		6.013	acre-ft/yr
AUTHORIZED CONSUMPTION:		**9,632.033**	acre-ft/yr			

Use buttons to select percentage of water supplied **OR** value

WATER LOSSES (Water Supplied - Authorized Consumption)

746.847 acre-ft/yr

Apparent Losses

			Pcnt:	Value:	
Unauthorized consumption:	25.947	acre-ft/yr	0.25%		acre-ft/yr

Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

Customer metering inaccuracies:	5	83.040	acre-ft/yr	83.040	acre-ft/yr
Systematic data handling errors:	5	23.723	acre-ft/yr	0.25%	acre-ft/yr

Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed

Apparent Losses: **132.710** acre-ft/yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: **614.137** acre-ft/yr

WATER LOSSES: **746.847** acre-ft/yr

NON-REVENUE WATER

NON-REVENUE WATER: **889.840** acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	10	320.0	miles
Number of active AND inactive service connections:	5	29,001	
Service connection density:		91	conn./mile main
Are customer meters typically located at the curbstop or property line?		Yes	
Average length of customer service line:			(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 data grading score of 10 has been applied

Average operating pressure:	4	119.4	psi

COST DATA

Total annual cost of operating water system:	10	$61,994,576	$/Year	
Customer retail unit cost (applied to Apparent Losses):	9	$10.02	$/100 cubic feet (ccf)	
Variable production cost (applied to Real Losses):	5	$378.00	$/acre-ft	☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 69 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: Volume from own sources
2: Billed metered
3: Customer metering inaccuracies

AWWA Free Water Audit Software: Worksheet

FWAS v6.0
American Water Works Association.
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Water Audit Report for: City of Santa Barbara
Audit Year: 2023 | Jul 01 2022 - Jun 30 2023 | Fiscal

Click 'n' to add notes
Click 'g' to determine data validity grade

To edit water system info: go to start page

To access definitions, click the input name

All volumes to be entered as: ACRE-FEET PER YEAR

Water Supplied Error Adjustments

WATER SUPPLIED

		n	g				n	g		choose entry option:		
VOS	Volume from Own Sources:	n	g	7	9,553.400	Acre-ft/Yr	n	g	4	0.00%	percent	VOSEA
WI	Water Imported:	n	g	n/a	0.000	Acre-ft/Yr						WIEA
WE	Water Exported:	n	g	n/a	0.000	Acre-ft/Yr						WEEA
	WATER SUPPLIED:				9,553.400	Acre-ft/Yr						

AUTHORIZED CONSUMPTION

BMAC	Billed Metered:	n	g	8	8,644.088	Acre-ft/Yr						
BUAC	Billed Unmetered:	n	g	n/a	0.000	Acre-ft/Yr						
UMAC	Unbilled Metered:	n	g	8	105.077	Acre-ft/Yr				choose entry option:		
UUAC	Unbilled Unmetered:	n	g	8	8.720	Acre-ft/Yr				custom	8.720	acre-ft/yr
	AUTHORIZED CONSUMPTION:				8,757.884	Acre-ft/Yr						

WATER LOSSES

795.516 Acre-ft/Yr

Apparent Losses

Default option selected for Systematic Data Handling Errors, with automatic data grading of 3

										choose entry option:		
SDHE	Systematic Data Handling Errors:	n	g	3	21.610	Acre-ft/Yr				0.25%	default	
CMI	Customer Metering Inaccuracies:	n	g	3	64.870	Acre-ft/Yr				volume	64.870	acre-ft/yr under-registration
UC	Unauthorized Consumption:	n	g	3	21.610	Acre-ft/Yr				0.25%	default	

Default option selected for Unauthorized Consumption, with automatic data grading of 3

Apparent Losses: 108.090 Acre-ft/Yr

Real Losses

Real Losses: 687.425 Acre-ft/Yr

WATER LOSSES: 795.516 Acre-ft/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 909.312 Acre-ft/Yr

SYSTEM DATA

Lm	Length of mains:	n	g	10	338.0	miles	(including fire hydrant lead lengths)
Nc	Number of service connections:	n	g	8	26,353		(active *and* inactive)
	Service connection density:				78	conn./mile main	

Are customer meters typically located at the curbstop/property line? Yes

Lp | n | g | 10

Average length of customer service line has been set to zero and a data grading of 10 has been applied

AOP Average Operating Pressure: n | g | 6 | 119.0 psi

COST DATA

CRUC	Customer Retail Unit Charge:	n	g	7	$10.16	$/100 cubic feet (ccf)	Total Annual Operating Cost	
VPC	Variable Production Cost:	n	g	9	$311.26	$/acre-ft	$64,308,650	$/yr (optional input)

WATER AUDIT DATA VALIDITY TIER:

***** The Water Audit Data Validity Score is in Tier III (51-70). See Dashboard tab for additional outputs. *****

go to dashboard

A weighted scale for the components of supply, consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

Based on the information provided, audit reliability can be most improved by addressing the following components:

1: Volume from Own Sources (VOS)
2: Customer Metering Inaccuracies (CMI)
3: Billed Metered (BMAC)

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses:	33.9	gal/conn/day
Unit Apparent Losses:	5.1	gal/conn/day
Unit Real Losses[A]:	28.8	gal/conn/day
Unit Real Losses[B]:		gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

AWWA Free Water Audit Software: Worksheet

FWAS v6.0

American Water Works Association.
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Water Audit Report for: City of Santa Barbara
Audit Year: 2024 | Jul 01 2023 - Jun 30 2024 | Fiscal

Click 'n' to add notes
Click 'g' to determine data validity grade

To edit water system info: go to start page

To access definitions, click the input name

All volumes to be entered as: ACRE-FEET PER YEAR

Water Supplied Error Adjustments

WATER SUPPLIED

		n	g				n	g		choose entry option:		
VOS	Volume from Own Sources:	n	g	7	9,613.145	Acre-ft/Yr	n	g	4	0.00%	percent	VOSEA
WI	Water Imported:	n	g	n/a	0.000	Acre-ft/Yr						WIEA
WE	Water Exported:	n	g	n/a	0.000	Acre-ft/Yr						WEEA
	WATER SUPPLIED:				9,613.145	Acre-ft/Yr						

AUTHORIZED CONSUMPTION

BMAC	Billed Metered:	n	g	8	8,454.776	Acre-ft/Yr						
BUAC	Billed Unmetered:	n	g	n/a	0.000	Acre-ft/Yr						
UMAC	Unbilled Metered:	n	g	8	108.391	Acre-ft/Yr				choose entry option:		
UUAC	Unbilled Unmetered:	n	g	8	8.720	Acre-ft/Yr				custom	8.720	acre-ft/yr
	AUTHORIZED CONSUMPTION:				8,571.887	Acre-ft/Yr						

WATER LOSSES

1,041.257 Acre-ft/Yr

Apparent Losses

Default option selected for Systematic Data Handling Errors, with automatic data grading of 3

SDHE	Systematic Data Handling Errors:	n	g	3	21.137	Acre-ft/Yr				0.25%	default	
CMI	Customer Metering Inaccuracies:	n	g	3	62.630	Acre-ft/Yr				volume	62.630	acre-ft/yr
UC	Unauthorized Consumption:	n	g	3	21.137	Acre-ft/Yr				0.25%	default	

choose entry option:

under-registration

Default option selected for Unauthorized Consumption, with automatic data grading of 3

Apparent Losses: 104.904 Acre-ft/Yr

Real Losses

Real Losses: 936.354 Acre-ft/Yr

WATER LOSSES: 1,041.257 Acre-ft/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 1,158.369 Acre-ft/Yr

SYSTEM DATA

Lm	Length of mains:	n	g	10	330.2	miles	(including fire hydrant lead lengths)
Nc	Number of service connections:	n	g	8	26,303		(active *and* inactive)
	Service connection density:				80	conn./mile main	

Are customer meters typically located at the curbstop/property line? Yes

Lp n g 10

Average length of customer service line has been set to zero and a data grading of 10 has been applied

AOP Average Operating Pressure: n g 6 119.0 psi

COST DATA

CRUC	Customer Retail Unit Charge:	n	g	7	$10.67	$/100 cubic feet (ccf)	Total Annual Operating Cost	
VPC	Variable Production Cost:	n	g	9	$328.82	$/acre-ft	$70,099,401	$/yr (optional input)

WATER AUDIT DATA VALIDITY TIER:

***** The Water Audit Data Validity Score is in Tier III (51-70). See Dashboard tab for additional outputs. *****

go to dashboard

A weighted scale for the components of supply, consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

Based on the information provided, audit reliability can be most improved by addressing the following components:

1: Volume from Own Sources (VOS)
2: Customer Metering Inaccuracies (CMI)
3: Billed Metered (BMAC)

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses:	33.9	gal/conn/day
Unit Apparent Losses:	5.1	gal/conn/day
Unit Real Losses[A]:	28.8	gal/conn/day
Unit Real Losses[B]:		gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

AWWA Free Water Audit Software: Worksheet

FWAS v6.0

American Water Works Association.
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Water Audit Report for: City of Santa Barbara
Audit Year: 2025 | Jul 01 2024 - Jun 30 2025 | Fiscal

Click 'n' to add notes
Click 'g' to determine data validity grade

To edit water system info: go to start page

To access definitions, click the input name

All volumes to be entered as: ACRE-FEET PER YEAR

Water Supplied Error Adjustments

WATER SUPPLIED

			choose entry option:									
VOS	Volume from Own Sources:	n	g	7	17,942.821	Acre-ft/Yr	n	g	8	0.00%	percent	VOSEA
WI	Water Imported:	n	g	n/a	0.000	Acre-ft/Yr						WIEA
WE	Water Exported:	n	g	7	7,886.348	Acre-ft/Yr	n	g	3	0.00%	percent	WEEA
	WATER SUPPLIED:				10,056.473	Acre-ft/Yr						

AUTHORIZED CONSUMPTION

							choose entry option:			
BMAC	Billed Metered:	n	g	8	8,827.431	Acre-ft/Yr				
BUAC	Billed Unmetered:	n	g	n/a	0.000	Acre-ft/Yr				
UMAC	Unbilled Metered:	n	g	8	809.645	Acre-ft/Yr				
UUAC	Unbilled Unmetered:	n	g	8	7.900	Acre-ft/Yr	custom	7.900	acre-ft/yr	
	AUTHORIZED CONSUMPTION:				9,644.975	Acre-ft/Yr				

WATER LOSSES

411.498 Acre-ft/Yr

Apparent Losses

Default option selected for Systematic Data Handling Errors, with automatic data grading of 3

							choose entry option:		
SDHE	Systematic Data Handling Errors:	n	g	3	22.069	Acre-ft/Yr	0.25%	default	
CMI	Customer Metering Inaccuracies:	n	g	3	71.846	Acre-ft/Yr	0.74%	percent	under-registration
UC	Unauthorized Consumption:	n	g	3	22.069	Acre-ft/Yr	0.25%	default	

Default option selected for Unauthorized Consumption, with automatic data grading of 3

Apparent Losses: 115.983 Acre-ft/Yr

Real Losses

Real Losses: 295.514 Acre-ft/Yr

WATER LOSSES: 411.498 Acre-ft/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 1,229.042 Acre-ft/Yr

SYSTEM DATA

Lm	Length of mains:	n	g	10	329.7	miles	(including fire hydrant lead lengths)
Nc	Number of service connections:	n	g	8	26,238		(active *and* inactive)
	Service connection density:				80	conn./mile main	

Are customer meters typically located at the curbstop/property line? Yes

Lp n g 10

Average length of customer service line has been set to zero and a data grading of 10 has been applied

AOP Average Operating Pressure: n g 6 117.8 psi

COST DATA

CRUC	Customer Retail Unit Charge:	n	g	7	$11.79	$/100 cubic feet (ccf)	Total Annual Operating Cost	
VPC	Variable Production Cost:	n	g	9	$245.11	$/acre-ft	$77,029,110	$/yr (optional input)

WATER AUDIT DATA VALIDITY TIER:

***** The Water Audit Data Validity Score is in Tier III (51-70). See Dashboard tab for additional outputs. *****

go to dashboard

A weighted scale for the components of supply, consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

Based on the information provided, audit reliability can be most improved by addressing the following components:

1: Volume from Own Sources (VOS)
2: Customer Metering Inaccuracies (CMI)
3: Water Exported (WE)

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses:		gal/conn/day
Unit Apparent Losses:		gal/conn/day
Unit Real Losses[A]:		gal/conn/day
Unit Real Losses[B]:		gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

Appendix F 2026 Water Shortage Contingency Plan

F

Public Draft

2025 Water Shortage Contingency Plan

MAY 2026 | CITY OF SANTA BARBARA

CITY OF SANTA BARBARA

2025 Water Shortage Contingency Plan

MAY 2026

Public Draft

Prepared by Water Systems Consulting, Inc

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ACRONYMS & ABBREVIATIONS

WSCP	Water Shortage Contingency Plan
AF	Acre-feet
AFY	Acre-feet per Year
AMI	Advanced Metering Infrastructure
CII	Commercial, Industrial, and Institutional
CITY	City of Santa Barbara
COMB	Cachuma Operation and Maintenance Board
CWC	California Water Code
DCR	Delivery Capability Report
DWR	Department of Water Resources
LTWSP	Long-Term Water Supply Plan
SBMC	Santa Barbara Municipal Code
SCADA	Supervisory Control and Data Acquisition
SWP	State Water Project
USBR	US Bureau of Reclamation
UWMP	Urban Water Management Plan

1.0 Introduction

This Water Shortage Contingency Plan (WSCP) is a detailed plan for how the City of Santa Barbara (City) intends to respond to water shortages. The WSCP is used to provide guidance to the City's Water Commission and City Council, staff, and the public by identifying response actions to allow for efficient and equitable management of water shortages.

Water shortages can be triggered by a hydrologic limitation in supply (i.e., a prolonged period of below-normal precipitation and runoff); limitations or failure of supply, treatment, and/or conveyance infrastructure; or both. Hydrologic or drought limitations tend to develop and abate more slowly, whereas infrastructure failure tends to happen quickly and relatively unpredictably. Water supplies may be interrupted or reduced significantly in several ways, such as during a drought that limits supplies; a catastrophic event, such as an earthquake, that damages water delivery or storage facilities; a regional power outage; or a toxic spill that affects water quality.

The WSCP describes the following:

1. **Water Service Reliability Analysis:** Summarizes the City's water supply analysis and reliability and identifies any key issues that may trigger a shortage condition.
2. **Annual Water Supply and Demand Assessment Procedures:** Describes the key data inputs, evaluation criteria, and methodology for assessing the system's reliability for the coming year and the steps to formally declare any water shortage stages and response actions.
3. **Water Shortage Stages:** Establishes water shortage stages to clearly identify and prepare for shortages.
4. **Shortage Response Actions:** Describes the response actions that may be implemented or considered for each stage to reduce gaps between supply and demand.
5. **Communication Protocols:** Describes communication protocols under each stage to ensure customers, the public, and government agencies are informed of shortage conditions and requirements.
6. **Compliance and Enforcement:** Defines compliance and enforcement actions available to administer demand reductions.
7. **Legal Authority:** Lists the legal documents that grant the City the authority to declare a water shortage and implement and enforce response actions.
8. **Financial Consequences of WSCP Implementation:** Describes the anticipated financial impact of implementing water shortage stages and identifies mitigation strategies to offset financial burdens.
9. **Monitoring and Reporting:** Summarizes the monitoring and reporting techniques to evaluate the effectiveness of shortage response actions and overall WSCP

implementation. Results are used to determine if shortage response actions should be adjusted.

10. **WSCP Refinement Procedures:** Describes the factors that may trigger updates to the WSCP and outlines how to complete an update.
11. **Plan Adoption, Submittal, and Availability:** Describes the process for the WSCP adoption, submittal, and availability after each revision.

2.0 Water Service Reliability Analysis

Chapter 7 of the City's 2025 Urban Water Management Plan (UWMP) describes the reliability of the City's water supply by comparing supply and demand projections through 2050 for a normal, single dry, and multiple dry years. The chapter also assesses the drought risk over the next five years (2026–2030) assuming the driest five-year period is repeated over the next five years. Water supply reliability reflects the City's ability to meet the water needs of its customers with available water supplies under varying conditions. The analysis considers plausible hydrological and regulatory variability, climate conditions, and other factors that affect the City's water supply and demand. The following is a concise narrative of the assessment. Refer to the City's 2025 UWMP for the full assessment.

2.1 Supply Characterization

The diversity of the City's water supply portfolio is an important factor in assessing the reliability of the water supply under a variety of hydrologic conditions as well as the ability to store multiple years of demand in Lake Cachuma. In normal conditions, the City's primary water supply is surface water from the Santa Ynez River stored in both Lake Cachuma and Gibraltar Reservoir, including carryover storage from unused Cachuma allocations, and desalination. These supplies are augmented with limited groundwater production (which is typically preserved by the City for droughts and emergencies), State Water Project (SWP) deliveries, and recycled water. These additional supplies typically offset any reduced inflows into Lake Cachuma and Gibraltar Reservoir that would occur in a single year of below-average rainfall conditions.

A single dry year has little effect on availability of Cachuma supplies, because the multiyear reservoir typically has storage available from previous years. However, because Gibraltar is a much smaller reservoir than Cachuma, available supply from Gibraltar Reservoir could potentially be significantly reduced, depending on how dry the year is. In this situation, the City's annual water supply assessment will determine whether to offset the supply deficiency with added State Water deliveries, increased groundwater pumping, or additional use of Cachuma supplies.

The critical drought period for the City's water supply occurs when there are multiple consecutive years of below-average rainfall. This is due to the hydrology of the Santa Ynez River, where little or no inflow to Cachuma Reservoir occurs until there is at least a year of

average rainfall. When the condition of average or less rainfall continues for multiple years in succession, the storage level of Cachuma Reservoir drops and shortages in deliveries occur.

2.2 Supply and Demand Assessment

For the water service reliability analysis, the following supply availability assumptions were applied for the normal, single-dry-year, and multiple-dry-year conditions for each of the City's supplies:

- **Normal Year:** Average supply availability during the entire 1942–2019 simulation
- **Single Dry Year:** The year with the lowest water supply available to the City (2016)
- **Multiple Dry Year:** The five-year historical sequence with the lowest precipitation at Lake Cachuma (2012–2016)

As shown in Table 2-1, the City has sufficient supplies to meet demands in a normal year, a single dry year, and multiple dry years, with the need for 20% extraordinary conservation above and beyond the City's regular water conservation program in the fifth year of a five-year drought. As shown in the table, in normal years, the City has roughly an excess of 7,000 acre-feet per year (AFY) of available supplies that can be used to prepare for dry periods. For example, unused Cachuma Project water could be stored for use in future years as carryover water. This approach is shown in a single dry year with no Cachuma Project allocations or Gibraltar Reservoir supplies; the City can meet demands through the use of carryover water storage at Lake Cachuma. In multiple dry years, due to limited supplies and assuming no Cachuma carryover water availability in the last two years of a five-year drought, demands are assumed to be reduced by 20% through extraordinary conservation1[1] measures in the fifth year. During the 2014 - 2019 extended drought, City customers achieved 40% conservation, so the City is confident extraordinary conservation can be achieved during an extended drought, if necessary.

[1] Extraordinary conservation is additional conservation measures above and beyond the City's regular water conservation program that are required to enable the City to meet water demands using available supplies.

Table 2-1. Supply and Demand Comparison Summary (AFY)

Year	Item[1]	2030	2035	2040	2045	2050
Normal Year	Supply Totals	19,260	19,210	19,160	19,110	19,060
	Demand Totals	12,400	12,480	12,540	12,560	12,600
	Difference	**6,860**	**6,730**	**6,620**	**6,560**	**6,470**
Single Dry Year	Supply Totals	12,420	12,420	12,420	12,420	12,420
	Demand Totals[2]	12,400	11,980	12,030	12,050	12,090
	Difference	**20**	**440**	**390**	**370**	**330**
Multiple Dry Years						
First Year (2012)	Supply Totals	23,460	23,460	23,460	23,460	23,460
	Demand Totals	12,400	12,480	12,540	12,560	12,600
	Difference	**11,060**	**10,980**	**10,920**	**10,900**	**10,860**
Second Year (2013)	Supply Totals	22,450	22,370	22,310	22,290	22,250
	Demand Totals	12,400	12,480	12,540	12,560	12,600
	Difference	**10,050**	**9,890**	**9,770**	**9,740**	**9,650**
Third Year (2014)	Supply Totals	19,440	19,270	19,160	19,120	19,040
	Demand Totals	12,400	12,480	12,540	12,560	12,600
	Difference	**7,040**	**6,790**	**6,620**	**6,570**	**6,440**
Fourth Year (2015)	Supply Totals	15,700	15,700	15,700	15,700	15,700
	Demand Totals	12,400	12,480	12,540	12,560	12,600
	Difference	**3,310**	**3,220**	**3,170**	**3,150**	**3,100**
Fifth Year (2016)	Supply Totals	11,010	11,010	11,010	11,010	11,010
	Demand Totals[3]	10,410	10,480	10,520	10,540	10,570
	Difference	**600**	**540**	**490**	**480**	**440**

1. Refer to supply assumptions in Section 7.1 of the 2025 UWMP. Values are rounded to the nearest 10.
2. Extraordinary conservation measures, which are above and beyond the City's adopted conservation program, are assumed to be implemented to reduce demand by 5% beginning in 2035 during a single dry year.
3. Extraordinary conservation measures, which are above and beyond the City's adopted conservation program, are assumed to be implemented to reduce demand by 20% in Year 5.

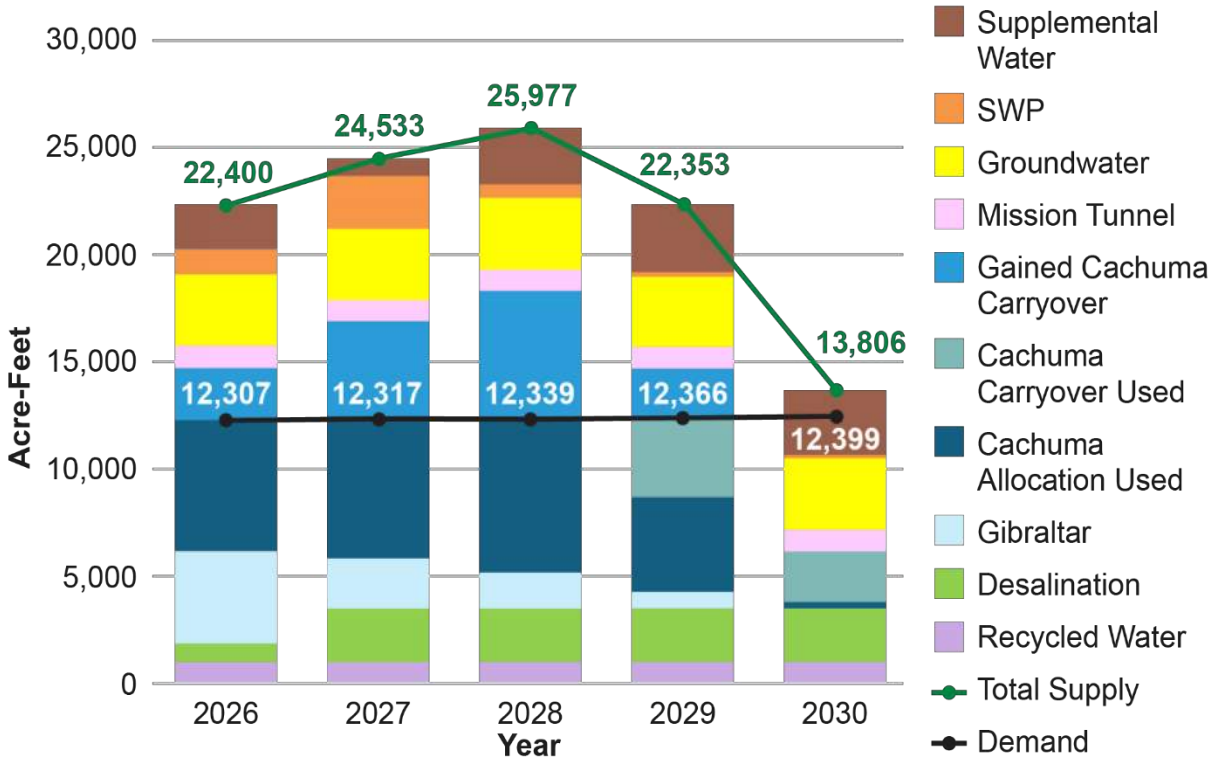
2.3 2026-2030 Drought Risk Assessment

The Drought Risk Assessment for the upcoming five years (2026–2030) is based on current conditions and the five driest years on record (2012–2016). Based on the projected demands and available supplies, Figure 2-1 presents the projected supplies used to meet demands and

the remaining available supply each year. While the City currently has no Cachuma carryover following the reservoir spilling in early 2026, it is anticipated that the City could build some carryover in the next few years that would be used starting in 2029 as Cachuma allocations decrease. With the current available supplies, the City is expected to have sufficient supplies to meet demand through a five-year drought.

Note that these projections contrast with the need to implement extraordinary conservation measures during the 2014-2019 drought due to the addition of desalination, which adds a base-loaded annual supply and allows the City to accumulate carryover storage in Cachuma.

Figure 2-1. 2026-2030 Drought Risk Assessment, Supply and Demand Projections



Note: Supply projections assume drought conditions extend through 2030. Refer to the City's 2025 UWMP Chapter 7 for supply and demand assumptions.

2.4 Water Supply Reliability Risks

A range of issues could lead to supply shortages. However, extended drought conditions are the most likely threat. The City's 2021 Long-Term Water Supply Plan (LTWSP) analyzed the most impactful risks associated with the City's supply projections, shown in Table 2-2 (WSC, 2021). The topics listed in the table were analyzed by comparing supply and demand with risk-adjusted supplies to understand reliability under potential future conditions. Also, resilience scenarios, such as temporary loss of one or more supplies from an earthquake, were analyzed. The result

of the analysis was a series of recommendations and an Adaptive Management Plan for the City to implement when supply or demand conditions change in the future.

Table 2-2. Supply Risks

Risk	Description
Climate Variability	More extreme droughts, increased irrigation demand, reduced yield, more intense rainfall/flooding, and higher variability from surface water supplies
Lake Cachuma Increased Releases	An update to the 2000 Biological Opinion may lead to a reduction in Lake Cachuma supplies and the City's annual yield.
Gibraltar Reservoir High Sedimentation	Increased rate of sedimentation due to wildfires reduces the Gibraltar Reservoir storage volume and annual yield. Obtaining a Warren Act contract with US Bureau of Reclamation (USBR) per the Pass-Through Agreement would shift lost Gibraltar Reservoir storage capacity to Lake Cachuma.
Megadrought[1]	A prolonged drought lasting two decades or longer
Surface Water Quality Degradation	Surface water quality degradation due to wildfires and warmer temperatures impact Lake Cachuma and Gibraltar Reservoir, making them susceptible to algae blooms, which negatively impact water quality.
Ocean Water Quality Degradation	Ocean water quality degradation scenarios from algae blooms, debris flows, oil spills, and sewage spills would temporarily prevent intake of seawater for desalination.
Desalination Regulations	Permanent loss or reduction of desalination supply due to changes in laws or regulatory policy would return the City to supply conditions prior to the desalination plant activation in 2017.
SWP Yield	SWP annual allocations are highly variable, and average yield projections have declined with each successive Delivery Capability Report (DCR) from the California Department of Water Resources (DWR). The City does not benefit from average and wet year supplies due to lack of storage beyond limited carryover water in San Luis Reservoir. Delta Conveyance Project construction would further reduce the reliability of SWP water since San Luis Reservoir will spill more frequently and the City loses its carryover water after spill events.

[1]Per Williams et al. "Global warming has pushed what would have been a moderate drought in southwestern North America into megadrought territory." Williams et al. used a combination of hydrological modeling and tree-ring reconstructions of summer soil moisture to show that the period from 2000 to 2018 was the driest 19-year span since the late 1500s and the second driest since 800 CE. "This appears to be just the beginning of a more extreme trend toward megadrought as global warming continues." (Williams, 2020)

3.0 Annual Water Supply and Demand Assessment Procedures

As established by California Water Code (CWC) Section 10632.1, urban water suppliers must conduct annual water supply and demand assessments and submit an annual water shortage assessment report to DWR with information on anticipated shortages, triggered shortage response actions, and compliance and enforcement actions consistent with the WSCP. Beginning in 2022, the City prepares and submits an Annual Water Shortage Assessment Report to DWR. The Annual Water Shortage Assessment Report is due by July 1 of every year. Per CWC, the annual assessment must include:

- The written decision-making process that the City will use each year to determine its water supply reliability
- The key data inputs and assessment methodology used to evaluate the supplier's water supply reliability for the current year and one dry year, including:
  - Current-year unconstrained demand
  - Available supply in the current year and one dry year
  - Existing infrastructure capabilities and plausible constraints
  - A defined set of locally applicable evaluation criteria that are consistently relied on for each annual water supply and demand assessment
  - A description and quantification of each source of water supply

The City has an existing annual assessment process in place that goes beyond the CWC annual assessment requirements. The City's process comprises an Annual Water Supply Management Report and Annual Water Supply Outlook, which are separate activities that are often presented to the City's Water Commission and City Council in conjunction with each other.

The City's Annual Water Supply Management Report is a backward-looking analysis that summarizes water supplies and issues for the previous water year, which extends from October 1 to September 30. The report summarizes the following information:

- The status of water supplies at the end of the water year (September 30)
- Drought outlook
- Water conservation and demand
- Major capital projects that improve the City's ability to provide safe and reliable water
- Significant issues that affect the security and reliability of the City's water supplies

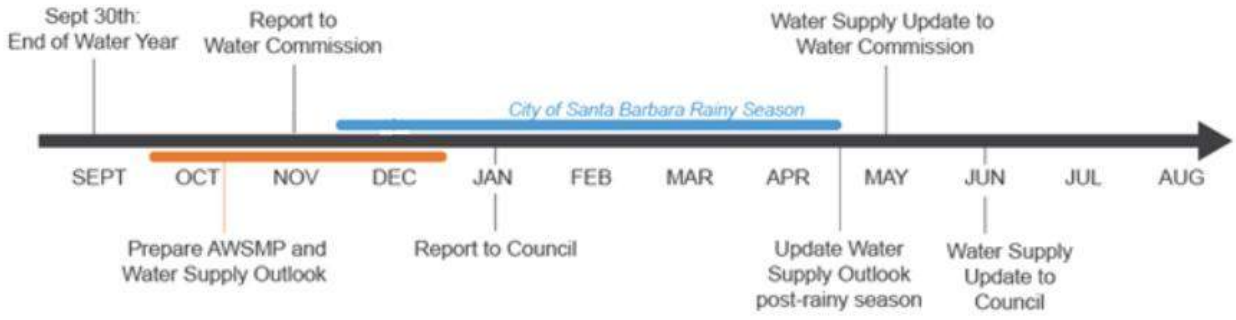
The Annual Water Supply Outlook provides an overview of the City's water supplies at the beginning of each water year and includes an analysis of whether the City's available water supplies are sufficient to meet demands over the next three years. The analysis takes a conservative approach, assuming the next three years will be drought years. This conservative planning approach allows staff to evaluate if the City has sufficient water to meet demands

under three additional years of drought and, if not, what level of shortage is anticipated. Assumptions used to compile the Annual Water Supply Outlook include:

- Next three water years are dry — no new inflows to Cachuma or Gibraltar
- Current Cachuma storage and projected storage for the next three years (source: Cachuma Operation and Maintenance Board [COMB])
    - Reduced Cachuma allocations based on projected Cachuma storage
- 35% SWP allocation
- Assumes drought-impacted Mission Tunnel intrusion (75 AF/month)
- Current supply availability
    - Cachuma carryover plus Cachuma allocation (source: monthly COMB reports)
    - Gibraltar storage (source: monthly Upper Santa Ynez River Operations Agreement Reports [City])
    - Groundwater storage and pumping capacity (source: USGS water-level data and City well-pumping-capacity data)
    - SWP carryover and SWP allocation (source: Central Coast Water Authority Water Delivery Status Report)
    - Desal production capacity (source: City data)
- Demands as projected in the UWMP or as adjusted to meet real-time demands

Figure 3-1 presents a typical annual timeline for preparation and submittal of the Annual Water Supply Management Report and Annual Water Supply Outlook in relation to the water year. If the City is actively engaged in drought response, water supply updates are provided to the Water Commission monthly and the Council as frequently as monthly, as needed. The Water Commission can recommend, and the Council can adopt, new ordinances to change the City's water shortage condition, as described in Section 7.

Figure 3-1. City of Santa Barbara Annual Water Assessment Timeline



4.0 Water Shortage Stages

The City's water shortage planning addresses supply shortages ranging from a slowly developing drought to sudden and potentially catastrophic interruptions, such as earthquakes and/or failure of major system components. Consistent with past plans and experience with severe droughts, including the most recent record drought, this plan uses four stages to structure the City's response to water shortages. It reflects the City's experience that each shortage situation is different and that flexibility is needed to respond to developing water conditions. This is especially important with the increasing diversity of the City's water supply portfolio and the need to comply with State mandates regarding water reduction targets and water use regulations.

The City's water shortage stages and corresponding demand reductions and a description of the corresponding water supply conditions are included in Table 4-1 and described further in separate sections. The potential reduction measures for each stage are described in Section 5.0.

Table 4-1. Water Shortage Contingency Plan Levels

Stage	Percent Supply Reduction	Category	Water Supply Condition
Normal Supply	0%		Full Cachuma entitlement is projected for the coming water year, and there are no extraordinary shortages in other City supplies.
1	0%–15%	Water Shortage Watch	A Cachuma entitlement reduction is projected for the coming water year, assuming continued dry weather, or an extraordinary reduction in other City supplies has been identified.
2	15%–25%	Water Shortage Alert	Continuing conditions of average or less rainfall have resulted in continued decline in Cachuma storage following a reduction in entitlement, or an extraordinary reduction in other City supplies has been identified.
3	25%–50%	Water Shortage Emergency	Cachuma supplies are projected to be exhausted during the coming water year, or a catastrophic interruption to City water supplies has occurred.
4	>50%	Catastrophic Water System Emergency	Catastrophic interruption to City water supplies has occurred.

4.1 Normal Supply Stage

Supplies are considered normal when a 100% Cachuma allocation is projected for the coming water year and there are no extraordinary shortages in other City supplies. While in the normal supply condition stage, the City will:

- Continue efforts to preserve water supply sources, such as management of watersheds to minimize siltation, banking of water as feasible to firm up deliveries through the SWP, in-lieu recharge of groundwater in years when adequate surface water supplies are available to meet demand (even as demand may be reduced through conservation measures), and development of optimal groundwater pumping capacity to ensure reliable extraction of groundwater when needed
- Continue implementation of the City's conservation program with the goal of encouraging water conservation as a way of life, including high-efficiency plumbing retrofits, low-water-using landscaping, efficient irrigation practices, public information regarding water awareness, and tiered rate pricing
- Extend and expand the use of recycled water where feasible and cost effective
- Monitor water demands in terms of actual versus projected consumption and cumulative commitments to serve
- Limit water use restrictions to prohibiting water waste

4.2 Stage 1 Water Shortage Condition: Water Shortage Watch

A Stage 1 Water Shortage Condition is defined as a short-term water shortage condition declared by Resolution of the City Council upon being advised that a Cachuma entitlement reduction is projected for the coming water year, assuming continued dry weather. A Stage 1 Water Shortage Condition is also defined as the identification of an extraordinary reduction in other City supplies. During a Stage 1 Water Shortage Condition, the City will take the following actions:

- Staff prepares a report to the Water Commission and City Council addressing:
  - Status of surface water supplies
  - Status of the City's groundwater resources and pumping capability
  - Status of the City's desalination facility and any related cost and permitting issues
  - Projected deliveries of SWP entitlement
  - Anticipated availability of banked water and one-time purchase of water via short-term transfers
  - Possible reduction in Cachuma deliveries to City in excess of reductions agreed to by member units to allow build-up of City carryover at Cachuma
  - A range of water supply scenarios based on various levels of assumed rainfall

- Water Commission and City Council consider staff recommendation regarding adoption of a resolution declaring a Stage 1 Water Shortage Condition
- Public advised of the City's water supply situation; the need for voluntary reductions in water use is expected to range from 0% to 15% at this stage
- Water use restrictions limited to prohibiting water waste

4.3 Stage 2 Water Shortage Condition: Water Shortage Alert

A Stage 2 Water Shortage Condition is defined as a short-term water shortage condition declared by Resolution of Council upon being advised that continuing conditions of average or less rainfall have resulted in continued decline in Cachuma storage following a reduction in entitlement. A Stage 2 Water Shortage Condition is also defined as the identification of an extraordinary reduction in other City supplies. During a Stage 2 Water Shortage Condition, the City will take the following actions:

- Staff prepares a report to the Water Commission and City Council addressing:
  - Updated water supply scenarios based on various levels of assumed rainfall or other applicable metrics
  - Need for:
    - Demand reduction by the public
    - Water use restrictions
    - Design and permitting work associated with temporary water supply augmentations
- Revenue projections and changes in water rates
- City Council considers staff and Water Commission recommendation regarding adoption of a resolution declaring a Stage 2 Water Shortage Condition
- Public advised of need for mandatory water conservation savings in the range of 15%–25%
- City determines the need for water use restrictions pursuant to Santa Barbara Municipal Code (SBMC) Section 14.20.215 (Attachment 1) and incorporates appropriate exemptions into the water shortage resolution
- Public information effort is aimed at advising the public regarding:
  - The City's water supply situation
  - Efforts being made by the City to minimize impacts of the water shortage
  - The public's role in achieving demand reductions
  - Enforcement of water use restrictions, pursuant to Council direction
  - Review of revenue projections and implementation of rate changes, if necessary, pursuant to Council direction

4.4 Stage 3 Water Shortage Condition: Water Shortage Emergency

A Stage 3 Water Shortage Condition is defined as a short-term water shortage condition declared by Resolution of Council upon being advised that Cachuma supplies are projected to be exhausted during the coming water year. A Stage 3 Water Shortage Condition is also defined as the imminence or occurrence of a catastrophic interruption to City water supplies. During a Stage 3 Water Shortage Condition, the City will take the following actions:

- Staff prepare a report to the Water Commission and City Council addressing:
  - Updated water supply scenarios based on various levels of assumed rainfall or other applicable metrics
  - Need for:
    - Further demand reduction by the public
    - Increased water use restrictions, including potential prohibition on uses other than drinking water and sanitation
    - Accelerated design, permitting, and construction work associated with temporary water supply augmentations
  - Evaluation of potential increased supply from desalination facility and from purchases of supplemental water
- City Council considers staff and Water Commission recommendations regarding adoption of a resolution declaring a Stage 3 Water Shortage Condition pursuant to CWC, Chapter 3
- Public advised of need for mandatory water conservation savings in the range of 25%–50%
- Revised demand reduction target announced to public, accompanied by information about how to achieve required reductions and efforts being made by the City to resolve the water shortage condition
- Water use restrictions adjusted as necessary pursuant to SBMC Section 14.20.215.B (Attachment 1)
- Evaluate revenues and the need for rate changes; staff implement changes pursuant to Council direction
- Suspension of development project approvals considered
- Water use restrictions enforced by staff pursuant to Council direction
- Success in meeting reduction targets measured by tracking monthly production of water into the distribution system and by targeted water use analysis of specific water use sectors

While the City's long-term supply planning is based on a maximum planned shortage of 15%, unforeseen circumstances can result in the need to respond to shortages of up to 50%. The City's customers achieved 40% conservation during the 2014-2019 drought, and the City still had water shortage response measures that could achieve short-term demand reductions up to 50%, carefully tailored to the situation at hand. Flexible application of water use regulations, development restrictions, allocations, and public information will be used to meet the required demand reduction target.

4.5 Stage 4 Water Shortage Condition: Catastrophic Water System Emergency

A Stage 4 Water Shortage Condition is defined as a short-term water service emergency declared by the City Council following a catastrophic event that substantially reduces the City's ability to provide potable water to its customers. The condition may be activated following a major earthquake or other natural disaster that could restrict the City's water service abilities. During a Stage 4 Water Shortage Condition, the City would implement its Emergency Response Plan, which is described in Section 5.4.

4.6 Standard Water Level Crosswalk

CWC Section 10632(a)(3)(A) includes six standard water shortage levels, corresponding to progressive ranges of up to 10%, 20%, 30%, 40%, and 50% shortages and greater than a 50% shortage. If the supplier's water shortage levels do not correspond with the six standard levels, then a crosswalk between the supplier's stages and the standard levels is required for compliance. The crosswalk between the City's four stages and the standard water shortage levels is shown in Figure 4-1.

Figure 4-1. Water Shortage Stages Crosswalk

City of Santa Barbara Water Shortage Stage	Percent Supply Reduction
1	10%
2	25%
3	50%
4	> 50%

Standard Water Shortage Levels	Percent Supply Reduction
1	10%
2	20%
3	30%
4	40%
5	50%
6	>50%

5.0 Shortage Response Actions

This WSCP identifies various actions to be considered by the City Council during the various water shortage stages, including public information, water conservation assistance, supply augmentation, water use regulations, development approvals, and demand tracking. In the event of a water shortage emergency, the City will evaluate the cause of the emergency to help inform which response actions should be implemented. Depending on the nature of the water shortage, the City can elect to implement one or several response actions to mitigate the shortage and reduce gaps between supply and demand. It should be noted that all actions listed for Stage 1 apply to Stages 2, 3, and 4. Likewise, Stage 2 actions apply to Stages 3 and 4, and Stage 3 actions apply to Stage 4. If necessary, the City may adopt additional actions not listed here in extreme circumstances. SBMC Chapter 14.20 (Attachment 1) provides standing authorization for water use restrictions and prohibitions to become effective upon adoption of a Water Shortage Resolution at any regular meeting of the City Council. An example water shortage resolution is included in Attachment 2.

5.1 Demand Reduction

Whether during normal supply or water shortage conditions, the City implements a comprehensive water conservation program pursuant to the Water Conservation Strategic Plan. Public information, development standards, workshops, rebates, and tiered rates are ongoing during normal supply conditions and adjusted to target needed reductions during water shortage conditions. Table 5-1 identifies demand reduction methods that are considered during water shortage conditions. These methods were effective in providing substantial reductions in demand during the drought of the late 1980s and the recent record drought that commenced in 2014.

Table 5-1. Demand Reduction Actions

Shortage Level	Demand Reduction Actions	How much is this going to reduce the shortage gap?[1]	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement
All	Expand Public Information Campaign	0%–5%	Community outreach includes increased advertising, presentations to community groups, workshops, and enhanced website resources.	No
All	Offer Water Use Surveys	0%–1%	Water checkups are available to all customer classes.	No
All	Provide Rebates on Plumbing Fixtures and Devices	0%–1%	Offer or expand rebates on a variety of plumbing fixtures that are high efficiency such as washers, toilets, and urinals.	No
All	Provide Rebates for Landscape Irrigation Efficiency	0%–1%	Offer or expand rebates for drip irrigation conversions, smart irrigation controllers, water wise plants, and rain sensors to improve efficiency.	No
All	Provide Rebates for Turfgrass Replacement	0%–1%	Offer or expand rebates for community members who wish to replace their turfgrass with a water wise garden.	No
All	Decrease Line Flushing or Pursue Zero Discharge Flushing Methods	0%–1%	The City uses zero-discharge water recycling trucks for water system flushing.	No
All	Other — Leaky device	0%–1%	Customers are required to repair any leaking or malfunctioning devices within 72 hours of notification of leak.	Yes
All	Landscape — Runoff	0%–1%	Landscape irrigation in excess leading to runoff onto nearby surfaces is prohibited.	Yes

Shortage Level	Demand Reduction Actions	How much is this going to reduce the shortage gap?[1]	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement
All	Other — Post-rainfall prohibition	0%–1%	Prohibit irrigation with potable water during and within 48 hours after measurable rainfall.	Yes
1	Reduce System Water Loss	0%–1%	The City increases efforts to correct water system losses, including repairing leaks and eliminating illicit connections.	No
2	Increase Water Waste Patrols	0%–1%	Patrols discourage water wasting and correct water wasting practices in the community.	Yes
2	Other — Nozzles	0%–1%	Only hoses with automatic shutoff nozzle fixtures are permitted.	Yes
2	Other — Prohibit vehicle washing	0%–1%	Prohibit washing cars, boats, trailers, aircraft, or other vehicles except with hose shutoff nozzle or at commercial or fleet vehicle washing facilities using water recycling equipment.	Yes
2	Landscape — Limit landscape irrigation to specific times	0%–5%	Prohibit irrigation during the hours when evaporation is highest.	Yes
2	CII — Lodging linen service	0%–1%	Hotels/motels must provide guests with option to reuse towels and linens for more than one day.	Yes
2	CII — Restaurants serve water upon request	0%–1%	No restaurant, hotel, café, cafeteria, or other public place where food is served shall serve drinking water to any customer unless expressly requested.	Yes
2	Other	0%–1%	Require posting of water shortage notice at restaurants, hotels/motels, and commercial showering and car washing facilities.	Yes

Shortage Level	Demand Reduction Actions	How much is this going to reduce the shortage gap?[1]	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement
2	Pools and Spas — Require covers for pools and spas	0%–1%	Require covers for swimming pools and spas when not in use.	Yes
3	Other — Prohibit use of potable water for washing hard surfaces	0%–1%	Prohibit use of potable water to wash sidewalks, walkways, driveways, parking lots, open ground, or other hard-surfaced areas except where necessary for public health or safety.	Yes
3	Landscape — Limit landscape irrigation to specific days	5%–10%	Limit to assigned watering days, which may depend on seasonal changes, such as summer and winter.	Yes
3	Water Features — Restrict water use for decorative water features	0%–1%	Prohibit use of potable water to fill or maintain decorative fountains and water features unless located indoors or are home to aquatic life.	Yes
3	Other water feature or swimming pool restriction	0%–1%	Restrict draining and refilling of pools by more than one-third of the pool volume.	Yes
3	Other	0%–1%	Limit the use of potable water hydrant meters.	Yes
4	Landscape — Other landscape restriction or prohibition	5%–10%	Restrict irrigation to high-efficiency methods.	Yes
4	Landscape — Other landscape restriction or prohibition	5%–20%	Restrict irrigation to watering by hand only.	Yes
4	Landscape — Other landscape restriction or prohibition	5%–20%	Prohibit/restrict irrigation of turfgrass.	Yes
4	Other	20%–40%	Prohibit all outdoor water use.	Yes

Shortage Level	Demand Reduction Actions	How much is this going to reduce the shortage gap?[1]	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement
4	Other	20%–70%	Institute water rationing.	Yes
4	Moratorium or Net Zero New Demand	0%–1%	The City may temporarily limit or ban new water service connections within the service area.	No

1. Reduction in the shortage gap is estimated and can vary significantly.

5.2 Supply Augmentation

The SWP conveyance infrastructure provides the City with the ability to convey supplemental water purchases to augment drought-year supplies. During the 2012-2016 drought, the City purchased supplemental water through Central Coast Water Authority. Refer to the 2025 UWMP Section 6.3.2 for more information on supplemental water purchases. Supply augmentation actions are described in Table 5-2. These augmentations represent short-term management objectives triggered during a water shortage and do not overlap with long-term new water supply development or supply reliability enhancement projects.

Table 5-2. Supply Augmentation and Other Actions

Shortage Level	Supply Augmentation Action and Other Actions by Water Supplier	How much is this going to reduce the shortage gap?	Additional Explanation or Reference
All	Groundwater	Varying	Groundwater is pumped from drought storage volume. The amount is dependent on diminished quantity from City's supply portfolio.
All	Water Purchases	Varying	The amount of water purchased is dependent on diminished quantity from City's supply portfolio.

5.3 Operational Changes

To address water shortages on a short- and long-term basis, operational changes within the City occur to ensure an efficient and meaningful response. During a time of water shortage, the City will convene a series of task forces, including:

- **Executive Drought Team:** composed of the City Administrator, City department heads, the Water Resources Director and the Water Supply and Services Manager. This team discusses plans and strategies for responding to the persistent drought conditions.
- **Intra-City Drought Team:** composed of representatives from Parks and Recreation Department, Airport Department, Fire Department, Fleet Services Division, Facilities Division, Planning Division, Building and Safety Division, Waterfront Department, Office of Emergency Services, Streets Division, and Water Resources Department. This team identifies immediate and long-term water-saving actions that can be implemented throughout the City organization and facilities, with support from Water Resources staff.
- **Water Resources Operational Drought Team:** composed of management and operational staff from water treatment, water distribution, wastewater treatment, wastewater collections, and water supply management work groups. This team identifies operational opportunities

to conserve water as well as practices to implement at water treatment facilities and/or throughout the water and wastewater system.

- **Core Drought Team:** composed of water supply management staff to assess changing water supply shortage conditions and implement the WSCP.

These teams work to facilitate internal City coordination. For example, during the 2014-2019 drought, the Parks and Recreation Department instituted a successful 2014 Strategic Drought Response Plan (City of Santa Barbara Parks and Recreation Department, 2014) that detailed department actions to prioritize potable water use for certain facilities and sensitive/historic resources. The majority of the City's parks are irrigated with recycled water, and increased messaging about the benefits and use of recycled water was also implemented. Similar measures may be considered in the future. Other internal operational changes that may be implemented by the City include:

- Display messaging highlighting water-saving actions in City facilities, including communal staff areas and public areas such as restrooms, kitchens, and break rooms
- Limit vehicle washing, in coordination with Fleet Services Division
- Evaluate frequency of items laundered by laundering contractor
- Equip field staff with public information material about the drought and water use regulations and educate staff on how to report water waste to enforcement staff
- Reduce reservoir cleaning
- Use secondary wastewater effluent as process water for wastewater treatment
- Reuse plant processing water at water treatment plant
- Evaluate suspending capital improvement projects that are water intensive and cannot use the water recycler vehicles
- Require the use of recycled water for dust control for all applicable City projects

During the 2014-2019 drought, the City researched, piloted, and invested in two new technologies to reduce the amount of water used in operational practices. The water distribution team purchased a vehicle that flushes water mains by filtering and recycling potable water in the system between two fire hydrants, rather than discharging the water into a nearby storm drain. The wastewater collection team purchased a vehicle that initially fills with recycled water and proceeds to clean the wastewater mains by continuing to recycle the water in the system, rather than using additional recycled or potable water. Use of these vehicles has now become standard practice for the City, and they will continue to be used during normal supply conditions, as well as during a water shortage condition.

5.4 Emergency Response Plan

Besides drought, the City water supply may experience a catastrophic interruption as a result of natural disasters such as an earthquake, a tsunami, a wildfire, a mudslide, a regional power outage, or terrorism. Emergency administrative procedures are detailed and periodically updated in the City's Emergency Operations Center Manual.

Planning and response measures in the event of an interruption to the City's water supply include the following:

- A diverse portfolio of supplies provides redundancy that increases the likelihood of being able to meet emergency needs even under catastrophic conditions.
- In advance of a known threat to the City's water system, such as a wildfire, distribution reservoirs will be filled to full capacity, and any reservoir out of service will be put back into service.
- Primary water supply sources and the main treatment plant will supply water to the City via gravity to reduce normal operating costs and minimize disruption during disasters.
- A groundwater production system has been developed and maintained to augment supplies to the distribution system or provide direct emergency drinking water supplies should the distribution system be put out of service. In the event of a prolonged power outage, power can be provided by portable generators to more than half of the City's major production wells.
- Backup power supplies with automatic transfer switching and supervisory control and data acquisition (SCADA) capability have been installed at the primary water treatment plant and critical distribution pump stations.
- Portable generators will be deployed to critical facilities lacking emergency backup power.
- SCADA is used throughout the distribution system to monitor system problems, whether minor day-to-day problems or major disruptions.
- An ongoing program of water main replacement targets sections of the distribution system with the highest likelihood of breaks.
- Upgraded security, including more secure fencing, video monitoring, and alarms, is being installed at select water supply facilities.
- Public access to water supply facilities has been limited for security reasons.
- City distribution system crews are trained in pipe repair and replacement as a part of their normal duties and are continually ready to perform such work in emergencies.
- All City employees are designated as emergency service workers and would be activated to perform damage assessment and repairs and to fill gaps left by staff who live out of town and may be unable to get to Santa Barbara during a disaster.
- The City's emergency response program includes emergency communication procedures that would be used for notifying the public about emergency water use restrictions, potential need to boil tap water before drinking, and locations where drinking water is available in the event of widespread distribution system failure.

Given the diversity of the City's water supply, there is a range of catastrophic supply interruption scenarios that may occur. At the extreme end of the range, a catastrophic seismic event could include failure of both Gibraltar Dam and Bradbury Dam (Lake Cachuma), also impacting State Water deliveries, or failure of Tecolote and/or Mission Tunnels, which convey surface water supplies from Lake Cachuma and Gibraltar Reservoir, respectively, to the City's treatment plant. Damage to groundwater wells would also be expected. Table 5-3 summarizes some foreseeable interruptions of higher probability but lesser magnitude. In an actual event, detailed

analysis would be conducted to assess the extent and duration of interruption and the alternatives for short-term replacement of lost supplies.

Table 5-3.Catastrophic Interruption Scenarios

Damage limited to distribution system: Main breaks in various parts of the City	
Anticipated Duration:	*Ranging from days to months, depending on extent of damage*
Responses:	• Valve off damaged sections. • Inventory customers without service and provide access to emergency drinking water as necessary. • Prioritize repair efforts based on health, safety, and sanitation.
Collapse of Mission Tunnel: Supplies from Gibraltar Reservoir and Mission Tunnel infiltration interrupted	
Anticipated Duration:	*Ranging from months to a year or more*
Responses:	• Assess extent of remaining tunnel flow. • Restrict irrigation uses. • Impose water usage restrictions and notify public to reduce water use to targeted level based on actual circumstances. • Consider increases in SWP delivery requests. • Initiate emergency design and construction process for tunnel repair.
Collapse of Tecolote Tunnel: Supplies from Lake Cachuma, tunnel infiltration, and SWP interrupted	
Anticipated Duration:	*Ranging from months to a year or more*
Responses:	• Assess extent of remaining tunnel flow. • Curtail most or all irrigation uses. • Impose water usage restrictions and notify public to reduce water use to targeted level based on actual circumstances. • Consider extent to which supplies are available to assist neighboring agencies affected by loss of Cachuma deliveries. • Participate with COMB and USBR in emergency design and construction process for repair of tunnel.
Regional Power Outage	
Anticipated Duration:	*Ranging from hours to weeks*
Responses:	• Initiate contact with City Emergency Operations Center. • Activate and monitor backup generators at Cater Treatment Plant and key distribution pumping stations. • Assess supplies of generator fuel and develop a schedule of prioritized fuel needs. • Identify optimal sites for deployment of portable generators (wells, pump stations, treatment system). • Prepare to issue a consumer alert about potential for: 1) low system pressure, 2) need to curtail water use, and 3) need to boil water before drinking. • Evaluate the need for water quality sampling. • Consider increasing disinfectant residual as a precaution against potential system contamination. • Isolate any segments of known contamination; issue notice not to drink water in the affected areas.

In the occurrence of a catastrophic event, City employees are prepared to mobilize to respond to emergent issues, including taking the following actions:

- Assemble supervisors at Public Works Yard, 630 Garden Street.
- Determine which staff are present and which need to be contacted.
- Contact absent staff and direct them to report once families are safe.
- Check status of all equipment, refuel, and restock supplies on vehicles.
- Mobilize Water Resources Laboratory staff at City lab and prepare for anticipated water quality test requests.
- Contact local contractors to be at the ready to provide support.

Dispatch crews will be sent to inspect, patrol, and report on condition of facilities and distribution piping in designated areas of the system based on Table 5-4.

The City also maintains a Sewer System Management Plan (SSMP) available online (https://santabarbaraca.gov/wastewatercollection) that includes a Sewer System Overflow Emergency Response Plan (Appendix G1 of the SSMP) and Lift Station Emergency Response Plan (Appendix G2 of the SSMP).

Table 5-4. Area Inspection Groups after a Catastrophic Interruption Scenario

Group A - Water Facilities
Vic Trace Reservoir & La Coronilla Pump Station La Mesa Reservoir Escondido Pump Station Calle Las Caleras Pump Station Hope Reservoir & Campanil Hill Pump Station

Group B - Water Facilities
Reservoir No. 1 East Reservoir & Bothin Pump Station El Cielito Reservoir & Skofield Pump Station Skofield Reservoir La Vista Reservoir

Group C – Water Facilities
Reservoir No. 2 Sheffield Reservoirs & El Cielito Pump Station South Portal of Mission Tunnel (Cater Staff to inspect) Rocky Nook Pump Station Sheffield Pump Station Tunnel Road Reservoir & Pump Station Cater Cross-Tie Pump Station (Cater Staff to inspect)

Group D - Wastewater Lift Stations
Braemar Linda Road El Camino De la Luz

Group E - Wastewater Lift Stations
Skofield La Colina Via Lucero Tallant Road

Additional actions to be implemented during a catastrophic event include:

- Assign qualified staff to monitor the SCADA telemetry system, to the extent it is still functional, to determine the extent of system damage and the most critical points on the distribution system.
- Conduct a complete inspection of the Cater Water Treatment Plant, Ortega Groundwater Treatment Plant, and Desalination Plant to determine status and extent of damage.
- Contact Cachuma Project operators (USBR and COMB) to determine condition of Bradbury Dam, Tecolote Tunnel, and related facilities.
- Contact the City's dam caretaker at Gibraltar Reservoir to determine condition of Gibraltar Dam and related facilities.
- Contact the City's Water Treatment Superintendent to determine if Mission Tunnel has experienced a disruption of water conveyance.
- Assess condition of City groundwater wells by measuring water levels and well depths and taking water samples for analysis of water quality.
- Assign qualified staff to use the City's hydraulic computer model to simulate identified field deficiencies and run scenarios to identify the most efficient repair, isolation, or reconstruction recommendations.
- Prioritize distribution system repairs to best meet critical needs, including water for firefighting and health and safety needs; identify a portion of available potable supply to be reserved for drinking water purposes in the event of prolonged interruption.
- Develop materials list for treatment plant and distribution system repairs, and contact California Water/Wastewater Agency Response Network for mutual aid support.
- Allocate available portable generators and pumps according to highest need for groundwater wells, sanitation, firefighting, or powering emergency facilities.
- Develop a clear message for information dissemination to the public that includes:
    - Nature of the catastrophic event
    - Status of distribution system
    - Water use prohibitions
    - Allowable water uses
    - Potential need to boil drinking water before consumption
    - Location and availability of emergency drinking water, in the event of distribution system failure

For more information on actions during an emergency, refer to the 2020 City of Santa Barbara Water System Risk and Resilience Assessment Report (Brown and Caldwell, 2020) and the City of Santa Barbara Emergency Response Plan (City of Santa Barbara Office of Emergency Services, 2021).

5.5 Seismic Risk Assessment and Mitigation Plan

Refer to the 2023 Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan with City of Santa Barbara Local Hazard Mitigation Plan Annex (Attachment 3) for general seismic risk

assessment and the 2020 City of Santa Barbara Water System Risk and Resilience Assessment Report (Brown and Caldwell, 2020) for seismic risk assessment specifically related to the City's water system. The City of Santa Barbara Emergency Response Plan (City of Santa Barbara Office of Emergency Services, 2021) details processes for mitigation. Refer to the previous Section 5.4 for an overview of the City's post-catastrophic-event mitigation process.

5.6 Shortage Response Action Effectiveness

Measuring reductions in water use is part of regular procedures, whether during normal or water shortage conditions. Water is produced and introduced into the distribution system in response to customer demand and is tracked monthly as an indicator of overall demand. For demand analysis by customer class, geographic area, and usage level, the City's billing system provides standardized reports on monthly metered sales by bill code, as well as customized reports for specific areas of analysis. The City can also utilize advanced metering infrastructure (AMI) data to track water use on a more regular basis (hourly, daily) or granular level (by customer type).

During water shortage conditions, savings are measured in comparison to what is considered to be a normal-year demand (i.e., current customer base with approximately average rainfall) or in reference to a specific base year as may be dictated by statewide requirements.

6.0 Communication Protocols

This WSCP includes a staged plan to communicate the declaration of a shortage stage and provide updates during a water shortage emergency. A summary of actions the City could potentially take during a specific shortage stage is outlined in Table 6-1. As water supply conditions worsen, but before a water shortage is declared, the City increases public outreach on the current water supply conditions, the plans for water shortage response, and the importance of water efficiency to stretch current supplies.

Table 6-1. Communication Protocol During Water Shortage Conditions

Shortage Level	City Action
1	Information posted on the City's website and regional water efficiency website, WaterWiseSB.org
1	Press releases to local media (online and print newspapers, TV, radio, etc.)
1	Increased messaging with the utility bill (message printed on front and back of bill, flyer insert with bill, message printed on front and back of envelope)
1	Articles in the weekly City e-newsletter
1	Articles in the quarterly water e-newsletter
1	Social media posts (Facebook, X, and Nextdoor)

Shortage Level	City Action
2-3	"Weekly Water Conservation Message" emailed weekly to partner organizations to share in their own messaging/newsletters, posted on City social media, sent in City weekly e-newsletter
2-3	Increased paid advertising — print, online, radio, TV, streaming, social media, movie theaters, buses, etc.
2-3	Signage in all City public facilities to reduce water usage, such as kitchens and bathrooms
2-3	Signage on City fountains that are turned off, City turfgrass that is deficit watered or stressed, and sites that use recycled water for irrigation or fountains
2-3	Letters, postcards, and flyers mailed to residents and businesses impacted by water use regulations
2-3	Outreach materials and drought notices mailed to the hospitality industry, including restaurants and lodging
2-3	Flyers posted in public places such as libraries and neighborhood centers or distributed to targeted areas
2-3	Targeted outreach and technical assistance to highest water users in each classification
2-3	Coordination with school district to send messaging to parents/guardians
2-3	Assembly and promotion of the speaker's bureau for water shortage presentations for neighborhood associations, gardening clubs, HOAs, churches, senior centers, business associations, community groups, property management companies, etc.
2-3	Creation and promotion of videos through City TV and rotation scrolls to display on City TV between programs
4	Signage posted at nurseries and irrigation supply stores, possibly to include receipt attachments
4	Increased outreach to the certified Green Gardeners email and mailing list
4	Increased coordination with the local landscaping industry, including water shortage information in their newsletters, publications, and facilities: California Landscape Contractors Association Channel Islands Chapter, Santa Barbara Botanic Garden, UCCE Master Gardeners, the Permaculture Network, local wholesale and retail nurseries, and irrigation supply stores

Note: If a water shortage progresses through multiple stages, all measures in the previous stage(s) are implemented in addition to current stage actions.

7.0 Compliance and Enforcement

With the exception of irrigation system standards for new homes and buildings, which are administered and enforced through the Building Permit process, all of the prohibitions in Table 5-1 are subject to the "Penalties and Charges" provisions of SBMC Section 14.20. 226–227, as summarized below:

Violations of SBMC Chapter 14.20:

1. First violation within the past year: Written "Notice of Violation" sent to the account holder and serves as a warning
2. Second violation within the past year: Penalty of up to $250 applied to the account holder's bill
3. Third violation within the past year: Penalty of up to $250, plus possible installation of a flow restrictor
4. Fourth and subsequent violations within the past year: Penalty of up to $250, plus possible installation of a flow restrictor or possible service shutoff

Account holders are provided with an opportunity for a hearing before the Water Resources Director. See Attachment 1 for the complete text of SBMC Chapter 14.20.

8.0 Legal Authority

SBMC Section 14.20 (Attachment 1) establishes authority for the City Council to adopt resolutions declaring water shortage conditions and adopt appropriate restrictions and prohibitions on water use. Although the SBMC does not apply to water service areas outside City limits, the County of Santa Barbara will adopt the water shortage resolution when necessary, allowing the City to enforce the regulations in those parts of the County located within the City's water service area. Such resolutions can be adopted at any weekly meeting of the City Council. Attachment 1 contains the full text of SBMC Section 14.20. Attachment 2 contains an example water shortage resolution from 2017.

9.0 Financial Consequences of WSCP Implementation

As the City activates different stages of response to water supply conditions, the financial position of the water utility is impacted both in revenues and expenses. The operating cost structure of the utility is largely fixed and independent of the level of customer demands. However, the City's water rates are structured such that approximately 30% of rate revenues

are collected from fixed monthly service charges and 70% are collected from consumption-related charges. This type of rate structure, combined with tiered pricing, promotes conservation and the efficient use of water and allows customers to considerably change their monthly water bill by using more or less water. As a result of this rate structure, however, when the utility experiences decreasing demand, as is expected when the City activates shortage response actions, there is an immediate impact on revenues, as the majority of revenue comes from volumetric charges. In contrast, the City's operating costs are only slightly reduced because many of the operating costs are fixed.

Although there are some reductions in operating costs related to treatment and delivery of drinking water, the total revenue requirement of the utility generally increases during water shortages. Primarily, this increase is related to the procurement or development of additional water supplies, which can be expensive and have long-term financial impacts on the water enterprise. The Charles E. Meyer Desalination Plant, for example, was originally constructed during a drought in the early 1990s and was financed through debt obligations that were paid over many years. Similarly, the desalination plant was reactivated in 2017 during the most recent drought of record, and again the City took on debt to finance design and construction of the reactivation. These debt payments will be paid by customers in their water bills over the next 20 years. To a lesser extent, there is an increased need for staff resources to implement and manage a water shortage condition. In the past, the City has increased staffing to provide additional public outreach and support professional staff as their workloads become focused on managing water supplies and communicating with decision makers.

The City has used tiered rates to encourage water conservation since 1989. The current adopted water rates are included in Attachment 4. The tiered system provides standardized allotments for residential customers based on the type of building (single family vs. multifamily) and number of dwelling units. Commercial and industrial allotments are based on historical off-peak usage because appropriate usage rates vary widely for customers in these classes. Irrigation billing provides a first-tier allotment that is a weather-based water budget sufficient for landscapes that are compliant with the City's landscape design standards (SBMC §14.23.005, Ordinance 6101, and Council Resolution No. 23-007) (City of Santa Barbara, 2023). Usage in excess of the budget is billed at a higher rate.

The tiered rate system worked well during the 1987–1992 drought when tier allotments and prices were modified as necessary to ensure adequate revenue. The system proved to be workable even for the 50% shortages experienced. The City's experience has been that tiered prices and allotments are best determined based on actual circumstances rather than trying to determine appropriate values in advance of the drought based on hypothetical situations. During drought, the City moves to an annual rate setting cycle to allow rates to be more responsive to current demands and the financial environment. The City has a comprehensive water rate model used to balance water system revenues and costs under normal and water shortage conditions. A tiered rate system presents challenges with revenue stability under normal conditions and even more so during water shortages. The rate model enables the City to identify

costs of service for the various water supply sources and system components and apply them in accordance with Proposition 218 to identify suitable water rates to meet revenue requirements.

As described above, the City's water utility typically experiences increasing costs and decreasing revenues during water shortage events. All things being equal, this type of situation will lead to significant increases in customer rates without mitigating measures. The water utility may choose to use reserves to cover any gaps between operating revenues and expenditures and buffer potential rate increases for customers.

For the City Water Fund, the policies include the following targets for reserve balances:

- Disaster Reserve: 15% of operating budget
- Contingency Reserve: 10% of operating budget
- Capital Reserve: Lessor of 5% of Water Fund asset value, or the average of the planned capital program budgets for the upcoming three fiscal years, excluding major capital projects that will be debt funded.

In addition, it may be necessary to defer certain noncritical capital expenditures to further alleviate rate pressure. However, the long-term deferral of water system infrastructure maintenance leads to increased maintenance costs in the future.

10.0 Monitoring and Reporting

As described in Section 3.0, the City intends to track its supplies and projected demands on an annual basis, and if supply conditions described in Table 4-1 are projected, the City will enact its WSCP. Monitoring demands is essential to ensure the WSCP response actions are adequately meeting required reductions and decreasing the supply and demand gap. This will help analyze the effectiveness of the WSCP or identify the need to activate additional response actions.

The City recently completed an AMI technology project to improve customer service with granular water usage data and customer leak notifications. The City currently has all of its customer connections equipped with AMI. With AMI, the City can use the detailed water usage data to monitor customers' response and demand reduction due to restrictions for each stage in the WSCP. The many restrictions and prohibitions assigned to each stage in Table 5-1 are inherently flexible so the City can implement certain restrictions, monitor customer usage, and implement additional restrictions if the demand reductions are not sufficient to close the supply and demand gap.

11.0 WSCP Refinement Procedures

The City intends to use this WSCP adaptively to respond to foreseeable and unforeseeable water shortages. The WSCP is used to provide guidance to City Council, staff, and the public by identifying response actions to allow for efficient management of any water shortage with

predictability and accountability. The WSCP will be revised during the UWMP update cycle to incorporate updated and new information. For example, new supply augmentation actions will be added, and actions that are no longer applicable for reasons such as program expiration will be removed. However, if revisions to the WSCP are warranted before the UWMP is updated, the WSCP will be updated outside of the UWMP update cycle.

12.0 Special Water Feature Distinction

As listed in Table 5-1, there are separate demand reduction actions for decorative water features (including fountains and ponds), and for pools and spas. The City has separate response actions, enforcement actions, and monitoring programs for both decorative water features and pools and spas. Non-pool or non-spa water features may use recycled water, whereas pools and spas must use potable water for health and safety considerations. Limitations to pools and spas may require different considerations compared to non-pool or non-spa water features.

13.0 Plan Adoption, Submittal, and Availability

Per Water Code Section 10642, the City provided notice of the availability of the Draft 2025 WSCP and notice of the public hearing to consider adoption of the 2025 WSCP. The public review drafts of the 2025 WSCP were posted prominently on the City's website, https://SantaBarbaraCA.gov/WaterVision, on May 15, 2026, and more than 14 days in advance of the public hearing. Public hearing notifications were also published in local newspapers. Copies of the hearing notifications are included in Attachment 5.

The Draft 2025 WSCP was discussed with the Board of Water Commissioners on April 16, 2026. The Commission supported the Plan content and recommendations. A public hearing, with public notice, was held at the same time as the City Council approval and adoption meeting on June 16, 2026. See Attachment 6 for the resolution approving the WSCP.

By July 1, 2026, the adopted 2025 WSCP was submitted to DWR through the WUEData portal and sent to the office of the Clerk of the Board, County of Santa Barbara, and the California State Library and DWR. There are no other cities in which the City provides water. Once the plan has been adopted, a hard copy will be made available for public review during normal business hours at the City Water Resources Department offices (located at 630 Garden Street). Additionally, an electronic copy will be uploaded to the City's website within 30 days of the filing date and will be available for public reference.

Based on DWR's review of the WSCP, the City will make any amendments in its adopted WSCP, as required and directed by DWR. If the City revises its WSCP after the UWMP is approved by DWR, then an electronic copy of the revised WSCP will be submitted to DWR within 30 days of its adoption.

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Attachment 1- Santa Barbara Municipal Code Chapter 14.20

CHAPTER 14.20
WATER REGULATIONS

§ 14.20.005. Use of Water.

The use of all water obtained by or through the distribution facilities of the City shall be governed and controlled by the provisions of this chapter.
(Ord. 4558, 1989)

§ 14.20.007. Prohibition Against Waste of Water.

It shall be a violation of this chapter for any consumer or account holder to waste any water obtained from or through the distribution facilities of the City.
(Ord. 4558, 1989)

§ 14.20.010. Wasting Water - Repairs - Temporary Shut-Off.

Property owners are required to repair water pipes, faucets, valves, plumbing fixtures, irrigation systems, or any other devices, to eliminate leaks and prevent waste of water. Upon reasonable notice or attempted notice to the occupant, the City may, but has no duty to, temporarily shut off service to any lot where the City reasonably believes there is a leak or other plumbing failure that is resulting in waste of water as demonstrated by water flowing off the property, excessive flow through the meter, or other facts indicating a leak or other plumbing failure. The City shall post a notice on the property stating that the service has been temporarily shut off to prevent further waste of water and advising the customer how to contact the City for restoration of service. Service will be restored upon determination by the Director that the condition that resulted in the disconnection has been corrected. The City will not charge a service fee for temporary shut off or restoration of service.
(Prior code §44.30; Ord. 2931 §2, 1963; Ord. 5847, 2018)

§ 14.20.040. City's Relation to Seepage, Etc. - Damage on Private Property.

The City is not responsible for damage to property or injury to persons arising from the installation, maintenance, condition, or use of pipes, plumbing systems, fixtures and other devices located on private property.
(Prior code §44.33; Ord. 2931 §2, 1963; Ord. 5847, 2018)

§ 14.20.050. Protection of City Water System - Prohibited Activity.

No person shall operate, tamper with, connect to, damage, or modify in any manner any meter, valve, pipe, pump, or other component of the City water system unless the person has obtained a written permit from the Director issued in accordance with this title. This section does not apply to work by City employees or contractors in the performance of their official duties.
(Prior code §44.34; Ord. 2931 §2, 1963; Ord. 5847, 2018)

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§ 14.20.060. Preventing Access to Water System Facilities Prohibited.

No person shall place upon or about a fire hydrant, curbcock, meter, valve, pump, water gate, or other City water facility any vegetation, object, material, debris or structure of any kind that obstructs or prevents free access by City employees or contractors. The City may remove any vegetation, object, material, debris, or structure placed in violation of this section.
(Prior code §44.42; Ord. 2931 §2, 1963; Ord. 5847, 2018)

§ 14.20.070. Consumer Precautions in Case of Fire.

In case of fire, consumers shall be required to shut off all irrigation or any steady flow of water being used when the fighting of any fire reasonably necessitates the same.
(Prior code §44.43; Ord. 2931 §2, 1963)

§ 14.20.080. Right of Access to Water Meters.

Any duly authorized representative of the City shall at all times have the right of ingress to and egress from any water meter located upon a consumer's premises by way of such easement, license or right-of-way, if any, as the City may own and for such purposes as are permitted by the easement, license or right-of-way.
(Prior code §44.44; Ord. 2931 §2, 1963; Ord. 4250, 1984; Ord. 4558, 1989)

§ 14.20.090. Access to Meters Inside Premises.

Where a water meter is placed inside the premises of a consumer, provision shall be made for convenient meter reading and repairing by representatives of the City, for shutting off or turning on water service, and for installation or removal of flow restricters.
(Prior code §44.45; Ord. 2931 §2, 1963; Ord. 4250, 1984; Ord. 4558, 1989)

§ 14.20.100. Shutting Off Water for Repairs, Etc., and Notice.

The City reserves the right to shut off the water from any premises, or from any part of the distribution system, as long as necessary, without notice to the consumer, at any time when the exigencies of the occasion may require it; but in all cases of extension or connections the Department shall notify consumers of the necessity of shutting off water and the probable length of time the water shall be shut off before taking such action.
(Prior code §44.46; Ord. 2931 §2, 1963)

§ 14.20.105. Shutting Off Irrigation Meters.

The City shall have the right to shut off water service to meters restricted to irrigation uses temporarily and as necessary to determine that the use of such meters is limited to irrigation. Any person applying for service through a meter restricted to irrigation uses shall be informed of such conditions of use at the time he or she applies for such a meter.
(Ord. 4558, 1989)

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§ 14.20.108. Place of Use of Water.

Except as otherwise provided in this title or as specifically authorized by the Director, water received from or through a meter may be used only on and for the property served by that meter.
(Ord. 4558, 1989)

§ 14.20.110. Tanks Required for Steam Boilers.

No stationary steam boiler shall be connected directly with the water distribution system of the City but in each and every case, a suitable tank of storage capacity, sufficient for 12 hours supply for such boiler, shall be provided and the service pipe supplying such tank shall discharge directly into the top of such tank.
(Prior code §44.47; Ord. 2931 §2, 1963)

§ 14.20.130. Unlawful Use of Water and Meter Removal.

It is unlawful:

A. For a person or entity that is not an Account Holder to use water through a Meter, unless such person or entity is authorized by agreement with the Account Holder to use such water through such Meter;

B. For a person or entity to use water from a fire hydrant, except as authorized by a permit issued by the Public Works Director;

C. For a person or entity to use water from a dedicated fireline except in response to a fire or in the minimum amount needed to perform maintenance of such fireline, or as authorized by the Public Works Director;

D. For a person or entity to use water from a Connection that does not have a Meter, except as expressly authorized by the Public Works Director;

E. For a person or entity to use water from a Meter for which there is no active Account Holder; and

F. For any person or entity to remove a Meter from a Water Service, except as authorized by the Public Works Director.

(Ord. 5653, 2014)

§ 14.20.140. Illegal Consumption Shown by Meter.

When a meter shows a consumption of water after service has been officially discontinued, the owner of the property served shall be held responsible for such consumption, in addition to which he or she shall pay to the City a service restoration fee and the water shall not again be turned on for either owner or tenant until such illegal consumption has been fully paid for.
(Prior code §44.50; Ord. 2931 §2, 1963; Ord. 4250, 1984)

§ 14.20.150. Reconnection.

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A. After water service has been discontinued to any premises, it shall not be restored except by the Department. Service may not be restored until a written application signed by the account holder, upon forms furnished by the Department, has been filed with the Department and approved by the Director.

B. The Director may approve a service restoration upon the Director's determination that the connection complies with the requirements of this chapter and the applicant has paid all required reconnection fees in an amount established by City Council resolution.

(Prior code §44.51; Ord. 2931 §2, 1963; Ord. 4250, 1984; Ord. 5847, 2018)

§ 14.20.170. Notice Upon Vacating Premises - Required.

Prior to vacating any premises connected to the City water supply system, the consumer shall request that the City terminate service and prepare a final billing.
(Prior code §44.53; Ord. 2931 §2, 1963; Ord. 4250, 1984)

§ 14.20.180. Department to Read Meter on Receipt and Stop Service.

Within two working days of receipt of the notice required by Section 14.20.170, the City shall read the water meter and shut off the water to the premises.
(Prior code §44.54; Ord. 2931 §2, 1963; Ord. 4250, 1984)

§ 14.20.215. Water Use Regulations During Water Shortage Conditions.

A. Water shortage conditions. A Stage One Water Shortage Condition, a Stage Two Water Shortage Condition and a Stage Three Water Shortage Condition are defined as short-term conditions declared by resolution of the City Council upon being advised by staff that projected water supply conditions warrant response measures consistent with those associated with corresponding stages in the City's adopted Water Shortage Contingency Plan. The Council resolution may identify and refer to such short-term conditions in terms or titles specific to the current water shortage.

B. Regulations during water shortage conditions. Upon adoption by the City Council of a resolution declaring a Stage One Water Shortage Condition, a Stage Two Water Shortage Condition or a Stage Three Water Shortage Condition, or such other titles as may be selected by Council pursuant to subsection A, the City Council may adopt a resolution containing such rules and regulations as necessary to restrict and regulate use of water from the City's water supply system in order to protect the public health and safety. Failure of any person or entity to comply with such rules and regulations as adopted by resolution of the City Council is a violation of this code subject to the remedies and penalties provided herein and as provided by Chapter 1.28 and as otherwise provided by law.

C. Exemptions. Exemptions to the water use regulations set forth by City Council resolution during a declared Stage One, Stage Two or Stage Three Water Shortage Condition may be granted by the Public Works Director for specific uses of water on the basis of factually demonstrated need or undue hardship and in accordance with guidelines for exemptions as may be determined by the Public Works Director.

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If the Public Works Director denies a request for an exemption for a specific water use, a written request for reconsideration may be made to the Board of Water Commissioners. The decision of the Water Commission shall be final.

D. Upon the declaration of and during a Water Shortage Condition, the failure of a mobilehome park owner to introduce water into a swimming pool or spa located in a mobilehome park, in accordance with the City Council resolution, shall not be considered an increase in "rent" for purposes of Municipal Code Section 26.08.030.N.

(Ord. 4558, 1989; Ord. 5653, 2014)

§ 14.20.225. Violations.

A. Any failure to comply with a provision of this chapter shall constitute a violation of this code, regardless of whether the failure to comply is caused by an Account Holder, a Consumer or any other person or entity.

B. Where the failure to comply with this chapter is continuing and reasonably preventable by the person or entity failing to comply, each successive hour of such failure to comply shall be a separate and distinct violation.

(Ord. 4558, 1989; Ord. 5653, 2014)

§ 14.20.226. Penalties and Charges.

A. In addition to the penalties and other methods of enforcement provided in Chapter 1.28, the following penalties may also be applied to any violation of any provision of this chapter:

1. For the first violation within the preceding 12 calendar months, the Director shall issue a written notice of the fact of such violation.

2. For a second violation within the preceding 12 calendar months, the Director shall impose a penalty on the bill of the Account Holder for the property where the violation occurred or is occurring, in an amount not to exceed $250.00.

3. For a third violation within the preceding 12 calendar months, the Director:

   a. Shall impose a penalty on the bill of the Account Holder for the property where the violation occurred or is occurring, in an amount not to exceed $250.00; and

   b. May install a flow restricter on the service where the violation occurred or is occurring, for a period to be determined by the Director.

4. For a fourth and any subsequent violation within the preceding 12 calendar months, the Director:

   a. Shall impose a penalty on the bill of the Account Holder for the property where the violation occurred or is occurring, in an amount not to exceed $250.00; and

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b. May install a flow restricter on or shut off water service to the property where the violation occurred or is occurring, for a period to be determined by the Director.

B. If a flow restricter is installed or water service shut off pursuant to subsection A of this section, prior to restoration of normal water service the Account Holder whose service is affected shall be required to reimburse the City for all costs it has incurred and will incur in installing and removing a flow restricter and in shutting off and turning on water service.

C. Any penalty imposed pursuant to this section shall be added to the account of the Account Holder for the property where the violation occurred or is occurring and shall be due and payable on the same terms and subject to the same conditions as any other charge for regular water service.

(Ord. 4558, 1989; Ord. 5653, 2014)

§ 14.20.227. Notice of Violation - Hearing.

A. For each violation of this chapter, the Director shall give notice as follows:

1. By sending written notice through the U.S. mail to the Account Holder for the property where the violation occurred or is occurring, at the current billing address shown in the City's water billing records; and

2. By personally giving written notice thereof to the person who committed the violation or by leaving written notice with some person of suitable age and discretion at the property where the violation occurred or is occurring; or

3. If neither the person who committed the violation nor a person of suitable age and discretion can be found, then by affixing written notice in a conspicuous place on the property where the violation occurred or is occurring.

B. Any written notice given under this section shall contain a statement of:

1. The time, place and nature of the violation;

2. The person(s) committing the violation, if known;

3. The provision(s) of this chapter violated;

4. The possible penalties for each violation;

5. The Account Holder's right to request a hearing on the violation and the time within which such a request must be made; and

6. The Account Holder's loss of the right to a hearing in the event the Account Holder fails to request a hearing within the time required.

C. Any Account Holder provided a notice of violation in accordance with the provisions of this chapter shall have the right to request a hearing. The request must be made in writing and must be received by the Director within 10 calendar days of

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the date of the notice of violation. The Director shall conduct the hearing, at which both written and oral evidence may be presented, and shall decide whether a violation occurred and the appropriate penalty. In determining the appropriate penalty, the Director shall consider whether the Account Holder knew of the violation at the time it occurred and whether he or she took reasonable action to correct the violation upon notification of it. In addition, the Director shall exercise his or her discretion in accordance with such guidelines as the City Council may adopt by resolution.

1. For a first, second or third violation within a 12 month period, the decision of the Director shall be final.

2. For a fourth or subsequent violation within a 12 month period, the Account Holder shall have the right to appeal the decision of the Director by requesting a hearing before the Board of Water Commissioners ("Board"). The request for hearing before the Board shall be in writing and shall be delivered to the Director not later than seven calendar days after the date of the decision of the Director. At the hearing, the Board may receive and hear both written and oral evidence and shall have the authority to affirm, reverse, or modify the decision of the Director. The decision of the Board shall be final.

D. If an Account Holder fails to request a hearing before the Director or the Board within the period(s) provided in this section, the action of the Director shall be deemed final.

E. Water service shall not be shut off until a notice of violation has become final or there is a final decision of the Director or the Board ordering the shut-off of water service.

(Ord. 4558, 1989; Ord. 5653, 2014)

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Attachment 2- Water Shortage Resolution

RESOLUTION NO. 17-017

A RESOLUTION OF THE COUNCIL OF THE CITY OF SANTA BARBARA ESTABLISHING A REVISED WATER CONSERVATION TARGET AND UPDATED WATER USE REGULATIONS EFFECTIVE DURING A STAGE THREE DROUGHT EMERGENCY, AND REPEALING RESOLUTION NO. 16-173

WHEREAS, the City of Santa Barbara, along with the rest of the State of California, has experienced the driest five-year period on record and such conditions have resulted in the depletion of surface water resources that are the City's primary water supply;

WHEREAS, the City's 2010 Urban Water Management Plan, which was updated in 2015, sets forth the City's Water Shortage Contingency Plan;

WHEREAS, pursuant to the Water Shortage Contingency Plan, on February 11, 2014, the City Council adopted resolution No. 14-009 declaring a Stage One Drought Condition and on May 20, 2014, the City Council adopted Resolution No. 14-027 declaring a Stage Two Drought Condition and imposing water use regulations;

WHEREAS, due to the continued lack of sufficient rainfall, on May 12, 2015, the City Council adopted Resolution No. 15-036 declaring a Stage Three Drought Condition, updating and augmenting water use regulations, and requiring a twenty-five percent (25%) reduction from calendar year 2013 normal citywide water use;

WHEREAS, on April 26, 2016, the City Council adopted Resolution No. 16-023 to increase the required citywide reduction from normal citywide water use to thirty-five percent (35%);

WHEREAS, on December 6, 2016, the City Council adopted Resolution No. 16-173 to increase the required citywide reduction from normal citywide calendar year 2013 water use to forty percent (40%) and to establish a lawn watering moratorium in response to continuing dry weather;

WHEREAS, while recent rainfall has been sufficient to make a modest improvement to the City's water supply and allow minor adjustments to current water use regulations, the drought remains severe and concern remains regarding entitlement limits from Lake Cachuma, depleted groundwater resources, and the potential return of dry weather during the current and subsequent years, thereby making it necessary to continue to conserve existing water supplies to protect the public health, safety and welfare if the current drought continues

WHEREAS, the Water Shortage Contingency Plan provides that, when the City determines that the water supply for the current or impending water year is projected to be more than 10 percent below projected normal demand, a Stage Three Water Shortage

Emergency shall be declared, and such conditions continue to exist;

WHEREAS, Santa Barbara Municipal Code Section 14.20.215 provides for the establishment, by resolution of the City Council, of water use rules and regulations necessary to restrict and regulate the use of water provided by the City's water distribution system during drought, and provides for exemptions to such regulations;

WHEREAS, it is the intent of the City Council to minimize inequities resulting from the implementation of water use regulations;

WHEREAS, on May 9, 2016, the Governor issued Executive Order B-37-16, Making Water Conservation a California Way of Life in California permanently prohibiting practices that waste potable water and extending emergency water conservation regulations through the end of January 2017;

WHEREAS, on February 8, 2017, the State Water Board adopted an emergency water conservation regulation to amend and extend the May 18, 2016 regulation that implemented Executive Order B-37-16;

WHEREAS, the City Council desires to preserve the substantial long-term investment in the community's trees and shrubs and to reserve the remaining amount of available irrigation water for use on trees and shrubs; and

WHEREAS, despite the elimination of the City's regulation prohibiting irrigation of lawns resulting from the adoption of this Resolution, customers of the City water system are urged to voluntarily forego lawn irrigation to the maximum extent feasible throughout the remainder of the drought.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF SANTA BARBARA AS FOLLOWS:

SECTION 1. Since February 11, 2014, there has existed within the City of Santa Barbara a continually worsening Drought Condition, improving slightly with recent rainfall, such that a thirty percent (30%) water use reduction from normal citywide calendar year 2013 water use is now required, based on the City's projected water supply.

SECTION 2. For the protection of public health and safety, the following drought water use regulations regarding use of potable water from the City's water system are hereby established and shall remain in effect for the duration of the Stage Three Drought Emergency, unless repealed or modified by resolution of the City Council:

a. Except as otherwise prohibited by these regulations, any outdoor use of potable water through a hose, pipe, or faucet is permitted only if the water is delivered by use of a self-closing valve that requires operator pressure to activate the flow of water.

b. The outdoor use of potable water from a hose, pipe, or faucet (even if delivered by use of a self-closing valve as provided in Section 2 a) for the purpose of cleaning buildings, pavement, driveways, sidewalks, tile, wood, plastic, or other hard

surfaces is prohibited.

Exceptions:

i. When such use is the only feasible means of correcting an immediate threat to health and safety.
ii. In preparation for painting or sealing, provided that such washing occurs immediately prior to such painting or sealing.

Water used pursuant to the above exceptions shall be applied only by use of a pressure washer, mop, bucket, brush, and/or other tools to limit the use of running water to the minimum necessary. A pressure washer is defined herein to be equipment that boosts incoming water pressure for the purpose of enhancing cleaning capability and minimizing the amount of water used;

c. Outdoor irrigation of vegetation is prohibited, except between the hours of 6:00 p.m. and 8:00 a.m. of the following day if automatically controlled and between the hours of 4:00 p.m. and 10:30 a.m. of the following day if manually controlled. Irrigation by hand-held hose is subject to the self-closing valve provision of Section 2.a.

Exceptions:

i. Irrigation accomplished by use of a water truck that delivers water by injection probe below mulch or below the soil surface;
ii. Irrigation devices such as tree watering bags and other similar devices that release water at a slow rate for the purpose of watering trees.

d. Irrigation with potable water that causes runoff onto adjacent property, non-irrigated areas, private and public walkways, roadways, parking lots, or parking structures is prohibited.

e. Irrigation with potable water during and within 48 hours after measurable rainfall is prohibited. Measurable rainfall is defined as a ¼ of an inch or more of precipitation in a 24-hour period.

f. Irrigation of turf on public street medians with potable water is prohibited.

g. The issuance of permits for use of potable water from fire hydrants is suspended. Applicants shall be directed to apply for a permit to use recycled water.

h. Washing of vehicles and boats is prohibited except at commercial car washing facilities equipped with water recycling equipment, or by use of a hose, subject to the self-closing valve provision of Section 2.a. Operators of commercial car washing facilities shall post a notice in a conspicuous place advising the public as to whether their operations conform to water recycling requirements.

i. Use of water in any fountain or other decorative water feature is prohibited.

Exceptions: Fountains or other decorative water features that are equipped with a recirculation system are permitted under any of the following circumstances:

i. At indoor locations;
ii. On residential properties;
iii. When total water surface area is less than or equal to twenty five (25) square feet;
iv. Where, since the May 20, 2014 adoption of Stage Two regulations, aquatic life has existed in the fountain or decorative water feature.

j. Swimming pools and spas must have a cover that conforms to the size and shape of the pool or spa and acts as an effective barrier to evaporation. The cover shall be in place during periods when use of the pool is not reasonably expected to occur.

k. Draining and refilling a pool in excess of one third of the volume per year is prohibited, except as authorized by the Public Works Director based on evidence from qualified maintenance personnel that such further draining is required to make needed repairs, or to prevent equipment damage or voiding of warranties.

l. All restaurants and other eating and drinking establishments shall post, in a conspicuous place, a Notice of Drought Condition as approved by the Public Works Director and shall not serve water except upon specific request by a customer.

m. Operators of hotels, motels and other commercial establishments offering lodging shall post in each room a Notice of Drought Condition as approved by the Public Works Director. Operators of hotels and motels shall provide guests with the option of choosing not to have towels and linens laundered daily. The hotel or motel shall prominently display notice of this option in each guestroom using clear and easily understood language.

n. Operators of pools, exercise facilities, and other similar commercial establishments providing showering facilities shall promote limitation of showering time and post a Notice of Drought Condition as approved by the Public Works Director in a conspicuous place.

SECTION 3. Violation of any regulation in Section 2 of this Resolution is subject to the penalties and charges set forth in Santa Barbara Municipal Code Section 14.20.226.

SECTION 4. Resolution Number 16-173 is hereby repealed in its entirety and of no further force and effect.

RESOLUTION NO. 17-017

STATE OF CALIFORNIA)
)
COUNTY OF SANTA BARBARA) ss.
)
CITY OF SANTA BARBARA)

I HEREBY CERTIFY that the foregoing resolution was adopted by the Council of the City of Santa Barbara at a meeting held on March 21, 2017, by the following roll call vote:

AYES: Councilmembers Gregg Hart, Frank Hotchkiss, Randy Rowse, Bendy White; Mayor Helene Schneider

NOES: Councilmembers Jason Dominguez and Cathy Murillo

ABSENT: None

ABSTENTIONS: None

IN WITNESS WHEREOF, I have hereto set my hand and affixed the official seal of the City of Santa Barbara on March 22, 2017.

Sarah P. Gorman, CMC
City Clerk Services Manager

I HEREBY APPROVE the foregoing resolution on March 22, 2017.

Helene Schneider
Mayor

Attachment 3- City of Santa Barbara Local Hazard Mitigation Plan Annex

City of Santa Barbara

Local Hazard Mitigation Plan

An Annex to the Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan

February 2023

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1.0 INTRODUCTION

Natural and human-caused disasters can lead to death, injury, property damage, and interruption of business and government services. When they occur, the time, money, and effort to respond to and recover from these disasters divert public resources and attention from other important programs and problems.

However, the impact of foreseeable yet often unpredictable natural and human-caused events can be reduced through mitigation planning. History has demonstrated that it is less expensive to mitigate against disaster damage than to repeatedly repair damage in the aftermath. A mitigation plan states the aspirations and specific courses of action jurisdictions intend to follow to reduce vulnerability and exposure to future hazard events.

The City of Santa Barbara (City) recognizes the consequences of disasters and the need to reduce the impacts of all hazards, natural and human-caused. This annex was prepared in 2022 as part of the update to the County of Santa Barbara (County) Multi-Jurisdictional Hazard Mitigation Plan (MJHMP). This annex serves as the Local Hazard Mitigation Plan (LHMP) for the City. The LHMP was last comprehensively updated in 2017 as an annex to the 2017 MJHMP. Since 2017, the City has:

- Incorporated the LHMP goals, objectives, and mitigation actions into its local plans and processes, including the General Plan Safety Element by reference and specific hazard planning efforts (e.g., Sea Level Rise Adaptation Plan).
- Used the LHMP's assessment of capabilities, hazards, and vulnerabilities to inform planning, capital improvements, programs, decision-makers, and the public.
- Implemented mitigation actions through the City's general plan, capital improvement program, maintenance programs, grant programming, community outreach, and budget process.
- Reviewed and evaluated mitigation actions before and after disasters, including the Thomas Fire and Montecito debris flow.

This 2022 update to the LHMP builds on and refines the MJHMP's assessment of hazards and vulnerabilities countywide to develop a mitigation plan for the City. The City participated in the 2022 MJHMP Mitigation Advisory Committee (MAC) and Local Planning Team (LPT), reviewed all portions of the MJHMP pertaining to the City, and incorporated relevant components into this annex. It contains updated capability assessment information, a current vulnerability assessment, and an updated/revised mitigation strategy. The methodology and process for developing this annex build on approaches employed in the 2022 MJHMP and are explained throughout the following sections.

The 2022 MJHMP update was prepared with input and coordination from each of the county's eight incorporated cities, six special districts, the County, citizen participation, responsible officials, and support from the State of California Governor's Office of Emergency Services (CalOES) and the Federal Emergency Management Agency (FEMA). The process to update the MJHMP and this LHMP included over a year of coordination with representatives from all participating agencies within the County and County representatives who comprised the MAC (described further in Section 3.0, *Planning Process* below). The City is a participating agency in the County's MJHMP update.

The City's LHMP is used by local emergency management teams, decision-makers, and agency staff to implement needed mitigation to address known hazards. The MJHMP and this annex can also be

used as a tool for all stakeholders to increase community awareness of local hazards and risks and provide information about options and resources available to reduce those risks. Informing and educating the public about potential hazards helps all county residents and visitors protect themselves against their effects.

Risk assessments were performed that identified and evaluated priority hazards that could impact the City. Vulnerability assessments summarize the identified hazards' impact on the City. Estimates of potential dollar losses to vulnerable structures are presented. The risk and vulnerability assessments were used to determine mitigation goals and objectives to minimize near-term and long-term vulnerabilities to the identified hazards. These goals and objectives are the foundation for a comprehensive range of specific attainable mitigation actions (see Section 7.0, *Mitigation Strategy*).

2.0 PLAN PURPOSE AND AUTHORITY

Federal legislation historically provided funding for disaster preparedness, response, recovery, and mitigation. The Disaster Mitigation Act (DMA) of 2000, also commonly known as "The 2000 Stafford Act Amendments" (the Act), constitutes an effort by the federal government to reduce the rising cost of disasters. The legislation reinforces the importance of mitigation planning and emphasizes planning for disasters before they occur.

Section 322 of the DMA requires local governments to develop and submit mitigation plans to qualify for the Federal Emergency Management Agency (FEMA) Hazard Mitigation Grant Program (HMGP) funds. The 2022 MJHMP meets the statutory requirements of DMA 2000 (P.L. 106-390), enacted October 30, 2000, and 44 CFR Part 201 – Mitigation Planning, Interim Final Rule, published February 26, 2002. The HMA grants include the Hazard Mitigation Grant Program (HMGP), Pre-Disaster Mitigation (PDM) program, and the Flood Mitigation Assistance (FMA) program. Additional FEMA mitigation funds include the HMGP Post Fire funding associated with Fire Management Assistance Grant (FMAG) declarations and the Building Resilient Infrastructure and Communities (BRIC) funding associated with the 2018 Disaster Recovery Reform Act (DRRA).

DMA 2000 specifically addresses mitigation planning at the state and local levels. It identifies requirements that allow HMGP funds to be used for planning activities and increases the amount of HMGP funds available to states that have developed a comprehensive, enhanced mitigation plan before a disaster. State, county, and local jurisdictions must have an approved mitigation plan in place before receiving post-disaster HMGP funds. These mitigation plans must demonstrate that their proposed projects are based on a sound planning process that accounts for the risk to and the capabilities of the individual communities.

Local governments have certain responsibilities for implementing Section 322, including:

- Preparing and submitting a local mitigation plan;
- Reviewing and updating the plan every five years; and
- Monitoring mitigation actions and projects.

To facilitate implementation of the DMA 2000, FEMA created an Interim Final Rule (the Rule), published in the Federal Register in February of 2002 at section 201 of 44 CFR. The Rule spells out

the mitigation planning criteria for states and local communities. Specific requirements for local mitigation planning efforts are outlined in section §201.6 of the Rule.

In March 2013, FEMA released The Local Mitigation Planning Handbook (Handbook) as the official guide for local governments to develop, update and implement local mitigation plans. The Handbook complements and references the October 2011 FEMA Local Mitigation Plan Review Guide (Guide) to help "Federal and State officials assess Local Mitigation Plans in a fair and consistent manner." Local jurisdictions must demonstrate that proposed mitigation actions are based upon a sound planning process that accounts for the inherent risk and capabilities of the individual communities as stated in section §201.5 of the Rule. The Handbook and Guide were consulted to ensure thoroughness, diligence, and compliance with the DMA 2000 planning requirements.

DMA 2000 is intended to facilitate cooperation between state and local authorities, prompting them to work together. It encourages and rewards local and state pre-disaster planning and promotes sustainability as a strategy for disaster resistance. This enhanced planning network is intended to enable local and state governments to articulate accurate needs for mitigation, resulting in a faster allocation of funding and more effective risk reduction projects.

This LHMP was prepared as an annex to the County's MJHMP in compliance with DMA 2000 and applicable FEMA guidance. The following pages show the resolutions that adopt the City's 2022 LHMP.

RESOLUTION NO. 23-038

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SANTA BARBARA CALIFORNIA ADOPTING THE 2022 CITY OF SANTA BARBARA ANNEX OF THE SANTA BARBARA COUNTY MULTI-JURISDICTION HAZARD MITIGATION PLAN

WHEREAS, The Federal Disaster Mitigation Act of 2000 (Act), as described in 44 CFR Section 201.6 mandates local governments to submit and maintain a Federal Emergency Management Agency (FEMA) approved local hazard mitigation plan;

WHEREAS, The of City Santa Barbara has participated in a county-wide multi-jurisdictional Hazard Mitigation plan with Santa Barbara County Office of Emergency Management as the Operational Area and lead agency;

WHEREAS, The Multi-Jurisdiction Hazard Mitigation Plan identifies each jurisdiction's risk assessment and mitigation strategies to reduce the impacts of natural, technological, or intentional disasters on the public and local government;

WHEREAS, Identification of hazards in the City assists with response planning, exercise development, public education, and awareness, and other emergency management functions;

WHEREAS, the City's Local Hazard Mitigation Plan will be an Annex to the City's Emergency Operations Plan and a resource for the Safety Element of the City's General Plan in accordance with California Government Code Sections 8685.9 and 65302.6;

WHEREAS, The Federal Disaster Mitigation Act of 2000 requires the Plan to be formally adopted by the City Council or governing agency; and

WHEREAS, adopting the City's Local Hazard Mitigation Plan and amending the General Plan to incorporate the Local Hazard Mitigation Plan by reference is exempt from environmental review pursuant to the California Environmental Quality Act (CEQA) through the use of the "General Rule" Section 15061(b)(3) of the CEQA Guidelines as adoption of the Amendment will have no potential adverse impact upon the environment because the LHMP will act a guidebook for hazard mitigation strategies but does not implement any specific project, action, or funding.

NOW THEREFORE IT IS HEREBY RESOLVED by the City Council of the City of Santa Barbara, California, as follows:

1. The City Council approves and adopts the 2022 Local Hazard Mitigation Plan five (5) year update in accordance with the Disaster Mitigation Act of 2000.
2. The City Council adopts the Santa Barbara County Multi-Jurisdiction Hazard Mitigation Plan
3. This Resolution is effective upon its adoption.

RESOLUTION NO. 23-038

STATE OF CALIFORNIA)
)
COUNTY OF SANTA BARBARA) ss.
)
CITY OF SANTA BARBARA)

I HEREBY CERTIFY that the foregoing resolution was adopted by the Council of the City of Santa Barbara at a meeting held on April 11, 2023, by the following roll call vote:

AYES: Councilmembers Eric Friedman, Alejandra Gutierrez, Oscar Gutierrez, Meagan Harmon, Kristen W. Sneddon, Mayor Randy Rowse

NOES: None

ABSENT: Councilmember Mike Jordan

ABSTENTIONS: None

IN WITNESS WHEREOF, I have hereto set my hand and affixed the official seal of the City of Santa Barbara on April 13, 2023.

Yazmin Dominguez
Deputy City Clerk

I HEREBY APPROVE the foregoing resolution on April 13, 2023.

Randy Rowse
Mayor

3.0 PLANNING PROCESS

3.1 OVERVIEW

The planning process implemented for the County's 2022 MJHMP update, including the City's LHMP update, utilized two different planning teams to review progress, inform and guide the update, and directly review and prepare portions of the plan, including each jurisdictional annex. The first team is the Mitigation Advisory Committee (MAC) and the second is the Local Planning Team (LPT).

All eight incorporated cities and the six special districts joined the County as participating agencies in the preparation of the MJHMP update, including the cities of Buellton, Carpinteria, Goleta, Guadalupe, Lompoc, Santa Barbara, Santa Maria, and Solvang; and special districts Cachuma Operation and Maintenance Board (COMB), Carpinteria Valley Water District (CVWD), Goleta Water District (GWD), Montecito Fire Protection District (MFPD), Montecito Water District (MWD), and Santa Maria Valley Water Conservation District (SMVWCD). Each of the participating agencies had representation on the MAC and was responsible for the administration of their own LPT. In addition, the MAC included representatives from other state and local agencies with an interest in hazard mitigation in Santa Barbara County, including local non-profit organizations, special districts, and state and federal agencies. This composition ensures diverse input from an array of voices representing all communities within Santa Barbara County.

Both the MAC and the LPTs focused on these underlining philosophies, adopted from the FEMA Local Mitigation Plan Review Guide:

- **Focus on the mitigation strategy**

  The mitigation strategy is the plan's primary purpose. All other sections contribute to and inform the mitigation strategy and specific hazard mitigation actions.

- **Process is as important as the plan itself**

  In mitigation planning, as with most other planning efforts, the plan is only as good as the process and people involved in its development. The plan should also serve as the written record, or documentation, of the planning process.

- **This is the community's plan**

  To have value; the plan must represent the current needs and values of the community and be useful for local officials and stakeholders. Develop the mitigation plan in a way that best serves your community's purpose and people.

- **Intent is as important as Compliance**

  Plan reviews will focus on whether the mitigation plan meets the intent of the law and regulation; and ultimately that the plan will make the community safer from hazards.

As a result, the planning process incorporated the following steps:

- **Plan Preparation**

- Form/validate planning team members
- Establish common project goals
- Set expectations and timelines

- **Plan Development**
  - Validate and revise the existing conditions/situation within the planning area;
  - Develop and review the risk to hazards (exposure and vulnerability) within the planning area;
  - Review and identify mitigation actions and projects within the planning area;

- **Finalize the Plan**
  - Review and revise the plan
  - Approve the plan locally and with state and federal reviewers
  - Adopt and disseminate the plan

3.2 MITIGATION ADVISORY COMMITTEE (MAC)

The City participated as a MAC member to prepare this LHMP as an annex to the 2022 MJHMP. The City was represented by Yolanda McGlinchey, Emergency Services Manager, on the MAC.

The MAC meetings were designed to discuss each component of the MJHMP with MAC members and coordinate annex updates. Table 3-1 below provides a list and the main purpose and topics of each MAC meeting.

Table 3-1. Mitigation Advisory Committee (MAC) Meetings Summary

Date	Purpose
March 2021	**MAC Meeting #1 (virtual)** Provided an overview of the project and why the plan is being revised Reviewed FEMA guidance and processes Discussed roles and responsibilities of the participating jurisdictions
September 2021	**MAC Meeting #2 (virtual)** Reviewed goals of the project, role of the MAC Summarized public outreach results Presented hazards assessment and displayed select draft hazard maps Conducted interactive exercise to rank hazards
October 2021	**MAC Meeting #3 (virtual)** Provided results of hazard ranking methodology Presented vulnerabilities assessment Discussed mitigation goals, objectives, and strategies Reviewed County goals from 2017 and compared them to new goals Conducted interactive exercise on potential mitigation goals and strategies
October 2021	**MAC Meeting #4 (virtual)** Collected feedback on 2017 mitigation strategies

Date	Purpose
	Conducted interactive exercise on mitigation strategies for key hazards unaddressed in previous MJHMP Discussed annex updates
January 2022	**MAC Meeting #5 (virtual)** Presented draft plan Discussed key MAC/LPT review needs and key issues Discussed annex updates to dovetail with plan update
March 2022	**MAC Meeting #6 (virtual)** Review and discuss public comments received on the draft plan Recommend a revised draft plan to decision-makers Review annex updates for review and approval

3.3 LOCAL PLANNING TEAM (LPT)

Table 3-2 lists the City's LPT. These individuals collaborated to identify the City's critical facilities, provide relevant plans, report on the progress of City mitigation actions, and provide suggestions for new mitigation actions.

Table 3-2. City of Santa Barbara Local Planning Team 2022

Department	Name	Title
Airport	Aaron Keller	Airport Operations Manager
Public Works	Adam Hendel	Principal Engineer
Sustainability & Resilience	Alelia Parenteau	Interim Sustainability & Resilience Dept. Director
Attorney	Ariel Calonne	City Attorney
Public Works	Ashleigh Shue	Principle Engineer
Fire	Brady Beck	Fire Investigator III
Airport	Brian D'Amour	Interim Airport Director
Public Works	Catherine Taylor	Water Services Manager
Community Development	Christina Dye	Building Official
Fire	Christopher Braden	Wildland Fire Services Specialist - GIS
Finance	Doug Smith	Accounting Manager
Information Technology	Eric Just	GIS Coordintor
Waterfront	Erik Engebretson	Harbor Operations Manager
Parks & Recreation	Jazmin LeBlanc	Assistant Parks & Recreation Director
Public Works	Jeff Brent	Maintenance Supervisor II
Library	Jessica Cadiente	Library Director
Public Works	Jim Dewey	Streets Operations Infrastructure Manager
Police	Joshua Morton	Police Lieutenant
Finance	Keith DeMartini	Finance Director
Library	Kristina Hernandez	Library Services Manager
Fire	Liliana Encinas	Bilingual Public Outreach Coodinator
Sustainability & Resilience	Melissa Hetrick	Administrative Analyst II

Department	Name	Title
Administration	Rene Eyerly	Interim Assistance City Administrator
Community Development	Renee Brooke	City Planner
Parks & Recreation	Rich Hanna	Recreation Program Manager
Community Development	Rosie Dyste	Project Planner
Information Technology	Rudy Fidler	Information Technology Planner
Fire	Ryan DiGuilio	Fire Marshal
Airport	Sara Iza	Principal Project Manager
Fire/OES	Yolanda McGlinchey	Emergency Services Manager

The Santa Barbara LPT members worked directly with the Santa Barbara County Office of Emergency Management (OEM), the consultant team, and each other to provide data, recommended changes, and continually work on the MJHMP and LHMP updates throughout the planning process. The City LPT met virtually as needed during the planning process to discuss data needs and organize data collection. Table 3-3 below outlines a timeline of the LPT's activities throughout the planning process.

Table 3-3. Local Planning Team Activity Summary

Meeting Dates	Summary of Activity
February 2020	LPT kickoff meeting to discuss stakeholder and public involvement and refine the scope of hazard analysis
April 2021 to January 2022	Collated data to share with hazard mitigation planning team, including hazard identification, refreshed data layers for maps, and geographic settings. Completed Plan Update Guides to directly inform hazard priorities and mitigation capabilities Met with County OEM and consultant staff (12/17/22) to discuss LHMP priorities and mitigation approaches.
April 9, 2021	City LHMP met to review documents and forms needed for the Consultant and County OEM
November 10, 2021	City LHMP to review City's Goals and Objectives Review Mitigation Projects, Defer, Complete, Delete or add new projects and review the template for projects from Consultant Review and revise Mitigation Strategies
January and March 2022	Reviewed new maps and local vulnerabilities. Provided input on the status of 2017 LHMP mitigation strategies. Reviewed draft mitigation strategies and provide feedback. Reviewed and finalized 2022 LHMP
January through April 2022	City's LHMP meet in various small meetings to complete: Updated Section 4 – Capability Assessment Reviewed and updated on Cost-Benefit Worksheet Mitigation Projects Review and make comment on City's Annex to the MJHMP

3.4 PUBLIC OUTREACH AND ENGAGEMENT

As a participating agency in the 2022 MJHMP update, the City was directly involved in the outreach program undertaken by the County for the 2022 MJHMP update, which involved extensive outreach during 2021 and early 2022. The City's MAC and LPT members participated in public outreach efforts for the MJHMP and LHMP update planning process by distributing notices for the 6-month-long community hazards survey (refer to Section 3.4.1 of the 2022 MJHMP) and three public workshops (refer to Section 3.4.4 of the MJHMP). The Public Outreach Plan (POP) employed a diversity of tools to maximize notification and participation. The POP was responsive to limitations presented by the Coronavirus (COVID-19) pandemic and focused on direct bilingual outreach using a variety of digital tools, including a fact sheet, social media posts, emails, and press releases. Multiple platforms and tools were used to publicize opportunities to participate. All public and stakeholder meetings were hosted virtually through Microsoft Teams, and all outreach completed for the project was conducted via electronic communications. Many of the meetings used an interactive tool called Slido to collect feedback during meetings. Slido allows audience members to answer questions during presentations, helping the County collect direct detailed feedback and facilitate discussion. All written notices were made available in English and Spanish.

Emergency preparedness information is also regularly distributed to the residents and businesses via the City's website.

In May 2022, the LHMP was completed and made available for public review, concurrent with review by FEMA and CalOES. The City's Draft LHMP was published on the City OES website for comment. Once approved the plan will be placed on the OES website. The opportunity to review documents was announced through social media, media release and the City's website. The community was welcome to submit written or verbal comments to the Emergency Services Manager. In addition, the opportunity for the community to be heard was permitted during the City Council meeting before the adoption of this plan.

4.0 CAPABILITY ASSESSMENT

The City LPT identified current capabilities and mechanisms available for implementing hazard mitigation activities. This section presents a discussion of the roles of key departments, administrative and technical capacity, fiscal resources, and summaries of relevant planning mechanisms, codes, and ordinances.

4.1 COMMUNITY PROFILE AND DEMOGRAPHICS

The City of Santa Barbara is located on the south coast of Santa Barbara County. Due to the Santa Ynez mountain range that blocks colder air from the north, Santa Barbara enjoys mild and pleasant weather. It sits at an elevation of roughly 50 feet above sea level and has a land area of 19 square miles. The City received its name when the California Mission Santa Barbara was founded there in 1786. The mission was known as the Queen of the Missions due to its beauty and the beauty of its surroundings.

Attractions in Santa Barbara include the Waterfront, Downtown retail, entertainment, and cultural districts, Santa Barbara Museums of Art and Natural History, the Santa Barbara Zoo, and special

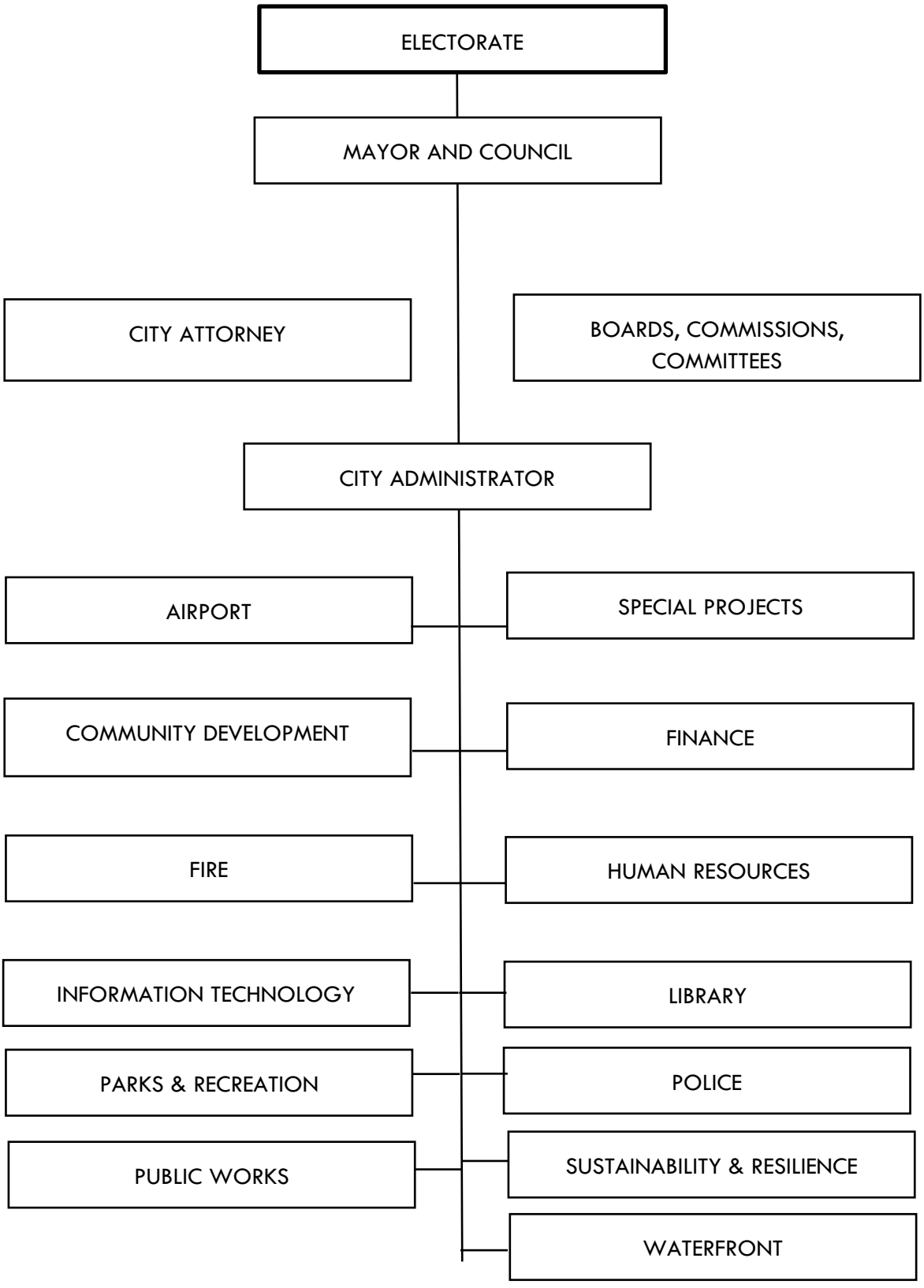
events such as Old Spanish Days – Fiesta Santa Barbara. Santa Barbara is the retail, tourism, government, education, and medical center of the County. It is home to the Santa Barbara Airport, which provides commercial services for Ventura, Santa Barbara, and San Luis Obispo Counties.

According to 2019 U.S. Census Bureau data, the City is home to 92,034 residents. This population is projected to grow to 98,655 residents by 2050 (SBCAG 2018). The average household size in the City is 2.45 and the median household income is $78,945. Approximately 56.2 percent of City of Santa Barbara residents identify as White, 36.50 percent identify as Hispanic, and 7.4 percent identify as Asian, Black, Mixed, or Other (US Census Bureau 2019).

4.2 KEY DEPARTMENTS

The City of Santa Barbara employs a Manager-Council form of governance. Santa Barbara City Council is comprised of one Mayor and six Council Members, all of whom are elected officials each serving a four-year term. The City of Santa Barbara's organization is comprised of fifteen departments. These departments are Airport; City Administrator; City Attorney; Community Development; Finance; Fire; Human Resources, Information Technology, Library; Mayor and Council; Parks and Recreation; Police; Public Works; Sustainability and Resilience and Waterfront Departments. In addition, Santa Barbara has 29 Advisory Boards, Commissions, and Committees whose job is to advise the City Council on a wide variety of subjects.

CITY OF SANTA BARBARA ORGANIZATION CHART



Departments involved in activities related to hazard mitigation include:

4.2.1 City Administrator's Office

The City Administrator's Office provides leadership, direction, and oversight to City departments to accomplish goals and objectives approved by the City Council, per the City Charter. The City Administrator manages all departments, provides training and development for all City employees, reviews the performance of all City departments, and assists the City Council in prioritizing goals. The City Administrator's Office also provides oversight to City TV on Channel 18.

In response to natural disasters, the City Administrator's Office serves as the primary point of contact to coordinate the entire flow of public information. This is accomplished through the use of media releases, press conferences, website updates, the City TV scroll, public information kiosks, and all other social media outlets. The Administrator's office works in conjunction with other emergency personnel to coordinate the public release of accurate, timely, and consistent information.

4.2.2 Santa Barbara Airport

The Santa Barbara Airport is one of the region's most important and visible assets. A recent University of California, Santa Barbara Economic Forecast Project study found that the Airport has a $500 million annual impact on the County. Since the 1930s, it has been the region's primary air transportation facility. Nearly 1 million passengers used the Airport in 2019; making it the busiest airport on the California coast between San Jose and Los Angeles. Consistent with national trends, air travel through the Santa Barbara Airport declined during the recent pandemic. However, passenger numbers have started to increase through the summer of 2020, and airline forecast studies show the passenger volume will grow over the next 10 years.

The Airport has recently completed a new master plan for development through 2025. The plan identifies Airport facility and capacity needs and prescribes improvements. The Airport must remain open during natural disaster situations to serve as a transportation point for the ingress and egress of personnel, equipment, and supplies during the recovery phase of a disaster. The Airport completed a master drainage plan to address flooding issues, and several of the recommended projects from the plan have been completed. The remaining flood control projects are listed in this document as potential projects for funding.

Approximately 400 of the 430 acres of the Goleta Slough Ecological Reserve are within Airport boundaries. As a steward of the slough, the Airport has made significant environmental improvements with plans for further restoration in the future.

In 2008, the Airport completed its airfield safety projects, which brought the runway safety areas up to federal standard and reduced the commercial runway flood hazard.

As mitigation for the Airfield Safety Projects, the Airport has spent nearly $9 million to improve or restore 40 acres of wetland habitat in the Goleta Slough. Ten of those acres were completed in 2010 after a 3-year study of bird behavior in tidal wetlands. The results of this study show that the restoration of tidal circulation has improved habitat for wildlife while reducing the risk of wildlife strikes on or near the airfield. This study has national significance as other airports may follow in

Santa Barbara's footsteps. Each restoration site is overseen in a 7-year maintenance and monitoring program to ensure success, no concerns followed the conclusion of the monitoring program in 2017.

4.2.3 City Attorney Department

The City Attorney's Office is responsible for legal representation and advice to the City Council, Boards, Commissions, and all City officers and staff. These responsibilities include advising the City Council and Planning Commission, as well as City staff, on thousands of matters each year. The office is also responsible for all City code enforcement and litigation services. The office is staffed by six attorneys and five support and paraprofessional staff.

4.2.4 Community Development Department

The Community Development Department is responsible for planning and zoning, building and safety, and housing and redevelopment for the City of Santa Barbara.

The Building & Safety Division is responsible for Building Inspection and Code Enforcement; Building Counter and Plan Review; and Records, Archives, and Clerical Services. One of the primary functions of this division is to ensure all new and remodeled structures, as well as additions to existing structures, are constructed to current health and safety codes, thus lessening the potential impact of hazards.

The Planning Division is responsible for Long Range Planning and Special Studies; Zoning Ordinance Information; Development / Environmental Review; and Design Review and Historic Preservation. This division mitigates natural and human-caused hazards for new and existing development through the implementation of the General Plan, Zoning Ordinance, California Environmental Quality Act (CEQA), the Local Coastal Plan, the Subdivision Map Act, and a variety of other California planning statutes.

The primary responsibilities of this division in mitigating hazards are through 1) developing General Plan and Coastal Zone goals, policies, and implementation actions that address natural and human-caused hazards(e.g., the Safety Element and the Coastal Land Use Plan); 2) mapping geology-related hazards and providing guidelines for site-specific geological investigations for various types of development projects via the Geology and Geohazards Master Environmental Assessment; 3) review and permitting of development consistent with hazard risk reduction and community resilience-related goals, polices, and procedures; and 4) enforcing existing development to ensure continued compliance with the Zoning Ordinance. In addition, all divisions of the Community Development Department are regularly trained to respond to disasters and assist with recovery efforts.

4.2.5 Finance Department

The Finance Department is responsible for providing financial expertise and guidance to the City Council and City Departments, managing the City's daily operations, and maintaining the financial integrity of the City. The Finance Department consists of five divisions, Administration, Accounting, Risk Management, Treasury, and General Services, which encompass sixteen programs.

4.2.6 Fire Department

The mission of the Fire Department is to serve and protect the community from the perils of fires, medical emergencies, environmental emergencies, and natural disasters. This will be accomplished through education, code enforcement, planning, prevention, emergency response, and disaster recovery. The Fire Department is responsible for managing the following programs, Fire Administration; Fire Prevention; Wildland; Office of Emergency Services; and Fire Operations.

Fire Administration provides leadership, policy direction, and administrative support to the entire department. Fire Prevention protects life, property, and the environment from the perils of fire, hazardous materials, and other disasters through proactive code enforcement, modern fire prevention methods, fire and arson investigation, and progressive public safety education, which provides fire and life safety education to the whole community to reduce the loss of life and property. Wildland Division ensures a safer community in the wildland-urban interface through analysis, defensible space, evacuation planning, education, enforcement and fuels modification The Office of Emergency Services coordinates the City's response to a disaster, educates residents to prepare and operates the City Emergency Operations Center, located at Fire Station 1; Fire Operations saves and protects lives, property, and the environment of the Santa Barbara community by preventing the impact of future events through proactive planning, public education, and occupancy fire code inspections.

In 2004, the City adopted the Wildland Fire Plan as a comprehensive, coordinated plan to mitigate the impact of wildland fire. The plan has recently been designated as the City's Community Wildfire Protection Plan. The Plan identifies and ranks the City's high fire hazard areas based on hazard and risk, identifies policies and actions to reduce the community's threat from wildland fire, and provides a process to prioritize and fund implementation of wildland fire projects. The Plan covers a wide range of areas including defensible space requirements and landscape guidelines, public education and outreach programs, evacuation preplanning, Codes modification and enforcement, fire protection services, post-fire rehabilitation, biomass utilization, and vegetation management programs on both private and public lands. To implement elements of that plan, the City adopted the Wildland Fire Suppression Assessment District (WFSAD) in 2006. The WFSAD provides an alternate funding source for defensible space chipping, vegetation road clearance, vegetation fuels management projects, and voluntary defensible space evaluations for residents located in the Foothill and Extreme Foothill high fire hazard areas. In cooperation with residents of the district, the program has removed hundreds of tons of flammable vegetation, thereby reducing the threat of wildfire and enhancing evacuation routes throughout the district.

City of Santa Barbara Office of Emergency Services Division

The City of Santa Barbara's Office of Emergency Services (OES) is a Division of the Fire Department. The OES office consists of an Emergency Services Manager and a Bilingual Public Outreach Coordinator. The purpose of OES is to develop and implement plans for the protection of persons and property within the City of Santa Barbara in the event of a disaster and to coordinate Emergency Services functions of the City with all other public agencies and affected nonprofits, corporations, and non-governmental organizations.

The City of Santa Barbara's Emergency Services Organization is managed by the Emergency Services Council (ESC). The City Administrator serves as the Director of Emergency Services and acts

as chair of the ESC. Other members of the ESC include the Police Chief; Fire Chief; Public Works Director; and representatives of each City department, service, or division designated by the City Administrator. The Emergency Services Manager is responsible for the development and maintenance of emergency plans, per the Standardized Emergency Management System (SEMS), organization and coordination of emergency programs and training, and is a member of the ESC.

The City of Santa Barbara's Emergency Services Organization is comprised of all officers and employees of the City, together with those volunteer forces enrolled to aid the City during a disaster, and all groups, organizations, and persons who may by agreement or operation of law, including persons pressed into service under the provisions of Section 9.116.060(3) of the Santa Barbara Municipal Code be charged with duties incident to the protection of life and property in the City during such disaster. This includes, but is not limited to, School Districts, Santa Barbara Community College District, Santa Barbara Metropolitan Transit District, American Red Cross, and Amateur Radio Emergency Services (ARES).

The City of Santa Barbara revised its Standardized Emergency Management System Emergency Operations Plan (SEMS EOP) in August 2019 to ensure the most effective and economical allocation of resources for the maximum benefit and protection of the civilian population in an emergency. The EOP was developed in conjunction with the Santa Barbara County Operational Area, as part of the California Standardized Emergency Management System (SEMS) and the National Incident Management System (NIMS). The EOP addresses emergency responses associated with natural disasters, technological incidents, and national security. The objective of the plan is to establish an effective organization capable of responding to and recovering from potential large-scale emergencies using all appropriate facilities and personnel in the City. The SEMS EOP assigns tasks and procedures for the coordination of emergency staff and service elements per the Comprehensive Plan Guide 101 (CPG101). The SEMS EOP identifies emergency response actions associated with large-scale emergencies through standard operating procedures.

The plan states that hazard mitigation is a year-round effort and encourages all entities to prepare hazard mitigation plans. The following activities are identified by the plan as potential mitigation activities: improving structures and facilities at risk; identifying hazard-prone areas and developing standards for prohibited or restricted use; recovery and relief from loss; and providing hazard warning.

Santa Barbara Aircraft Rescue (ARFF) and Firefighting Services

The Fire Department has been providing ARFF services at the Airport since July 1, 1990, after the Airport Director transferred the service from Santa Barbara County Fire Department. The ARFF Station 8, which was constructed in the early 1990s, was jointly funded by Federal Aviation Administration (FAA) Airport Improvement Program grants and Airport Capital funds. The Airport provides the two ARFF apparatuses, which were purchased in 2002 with FAA Airport Improvement Program grant funds, as well as a smaller "Rescue Squad" unit. Station 8 also houses the City's Mass Casualty unit, which can provide EMS supplies and staging equipment for 100 patients. Additionally, the Airport pays for specialized equipment (silver suits), routine supplies, and services. The Fire Department provides nine permanent positions - three Captains and six Engineers - to staff the ARFF station on a 24/7 basis. This personnel is trained and certified for airport firefighting (live fire drills), rescue, and EMS operations under both the FAA and City Fire Department requirements.

To accept commercial air carrier service, an airport is required to obtain certification from the Federal Aviation Administration, per the Code of Federal Regulations (CFR) Title 14, Part 139. CFR Part 139 regulations include requirements for equipment, firefighting agents, and operational requirements such as personnel training and emergency response times. All active-duty Fire Department ARFF personnel are compliant with these mandatory FAA requirements.

4.2.7 Human Resources

Human Resources provides a centralized program of personnel administration for approximately 1,050 regular employees (FTE) and approximately 500 hourly employees in 12 departments. Human Resources oversees programs designed to meet the needs of the City and its employees throughout the employee lifecycle.

- **Classification and Compensation:** Establishes job classifications and compensation levels for over 400 classifications; manages the HR Payroll System (Munis) concerning job titles, positions, and compensation (COLAS, merit increases, status changes, etc.)
- **Recruitment and Retention:** Recruits, tests, and certifies qualified applicants for City positions; establishes programs that ensure the City is abreast of current trends to stay an employer of choice.
- **Employee Relations:** Coordinates and assists departments with disciplinary actions, performance issues, grievances, and complaints; provides guidance, interpretation of policies, processes, laws, and MOU and other personnel-related information to employees and departments.
- **Civil Service Commission:** Provides staff support to the Civil Service Commission.
- **Benefits and Wellness:** Administers employee benefit programs including medical insurance, life insurance, long and short-term disability, flexible spending accounts, deferred compensation and retirement, and leaves of absences.
- **Training and Development:** Manages employee training through the LEAP programs (Learning for Excellence and Achievement Program), including the City Leadership Academy, City Supervisory Excellence Academy, New Employee Orientation, and Educational Reimbursement.

4.2.8 Information Technology

Information Technology provides Infrastructure support, Enterprise Applications, Web Services, Computer Training, and Centralized GIS. Infrastructure Support provides technical leadership, maintenance, and user support for computing and networking services to City staff by operating and maintaining the City's 40+ Local Area Networks; providing maintenance and support to over 950 desktop and laptop computers; establishing and maintaining standards for hardware and software; and performing systems analysis, system integration and system implementation; provides consulting services to all departments in areas of business problems, implementing solutions. Enterprise Applications Support provides financial management systems (including Human Resources and Payroll systems) and related services; maintains enterprise-wide applications such as customer information system for City Utilities, maintenance management, land use permitting, electronic content and agenda management, SQL reporting services, and data exportation to support the

analysis and inquiry needs of City staff. Web Services establishes standards and provides oversight of the City's local Intranet and public Website and associated services. Computer Training coordinates the City's computer training program; provides consulting services to all departments in areas of business problems, implementing solutions. Centralized GIS provides standards and a rules-based central database of GIS data; provides tools to update and display GIS data; and provides detailed maps, drawings, and other GIS services.

4.2.9 Public Library System

The Santa Barbara Public Library is dedicated to supporting community education for all ages through classes and events, building a community of readers, empowering individuals with free access to information, and connecting people to community resources.

In addition to providing free access to physical and digital materials for information and entertainment, the Library provides computer and internet access as well as through technology available for checkout. Library programming offers educational and enrichment opportunities for people of all ages and includes early literacy classes, science, technology, and maker classes, career resources, college readiness classes for teens, one-on-one support for business owners, job-seekers, and those pursuing citizenship, tech classes for seniors, and more. The Library celebrates local Santa Barbara history, supports the local community of artists, writers, and creators, and facilitates opportunities for residents to connect with other community organizations. Santa Barbara library staff work to serve all community members, including Black, Indigenous, and people of color, immigrants, people with disabilities, and the most vulnerable in our communities, offering services and educational resources to help transform communities, open minds, and promote inclusion, diversity, equity, and justice.

The central and Eastside libraries serve the residents of Santa Barbara, while the Carpinteria, and Montecito branch libraries are owned and funded by the County of Santa Barbara and administered under an agreement with the City.

4.2.10 Parks and Recreation Department

The City of Santa Barbara Parks and Recreation Department maintains 60 parks totaling nearly 1810 acres. The Parks Division is responsible for all aspects of parks, open space, street tree care, and beach management, and during emergencies provides logistical support such as personnel and supply transportation. The Recreation Division provides numerous recreational and cultural opportunities as well as community services. During emergencies, the Department manages community buildings and recreation facilities as shelters and staging areas. The Department oversees the management of the City's municipal golf course, which is a second staging area for emergency operations. The mission of the Creeks Restoration and Water Quality Improvement Division is to improve creek and ocean water quality and restore natural creek systems with the implementation of storm water and urban runoff pollution reduction, creek restoration, and community education programs. The water quality program focuses on creek clean-up, street sweeping, and storm water projects. Creek restoration programs improve creek health and water quality. Objectives include reducing erosion by bank stabilization and providing access where feasible. The Creeks Division has prepared Watershed Action Plans for Santa Barbara's three major watersheds and has held community forums for public input into these plans.

4.2.11 Police Department

The mission of the Santa Barbara Police Department, through the philosophy of community-oriented policing, is to create a safe community where all people can live in peace without the fear of crime. This commitment will ensure a professional quality of service and accountability to the citizens of the City of Santa Barbara.

While the primary mission of the Santa Barbara Police Department is law enforcement, the Police Department plays a pivotal role in general public safety as it relates to disaster preparedness. In addition, the Police Department has created some mitigation strategies that are included in their Unusual Occurrence Manual (UOM). The UOM is a guide for how officers will respond during a major incident or disaster.

The City's dispatch center was relocated to the Granada Garage facility at 1219 Anacapa Street. The move was due to the substandard condition of the current Police Department. In many emergencies, police officers are among the first responders, assisting with traffic control, effecting evacuations, and monitoring potentially life-threatening situations.

4.2.12 Public Works Department

The City's largest department is Public Works. The department's total annual budget of nearly $150 million represents approximately 40% of the City's total budget and its 301 full-time employees are approximately 28% of the City's permanent workforce. The Department is responsible for operating the City's El Estero Water Resources Center and Charles E. Meyer Desalination Plant both on Yanonali Street, the Ortega Groundwater Treatment Plant on Ortega Street, the Cater Water Treatment Facility on San Roque Road, and Mission Tunnel and the Gibraltar Dam and Reservoir located off Paradise Road on the Santa Ynez River. The Department's mission is to provide for the public's needs relative to the City's water and wastewater systems, construction and maintenance of all City facilities, automotive equipment, communications equipment, City parking lots and structures, and repair and maintenance of all streets, sidewalks, storm drains, traffic signals, and streetlights throughout the City.

The Public Works Department is divided into seven divisions: Administration, Engineering, Facilities, Streets Operations, and Infrastructure, Transportation Planning and Parking, Fleet Management, and Water Resource. The Administration Division provides administrative, personnel, and financial support to the entire department. The Engineering Division is responsible for engineering oversight for design and construction projects; land development; and real property. The Facilities Management Division is responsible for building maintenance; capital building renewal; communications; custodial services; and environmental compliance. The Transportation Planning and Parking Division is responsible for alternative transportation; parking; and transportation planning. The Streets Operations and Infrastructure Division is responsible for streets maintenance; transportation operations; traffic engineering and streets infrastructure management. The Water Resources Division is responsible for water and wastewater administration; water supply management; water treatment; water distribution; wastewater collection; wastewater treatment; and laboratory services. The Fleet Management Division is responsible for the service, repair, and replacement of all city vehicles and heavy equipment.

The Department is responsible for the following emergency activities and areas:

- Recovery operations in all types of disasters.
- Coordinating with Public Utility companies in the repair of utilities essential to the life, health, and welfare of the community.
- Coordinating and furnishing transportation to all emergency agencies of the City and providing maintenance for disaster vehicles and equipment throughout the State of Emergency.
- Assuring an adequate supply of water for emergency requirements and an adequate supply of potable water for human consumption.
- Assuring that sanitary facilities are operational or that alternate emergency facilities are provided.
- Assuring the Laguna pump station is operating.
- Assisting in and providing for traffic controls (signs, barricades, and signalization) and warning signs.
- Providing personnel to assist in EOC operations (office and field). Setting up and operating the Public Works Department Operations Center.

The Public Works Engineering Division is very involved in hazard mitigation activities. It manages the City's Capital Improvement Program and provides professional engineering services for planning, designing, and constructing public works improvements. Long-range master planning to support the City's street, water, wastewater, transportation, and parking infrastructures is also provided. The Division also provides the Airport, Waterfront, and all General Fund departments with engineering services.

4.2.13 Sustainability and Resilience Department

The City of Santa Barbara Sustainability and Resilience Department leads and coordinates projects, policies, and services related to environmental sustainability and resilience across the City. The Department consists of two divisions: Environmental Services, Energy, and Climate.

The Environmental Services Division provides garbage, recycling, and organics collection, processing, and disposal services for the community. The Division oversees zero waste planning, waste reduction policies, education, and food resilience and security programs. The Division's CleanSB program provides a suite of neighborhood services including illegal dumping, code enforcement, public area trash collection, encampment cleanup, and disaster debris planning. In the event of a disaster, Environmental Services is responsible for ensuring regular services are reestablished as quickly as possible, coordination with trash collection companies to remove disaster debris safely and efficiently, ensuring adequate disaster debris staging areas and processing, and communication with other regional solid waste agencies and state regulators.

The Energy and Climate Division is responsible for developing and managing the City's renewable energy and energy efficiency projects, creating and overseeing the Community Choice Energy enterprise, coordinating climate action planning and adaptation efforts, and overseeing other sustainable planning initiatives such as the Green Building policy. The Division is a primary contact for coordination with energy utilities providing power to the community and for coordinating efforts relating to climate hazard mitigation, such as sea level rise.

4.2.14 Waterfront Department

The Waterfront Department is an Enterprise Fund, which oversees the operations, infrastructure, and public safety within the City of Santa Barbara's Waterfront area. The Waterfront provides services in support of recreation, commercial fishing, local business, and tourism. The responsibilities of the Waterfront Department include:

- Tidelands and ocean space fronting the City of Santa Barbara
- Harbor Business District buildings and infrastructure
- Stearns Wharf buildings and infrastructure
- 1100+ Slip Marina and associated facilities
- Breakwater and associated infrastructure
- East Beach mooring areas
- 10 Waterfront parking lots and associated infrastructure

The Waterfront Department consists of three Divisions: Harbor Operations, Facilities Management, and Business Services. These three divisions are outlined below.

Harbor Operations Division

Harbor Operations oversees the marina management-related activities within the harbor, which includes oversight of visiting vessels, slip holders, and liveaboards. Additionally, Harbor Operations oversees the Santa Barbara Harbor Patrol. The mission of the Santa Barbara Harbor Patrol is to enforce laws, educate the public and provide emergency fire, medical, and ocean response services to facilitate the safe and orderly use of the Waterfront area.

Facilities Division

The Facilities Division is responsible for the maintenance of all Waterfront facilities and infrastructure, which includes the Harbor Business District, Stearns Wharf, breakwater, marina, parking lots, and all Waterfront buildings. The Facilities Division is tasked with providing clean and safe commercial and recreational facilities for tenants and visitors. The Facilities Division also oversees the Waterfront's Capital Improvement Program, which includes planning, design, permitting, and construction of all associated projects.

Business Management Division

The Business Management Division oversees all financial and budgeting elements of the entire Waterfront Department. Additionally, the Business Management Division oversees the Department's parking and property management operations. The property management operations include oversight of 61 tenant leases and licenses and associated revenues. The parking operations include 10 Waterfront parking lots and associated revenues.

For Emergency Response, the Waterfront Department is available and ready to respond. The Waterfront Department has the ability to standup a Department Operating Center (DOC) located in the Waterfront Administration Building, which is established to effectively coordinate personnel and resources to effectively respond to specific emergency events. The DOC becomes a base of operations and collection center for information, inspection/damage reports, and response

strategies as they are developed. For larger, citywide emergency events, the Waterfront Department will coordinate with the City's Emergency Operations Center (EOC) and provide support as needed.

4.3 ADMINISTRATIVE AND TECHNICAL CAPACITY

The administrative and technical capabilities of the City, as shown in Table 4-1, include staff, personnel, and department resources available to implement the actions identified in Section 7.0, *Mitigation Strategy* of this LHMP. Specific resources reviewed include those involving technical personnel such as planners/engineers with knowledge of land development and land management practices, engineers trained in construction practices related to building and infrastructure, planners and engineers with an understanding of natural or manmade hazards, floodplain managers, surveyors, personnel with GIS skills and scientists familiar with hazards in the community. Equipment and supplies are maintained by the Public Works Director.

Table 4-1. City of Santa Barbara Administrative and Technical Capacity

Personnel Resources	Yes/No	Department/Position
Planner/engineer with knowledge of land development/land management practices	Yes	Public Works/Senior Planner Community Development/Project Planner
Engineer/professional trained in construction practices related to buildings and/or infrastructure	Yes	Public Works/Facilities Manager
Planner/engineer/scientist with an understanding of natural hazards	Yes	Community Development/Project Planner
Personnel skilled in GIS	Yes	IT/GIS Coordinator Community Development/GIS Technician
Full-time building official	Yes	Community Development/Chief Building Official
Floodplain manager	Yes	Community Development/Floodplain Coordinator
Emergency manager	Yes	Fire Department/Emergency Services Manager
Grant writer	Yes	Departmental
Other personnel		
GIS Data Resources (Hazard areas, critical facilities, land use, building footprints, etc.)	Yes	Information Technology/ Community Development and Public Works
Warning Systems/Services (Reverse 9-11, cable override, outdoor warning signals)	Yes	The City uses the County's notification system
Other	N/A	

4.4 LEGAL AND REGULATORY CAPABILITIES

The legal and regulatory capabilities of the City are shown in Table 4-2, including existing ordinances and codes that affect the physical or built environment of Santa Barbara. Examples of legal and/or regulatory capabilities can include the City's building codes, zoning ordinances, subdivision ordinances, special purpose ordinances, growth management ordinances, site plan review, general plans, capital improvement plans, economic development plans, emergency response plans, and real estate disclosure plans.

Table 4-2. City of Santa Barbara Legal and Regulatory Capability

Regulatory Tool (ordinances, codes, plans)	Yes/No
General Plan	Yes
Zoning ordinance	Yes
Subdivision ordinance	Yes
Growth management ordinance	Yes
Floodplain ordinance	Yes
Other special-purpose ordinances (stormwater, steep slope, wildfire)	Yes
Building code	Yes
Fire code	Yes
Fire department ISO rating	2
Erosion or sediment control program	Yes
Stormwater management program	Yes
Site plan review requirements	Yes
Capital improvements plan	Yes
Economic development plan	Yes
Local emergency operations plan	Yes
Other special plans	Tsunami Response Guide and Watershed Response Guide – both to be updated in the fall of 2021
Flood insurance study or other engineering studies for streams	Yes
Elevation certificates (for floodplain development)	Yes

4.5 GIS, COMPUTER AND COMMUNICATION TECHNOLOGY

The City has a basic GIS system used by the Public Works and Community Development Departments. Currently, parcels, zoning, and flood hazards have been mapped, including water, sewer, storm drain, and citywide striping. Hazard layers created for this plan can be incorporated into that system for future planning and updates. In the event it is needed, the GIS system is fully

functional and can be used to provide the State of California Office of Emergency Services with preliminary damage assessments.

Using the County's notification system, Santa Barbara has a fully functional 911 emergency telephone system, dispatch capabilities, and a reverse 911 system to issue warnings in advance of disasters.

The City has a website, which will be used to assist with communication necessary for the implementation and future updates of this plan.

4.6 FINANCIAL RESOURCES

The fiscal year 2022 adopted budget includes a total operating budget of $305.4 million and a citywide capital program of $460 million. The General Fund, which includes traditional local government services, is composed of a $143.8 million operating budget and a $24.5 million capital program.

In addition to the General Fund, the City has other funds used to account for various activities. Special revenue funds, totaling $32.2 million are used to account for revenues legally restricted for a specific purpose. Enterprise funds, totaling $151.7 million are used to account for the activities of the City operating like the private sector, including water, wastewater, airport, golf, downtown parking, and waterfront operations. Finally, internal service funds, totaling $29.8 million are used to account for services provided internally to City departments and programs, such as Information Systems and Risk Management Services.

In 1996, the City Council established minimum reserve levels for all operating funds, including the General Fund. Under the adopted resolution, the General Fund currently maintains two separate reserves:

- Emergency Reserve – Set at 15% of the adopted operating budget, established to respond to natural disasters, such as floods, earthquakes, etc.
- Contingency Reserve – Set at 10% of the adopted operating budget, established to respond to provide for unique one-time costs and maintenance of City services, and to permit orderly adjustments during periods of reductions.

Table 4-3 shows specific financial and budgetary tools available to the City such as community development block grants; capital improvements project funding; authority to levy taxes for specific purposes; fees for water, sewer, gas, or electric services; ability to incur debt through general obligations bonds; and withholding spending in hazard-prone areas.

Table 4-3. City of Santa Barbara Fiscal Capability

Financial Resources	Accessible or Eligible to Use (Yes/No)	Has This Been Used for Mitigation in the Past?	Comments
Community Development Block Grants (CDBG)	Yes	N/A	
Capital improvements project funding	Yes	Yes	City budgets capital expenditures across all funds.
Authority to levy taxes for specific purposes	Yes	No	Subject to Voter Approval. The voters approved a 1% district sales tax increase (Measure C) that took effect in 2018 that is being used to maintain critical infrastructure across the City.
Fees for water and sewer service	Yes	Yes	Fees charged for City Water, Wastewater, Solid Waste and soon Community Choice Energy
Incur debt through general obligation bonds	Yes	Yes	Several Enterprise Funds have current bonds. No current General Fund debt at this time. Initial planning is underway to issue debt for the new police facility.
Incur debt through special tax bonds	Yes	N/A	The City adopted a Debt Management Plan in 2018
Incur debt through private activity bonds	Yes	Yes	The City issued a private debt in 2014 for Waterfront capital projects.
Federal Grant Programs (Hazard Mitigation Grant Program)	Yes	Yes	The City has been successful in receiving and building projects from Hazard Mitigation Funds.

4.7 EDUCATION AND OUTREACH CAPABILITIES

The City of Santa Barbara Office of Emergency Services public outreach and education programs offer comprehensive emergency and disaster education to the community to reduce the loss of life and property. It includes activities that are designed to provide a variety of safety programs appropriate for all ages. The programs offered are bilingual in English and Spanish and are listed below:

- **Community Disaster Education**
  - This program is designed to bring disaster education into all venues, including but not limited to, businesses, homeowner associations, community centers, etc. This program is tailored for meetings that have limited time for a presentation. This CDE Presentation will assist in better preparing your staff, residences and/or community for any type of disaster or emergency.
- **CERT**
  - The Community Emergency Response Team (CERT) program educates participants about disaster preparedness for hazards that can impact their area and trains them in basic disaster response skills, such as fire safety, light search and rescue, team organization, and disaster medical operations. CERT offers a consistent, nationwide approach to disaster training and organization to assist your family and neighbors.
- **LISTOS**
  - This program was developed to provide individuals and families with basic emergency and disaster preparedness education. LISTOS is a basic curriculum offered to all populations that desire to learn in an informal conversational setting about risks and vulnerabilities in their local community.
- **Presentations, Drills and Special Events**
  - The City of Santa Barbara Office of Emergency Services offers specific presentations on all hazards, assists with all hazard evacuation drills upon request and actively participates in community events to provide the public with general safety education.
- **Social Media**
  - The City of Santa Barbara Office of Emergency Services conducts regular messaging through a content calendar that aligns with both local and national efforts such as, Tsunami Awareness Month, Earthquake Awareness Month, The Great California Shake Out, National Preparedness Month, Firewise and Firesafe, Storm Ready etc.
  - The city provides messaging for the public, via social media platforms, such as Facebook, Instagram, Nextdoor, Twitter, the City News in Brief, utility inserts among other local committees and social groups.

- Included in the city public messaging is partnerships with local media such as local radio, newspaper, and television stations to distribute preparedness and incident specific messaging.

Contacts: Liliana Encinas, Public Outreach Coordinator at 805-564-5778 or liencinas@SantaBarbaraCA.gov

4.8 RELEVANT PLANS, POLICIES, AND ORDINANCES

The City of Santa Barbara has a range of guidance documents and plans for each of its departments. These include a general plan, public works, and public utilities plans, capital improvement plans, emergency management plans, Local Coastal Program (LCP), Master Environmental Assessment (MEA), Circulation Element, Safety Element, Mission Creek Project, Conejo Slide Area Program, Airport plans, flood response guidelines, Tsunami Response Plan, Community Wildfire Protection Plan, Sea Level Rise Adaption Plan and Vulnerability Assessment, and slough programs. The City uses building codes, fire codes, zoning ordinances, subdivision ordinances, and various planning strategies to address how and where development occurs. One of the essential ways the City guides its future is through policies laid out in the 2011 Plan Santa Barbara General Plan. The LHMP directly informs these plans and is used to evaluate the need for adjustments or updates to existing plans and programs. The City considers the LHMP's assessment of capabilities, hazards, and vulnerabilities to inform planning, capital improvements, programs, decision-makers, and the public. The City also implements mitigation actions through the City's general plan, capital improvement program, maintenance programs, grant programming, community outreach, and budget process.

4.8.1 The General Plan

The City of Santa Barbara General Plan was first adopted in the 1960s and was last updated in 2011. The 2011 General Plan is comprised of a comprehensively updated Land Use Element and seven reorganized elements, including the seven state-mandated elements, as well as optional elements of Economy and Fiscal Health and Historic Resources. The Safety Element was updated in 2013 and the Housing Element is updated every eight years per state law. In 2022, the City initiated an update to the Housing Element and the Safety Element. The LHMP is incorporated by reference in the Safety Element.

Santa Barbara is a mature city, and not much vacant land remains for residential or nonresidential development. The remaining vacant land is generally found in areas of steep topography where development potential is constrained. Over 60 percent of the land is in residential use, excluding the residential portion of mixed-use development in the Downtown or other commercial areas. To encourage residential infill development and due to concern over resources limitations, the General Plan has a Growth Management program to limit nonresidential growth. Conversely, one of the top priorities of the General Plan is to encourage workforce and affordable housing in the City's multi-unit and commercial zones. Institutional and public facilities are mainly found all over the City while most of the City's government facilities are found in the historical center of the community. There are approximately 1,086 acres of land dedicated open space and parks (not including beaches).

Since the last update of the City's LHMP in 2017, land use and population in the City have not substantially changed. Modest development has occurred consistent with the adopted Land Use Element and has primarily comprised infill development and redevelopment within the City limits. There has been no expansion of the City boundary or its Sphere of Influence (SOI) and no comprehensive changes to the Land Use Element that would result in substantial densification. Further, City population has not substantially changed. As a result, the City's level of vulnerability to hazards analyzed in Section 6.0, *Vulnerability Assessment*, has not substantially changed due to land use, development, or population growth since the last update of the LHMP.

4.8.2 Zoning Ordinance

Local land use controls include the Zoning Ordinance, which shapes the form and intensity of land use and residential development. Consistent with the General Plan, the City's Zoning Ordinance allows a range of zones and dwelling unit densities from one unit per acre (single-unit) to 27 units per acre (studio units with variable density). Higher density residential of 28-36 units per acre and 37 – 63 units per acre (Priority Housing Overlay) is allowed in certain areas under the Average Unit-Size Density Incentive Program. These zones also allow mobile home and emergency shelter units.

Zoning ordinance regulations related to hazard mitigation relate to the risk assessment for hazards within the City, including flooding, faults, unstable soils, and wildfire hazards. Examples of zoning regulations for hazard mitigation include Development Along Mission Creek, which provides controls on development adjacent to Mission Creek to prevent undue damage or destruction of development from flood water; and a slope density regulation that increases the minimum lot area where the average slope from 10 to over 30 percent.

The Environmental Policy and Construction section of the Municipal Code includes regulations and general requirements for hazardous waste generators, seismic safety, flood plain management, erosion and sedimentation control for construction, and construction prohibited in the vicinity of the Conejo Road landslide due to special geologic hazard conditions.

4.8.3 Floodplain Management

The City of Santa Barbara has participated in the National Flood Insurance Program (NFIP) since 1978. Flood Insurance Rate Maps (FIRMs) were developed most recently in 2015 through the NFIP and have been made available in GIS format as Digital Flood Insurance Rate Maps. These are on file with the Santa Barbara County Office of Emergency Management, County Flood Control, and the Santa Barbara City Public Library to identify floodplains, along with evacuation routes and locations of public shelters. The 2018 Floodplain Management Ordinance minimizes public and private losses due to flood conditions in flood prone, mudflow or flood related erosion areas by restricting land use, controlling alteration of natural floodplains, and protecting uses that are vulnerable to floods.

Repetitive Loss (RL) Properties

Repetitive loss properties are defined as property that is insured under the NFIP that has filed two or more claims above $1,000 each within any consecutive 10-year period since 1978. FEMA repetitive loss data shows that there have been 30 properties in Santa Barbara with multiple claims

against the NFIP. These RL properties have resulted in 65 total losses amounting to approximately $1.5 million in loss payments.

4.8.4 Safety Element

The Safety Element is a required component of the City's General Plan and is the element most relevant to hazard mitigation and emergency response. The Safety Element was updated in 2013 and includes specific items as prescribed by the California Government Code as well as other relevant safety issues that are considered important. Hazard maps provided in the Safety Element depict the general locations and possible severity of various hazards and are important tools in identifying and reducing the potential effects of hazards and for hazard response planning. The Safety Element provides information to guide the evaluation of hazard-related effects, provides policies to protect the community from hazard-related risk, and supports the implementation of programs intended to enable and expedite the recovery of a community after a disaster occurs. The Safety Element incorporates this LHMP by reference.

4.8.5 Sea Level Rise Adaptation Plan and Vulnerability Assessment

The purpose of the City's Sea Level Rise Adaptation Plan is to identify vulnerabilities to coastal hazards expected from sea-level rise in the City of Santa Barbara and possible actions to prepare for and adapt to sea-level rise. Preparation of a sea-level rise adaptation plan was a 2017 LHMP mitigation action and is identified as a priority in the Coastal Land Use Plan, Safety Element, and LHMP. Additionally, the State requires the City, as a trustee of state tidelands, to proactively plan for sea-level rise at the Harbor and Stearns Wharf and to consider sea-level rise as part of coastal development permitting. A vulnerability assessment was prepared for the Adaptation Plan to identify the areas of the city that, in the absence of intervention, are projected to be exposed to sea-level rise and related coastal hazards. The Adaptation Plan provides the framework for the City to monitor sea-level rise impacts and reduce vulnerabilities in phases as specific thresholds for action are reached. A wide range of adaptation options are presented, providing the City flexibility to consider different adaptation strategies over time.

4.8.6 Community Wildfire Protection Plan

The City of Santa Barbara Fire Department (SBFD)'s Community Wildfire Protection Plan (CWPP) is maintained to protect lives, property, and natural resources threatened by wildland fire. The CWPP updated the City's 2004 Wildland Fire Plan, accounting for changes in the City's fire environment and work completed under that Plan. Development of the CWPP included an assessment of wildfire hazard, which involved modeling potential fire behavior in the City under extreme wind and weather conditions, consistent with conditions experienced during a sundowner wind event. Other wildfire hazard variables were evaluated (terrain, weather, fuels, development patterns, fire department response, structure density, etc.) to identify the High Fire Hazard Area of the City. The hazard assessment was used to evaluate the extent of the City's four High Fire Hazard Area Zones (Extreme Foothill, Foothill, Coastal Interior, and Coastal) and the locations of the City's Vegetation Management Units (VMUs) and Community Fuels Treatment Network (CFTN). CWPP development also included development of a Public Outreach and Engagement Plan to guide community engagement and coordination with other key stakeholders throughout the development

of the CWPP. The City's central engagement goal was to develop a CWPP that builds on input from key stakeholders, including community members, City departments, neighboring jurisdictions (e.g., Santa Barbara County Fire Department, the U.S. Forest Service), and the California Department of Forestry and Fire Protection. This CWPP outlines a series of policies and action items which are intended to guide implementation of the CWPP. The policies and actions focus on codes and standards, funding, fire rehabilitation, evacuation, fire protection, vegetation/fuels management, and public education. Action items identify tasks to be implemented by the SBFD, and other responsible City departments, to achieve the stated goal of protecting lives, property, and natural resources threatened by wildland fire.

4.9 OPPORTUNITIES FOR MITIGATION CAPABILITY IMPROVEMENTS

The City continuously strives to mitigate the adverse effects of potential hazards through its existing capabilities while also evaluating the opportunities for improvements. Based on the capability assessment, the City has existing regulatory, administrative/technical, education/outreach, and fiscal mechanisms in place that help to mitigate hazards. In addition to these existing capabilities, there are opportunities for the City to expand or improve on these policies and programs to further protect the community:

- **Regulatory Opportunities**: As part of this update, the City will comply with AB 2140 by amending its Safety Element to incorporate the LHMP by reference. The City will consider the LHMP in policy, land use plans, and programs, including coastal hazard and sea level rise planning. For example, the City's CWPP recommends expanding the geographic extent of the City's High Fire Hazard Area and increasing the quantity and extent of VMUs based on wildfire hazard. Further, the City's Sea Level Rise Adaption Plan and Vulnerability Assessment recommends continued effort to improve the quality and accuracy of coastal hazard projections under sea level rise scenarios consistent with local and state guidelines.
- **Administrative/Technical Opportunities**: The City continues to improve its resilience to ensure emergency response operations are sustained during a hazardous event, including improvements to public safety facilities and planning. Enhancements to hazard training for staff in partnership with the County and other agencies or stakeholders would improve the City's ability to mitigate hazards with the latest knowledge and resources.
- **Outreach Opportunities**: Enhanced community outreach, emergency notifications, and trainings would further enhance the City's capabilities to respond to and recover from hazards. The City could expand outreach through digital tools such as social media, participate in the Great California ShakeOut, and increase FireWise outreach events and media coverage.
- **Fiscal Opportunities**: The City can update its CIP to include hazard mitigation actions from the LHMP and related documents such as the CWPP and the Sea Level Rise Adaptation Plan. The City will continue to seek grants (e.g., HMGP, BRIC) to fund these CIP projects and related projects in the City's mitigation strategy. The City can seek opportunities to partner with the County and/or other stakeholder agencies in grant applications to address regional hazards more effectively. The City could also consider expanding its fiscal capabilities through its annual budget process and other revenue measures (e.g., raising taxes, property assessments, bonds).

5.0 HAZARD ASSESSMENT

5.1 OVERVIEW

The purpose of this section is to review, update, and/or validate the hazards identified for the 2022 City of Santa Barbara LHMP. The intent is to confirm and update the description, location and extent, and history of hazards facing the City now and in the future. This assessment also considers the potential exacerbating effects of climate change. The importance of this review is to ensure that decisions and mitigating actions are based on the most up-to-date information available.

Another purpose of this section is to screen the hazards to determine their relative probability and severity to inform the risk posed to various communities and resources. This assessment will provide an understanding of the significance by ranking hazards by their priority in the City.

In 2021, the MAC reviewed and revised 1) the list of hazards by community or geographic area; 2) the information and material presented for each hazard; and 3) the prioritization of the hazards. The City LPT refined the list of hazards applicable to the City and confirmed the hazard prioritization. The following sections provide the results of this effort.

5.2 HAZARD SCREENING/PRIORITIZATION

The Hazard Assessment presented here reflects the City's 2022 review and modifications to the updated risk assessment presented in Chapter 5.0, *Hazard Assessment,* and Chapter 6.0, *Vulnerability Assessment* of the 2022 MJHMP. Applicable hazard information from the City's 2017 LHMP was incorporated during the development of this section. A comprehensive treatment of hazards and their descriptions may be found in Chapter 5.0 of the Santa Barbara County 2022 MJHMP.

The potential extent, probability, frequency, and magnitude of future occurrences were all used to identify and prioritize the list of hazards most relevant in the City. The City LPT completed the Plan Update Guide to rank the hazards and identify key hazards to help inform this assessment (Appendix A). As summarized in Table 5-1, the local priority hazards in the City are based on the screening of frequency/probability of occurrence, geographic extent, potential magnitude/severity of the hazard, and overall significance. Local experience, MAC/LPT input, and community feedback also informed the assessment of local priority hazards. After reviewing the localized hazard maps and exposure/loss assessment provided in the 2022 MJHMP, the following hazards were identified by the Santa Barbara LPT as their top priorities (Appendix A). A brief rationale for each hazard is included below. This assessment and description of key hazards in the City are provided in addition to the 2022 MJHMP's comprehensive assessment of regional hazards that may affect the City.

Table 5-1. City of Santa Barbara Local Priority Hazards

Hazard Type and Ranking	Score	Planning Consideration Based on Hazard Level
Wildfire	12	Significant
Earthquake	12	Significant

Hazard Type and Ranking	Score	Planning Consideration Based on Hazard Level
Flood	9	Moderate
Pandemic/Public Health Emergency	9	Moderate
Tsunami	9	Moderate
Drought and Water Shortage	8	Moderate
Energy Shortage and Resiliency	8	Moderate
Dam Failure	8	Moderate
Landslide	7	Moderate
Train Accident	7	Moderate
Aircraft Crash	7	Moderate
Coastal Hazards	6	Moderate
Extreme Heat	6	Moderate
Hazardous Materials Release	6	Moderate
Oil Spill	5	Limited

To continue compliance with the DMA of 2000, the City accepts the County's natural hazard profiles presented in Chapter 5.0, *Hazard Assessment* with the following notes and refinements or elaborations provided specifically for the City in subsections below. The City's LPT acknowledged the following hazards are either not a threat, are highly unlikely within the City limits, or are adequately addressed by the 2022 MJHMP and do not require additional information to be relevant to the City's hazard setting; therefore, these hazards are not addressed further in the City's LHMP: severe weather/storm, windstorm, hurricane, tornado, utility failure, natural gas pipeline rupture and storage facilities, hydraulic fracturing and well stimulation, radiological and nuclear accidents, levee failure, cyber threats, agricultural pests and invasive species, terrorism, and civil unrest. These additional hazards are being addressed in the more comprehensive 2022 MJHMP.

5.3 HAZARD PROFILES

5.3.1 Wildfire

Description of Hazard

Wildfires can be classified as either a wildland fire or a wildland-urban interface (WUI) fire. The former involves situations where wildfire occurs in an area that is relatively undeveloped except for the possible existence of basic infrastructure such as roads and power lines. A WUI fire includes situations in which a wildfire enters an area that is developed with structures and other human developments. In WUI fires, the fire is fueled by both naturally occurring vegetation and the urban structural elements themselves. According to the National Fire Plan issued by the U.S. Departments of Agriculture and Interior, the wildland-urban interface is defined as "*…the line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels.*"

The WUI fire can be subdivided into three categories (NWUIFPP, 1998): The *classic wildland-urban interface* exists where well-defined urban and suburban development presses up against open

expanses of wildland areas. The *mixed wildland-urban interface* is characterized by isolated homes, subdivisions, and small communities situated predominantly in wildland settings. The *occluded wildland-urban interface* exists where islands of wildland vegetation occur inside a largely urbanized area. Generally, many of the areas at risk within Santa Barbara County fall into the classic wildland-urban interface category.

Certain conditions must be present for a wildfire hazard to occur; a large source of fuel must be present, the weather must be conducive (generally hot, dry, and windy), and fire suppression sources must not be able to easily suppress and control the fire. The cause of a majority of wildfires is human-induced or lightning; however, once burning, wildfire behavior is based on three primary factors: fuel, topography, and weather. Fuel will affect the potential size and behavior of a wildfire depending on the amount present, its burning qualities (e.g., level of moisture), and its horizontal and vertical continuity. Topography affects the movement of air, and thus the fire, over the ground surface. The terrain can also change the speed at which the fire travels, and the ability of firefighters to reach and extinguish the fire. Weather as manifested in temperature, humidity, and wind (both short and long term) affect the probability, severity, and duration of wildfires.

Location and Extent of Hazard in Santa Barbara

The climate, topography, and vegetation in Santa Barbara County are conducive to wildfires. California Department of Forestry and Fire Protection, Fire and Resource Assessment Program (CDF-FRAP) was mandated to map areas of significant fire hazards based on fuels (vegetation), terrain, weather, and other relevant factors. These zones, referred to as Fire Hazard Severity Zones, define the application of various mitigation strategies to reduce the risk associated with wildland fires. The most current mapping efforts by CDF-FRAP were conducted in 2007. Figure 5-1 below shows the Fire Hazard Severity Zones located in Santa Barbara County.

CDF-FRAP developed data that displays the relative risk to areas of significant population density from wildfire. This data is created by intersecting residential housing unit density with proximate fire threat, to give a relative measure of potential loss of structures and threats to public safety from wildfire. Figure 5-2 of the 2022 MJHMP was generated using this data to show the WUI in Santa Barbara County. The WUI map depicts areas where potential fuels treatments will be prioritized to reduce wildland fire threats.

The WUI data shown in Figure 5-2 of the MJHMP was developed on a statewide basis and does not consider the placement of local neighborhoods within the geography. Santa Barbara City Fire has created data at a more local level to convey communities at risk. Due to the threat, the City developed a 'Ready, Set, Go' guide for residents within the high fire area. A list containing the federally regulated (communities that adjoin federal lands) communities at risk, which includes the City of Santa Barbara, is provided in Section 5.3.1 of the MJHMP (see also Figure 5-3 of the MJHMP).

The 2017 Thomas Fire burned approximately 281,893 acres in Ventura and Santa Barbara counties. The fire was started by power lines coming in contact during high winds and remained active for 40 days. Emergency personnel from all across the western U.S. responded to the fire The fire resulted in the destruction of 1,063 structures, the loss of one civilian, and one firefighter fatality.
Source: CALFIRE 2021; Ventura County Fire Department 2019. Photo: SB Bucket Brigade

History of Hazard in Santa Barbara

Santa Barbara County and the City are prone to wildfires. There are many areas in which the County and City intersect; there is a long history of wildfires in the County that have affected the City (refer to Figure 5-4 of the MJHMP). Table 5-4 of the MJHMP lists the major wildfires in Santa Barbara County since 1932.

The CDF-FRAP compiles fire perimeters of wildfires and has established an ongoing fire perimeter data capture process. Figure 5-4 of the MJHMP shows historic, significant wildfire perimeters in Santa Barbara County. Fire perimeters provide a reasonable view of the spatial distribution of past large fires.

Over the last ten years, Santa Barbara County has experienced 9 major fires. Two of these fires directly threatened the heavily populated Santa Barbara Front Country and areas of the City of Santa Barbara:

- Before even larger fires in recent years, the **Thomas Fire** in 2017 was the largest California wildfire in modern California history, engulfing more than 280,000 acres, destroying or damaging more than 1,000 structures, primarily within Ventura County, and resulting in two fatalities. The fire was ignited north of Santa Paula in Ventura County and burned into Santa Barbara County through the Santa Ynez Mountains and parts of the upper Santa Ynez River watershed. It was one of the first wildfires to burn from inland Ventura County into the Santa Barbara front country of the Santa Ynez Mountains. The fire was active for 40 days and at one time involved more than 8,500 firefighters, 800 fire engines, and dozens of aircraft (National Interagency Fire Center 2021; Santa Maria Times 2021). The fire burned in the City from December 5 to December 7. Within the City, evacuations were limited to the Riviera and

Eucalyptus Hill area. No deaths, injuries, property damage, or infrastructure damage occurred within the City boundaries. However, the City experienced economic impacts due to air quality and ash during the height of the holiday shopping season.

- The **Cave Fire** in 2019 burned over 3,000 acres near Painted Cave in the Los Padres National Forest for 21 days (National Interagency Fire Center 2021). Approximately 2,400 homes were placed under mandatory evacuation orders for areas north of Cathedral Oaks Road between Patterson Avenue and Highway 154 and areas of Foothill Road between Highway 154 and North Ontare Road. A unified command consisting of multiple County agencies was assembled to assist with the fire (County Fire Department 2021). No homes were damaged (Santa Maria Times 2021). The fire threatened a small area in the northwestern portion of the City.

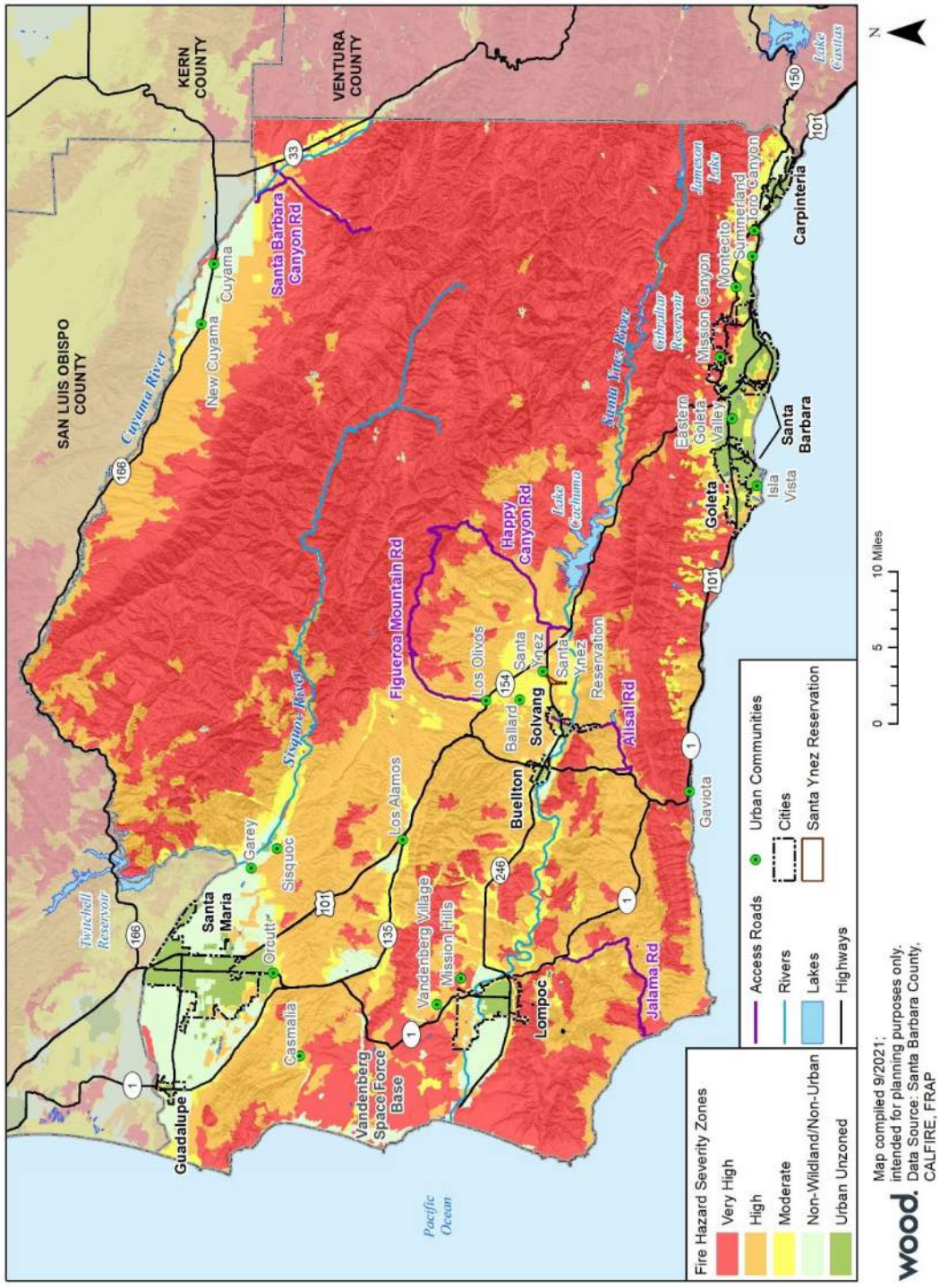
Probability of Occurrence

Vegetation and topography were significant elements in the identification of the fire threat zones. A substantial amount of the vegetation in Santa Barbara is commonly called chaparral, it is a dense and scrubby bush that has evolved to persist in a fire-prone habitat. Chaparral plants will eventually age and die; however, they will not be replaced by new growth until a fire rejuvenates the area. Chamise, manzanita, and ceanothus are all examples of chaparral which are quite common in Santa Barbara County and the foothills above the City. Santa Barbara County was subject to 42 major wildfires over 88 years, resulting in a 48 percent chance of occurrence in any given year.

Climate Change Considerations

Climate change plays a significant role in wildfire hazards. The changing conditions from wet to dry can create more fuel; the increased possibility of high winds increase risk and present a challenge, and drought conditions could hinder the ability to contain fires. Large wildfires also have several indirect effects beyond those of a smaller, local fire. These may include air quality and health issues, road closures, business closures, and other forms of losses. Furthermore, large wildfires increase the threat of other disasters such as landslide/debris flows and flooding (see Section 5.3.3, *Flood* and Section 5.3.9, *Landslide*).

Figure 5-1. Santa Barbara County Fire Hazard Severity Zones



5.3.2 Earthquake & Liquefaction

Description of Hazard

An earthquake is caused by a release of strain within or along the edge of the Earth's tectonic plates producing ground motion and shaking, surface fault rupture, and secondary hazards, such as ground failure. The severity of the motion increases with the amount of energy released decreases with distance from the causative fault or epicenter and is amplified by soft soils. After just a few seconds, earthquakes can cause massive damage and extensive casualties.

Most people are familiar with the Richter scale, a method of rating earthquakes based on strength using an indirect measure of released energy. The Richter scale is logarithmic. Each one-point increase corresponds to a 10-fold increase in the amplitude of the seismic shock waves and a 32-fold increase in energy released. For example, an earthquake registering 7.0 on the Richter scale releases over 1,000 times more energy than an earthquake registering 5.0.

Table 5-2. Richter Scale

Richter Magnitudes	Earthquake Effects
Less than 3.5	Generally not felt but recorded.
3.5-5.4	Often felt, but rarely causes damage.
Under 6.0	Slight damage to well-designed buildings. Can cause major damage to poorly constructed buildings over small regions.
6.1-6.9	Can be destructive in areas up to about 100 kilometers across residential areas.
7.0-7.9	Can cause serious damage to larger areas.
8 or greater	Can cause serious damage in areas several hundred kilometers across.

Peak ground acceleration (PGA) is a measure of the strength of ground shaking. Larger peak ground accelerations result in greater damage to structures. PGA is used to depict the risk of damage from future earthquakes by showing earthquake ground motions that have a specified probability (10%,5%, or 2%) of being exceeded in 50 years return period. These values are often used for reference in construction design, and in assessing relative hazards when making economic and safety decisions.

Liquefaction is the phenomenon that occurs when ground shaking causes loose, saturated soils to lose strength and act as a viscous fluid. Liquefaction causes two types of ground failure: lateral spread and loss of bearing strength. Lateral spreads develop on gentle slopes and entail the sidelong movement of large masses of soil as an underlying layer liquefies. Loss of bearing strength occurs when the soil supporting structures liquefy, causing the structures to settle; resulting in potential damage.

Location and Extent of Hazard in the City of Santa Barbara

As previously mentioned, Santa Barbara County, including the City of Santa Barbara, is located in a high seismic activity zone. The county is located in the Transverse Range geologic province.

The movement of continental plates manifests primarily along the San Andreas Fault system. The San Andreas fault is situated 7 miles northeast of Santa Barbara County; active faults in the San Andreas Fault system that fall within Santa Barbara County include the Nacimiento, Ozena, Suey, and Little Pine faults. Other active faults in the region include the Big Pine, Mesa, Santa Ynez, Graveyard- Turkey Trap, More Ranch, Pacifico, Santa Ynez, and Santa Rose Island faults. The Santa Barbara County Comprehensive Plan Seismic Safety and Safety Element provides descriptions of all faults in Santa Barbara County, including historically active, active, potentially active, and inactive, as well as their location and fault length. A map of faults in the Santa Barbara County region is located below (Figure 5-2).

The City has areas of liquefaction that would cause severe damage in the downtown and lower eastside areas (Figure 5-3). After earthquakes, some regions may be prone to liquefaction. On level ground, liquefaction results in water rising to the ground surface. On sloping ground, liquefaction will usually result in slope failure such as the event at the Sheffield Dam in the aftermath of the 1925 Santa Barbara earthquake. Liquefaction risk is considered high if there are soft soils (Types D or E) present. The National Earthquake Hazards Reduction Program (NEHRP) rates soils from hard to soft and gives the soils ratings from Type A through Type E. The hardest soils are rated Type A, and the softest soils are rated Type E. The majority of the soils in Santa Barbara County are types A-C, with some areas having type D. There have been no Type E soils identified. Liquefaction risk is also determined by the depth to groundwater. Most of the low coastal plain and valley bottoms in the City are underlain by alluvium and given a moderate rating with respect to liquefaction potential.

History of Hazard in the City of Santa Barbara

The City of Santa Barbara is located in a high seismic activity zone and as such has a long history of earthquakes. Although most seismic activity in California occurs along the San Andreas Fault system, most historic seismic events in the City of Santa Barbara region have been centered offshore on an east-west trending fault between Santa Barbara and the Channel Islands. While more extensive discussion of previous earthquakes in Santa Barbara County is available in the 2022 MJHMP, the following information provides an overview of the more recent, significant events. Table 5-9 of the MJHMP provides an overview of significant events within the last 50 years. Figure 5-10 of the MJHMP displays historical epicenters of earthquakes located in Santa Barbara County since 1700

- In June of 1925, the City experienced this destructive earthquake that caused property damage estimated at $8 million and killed 13 people. Most of the damage occurred at Santa Barbara and nearby towns along the coast, but the earthquake caused moderate damage at many points north of the Santa Ynez mountains, in the Santa Ynez and Santa Maria River valleys. North of Santa Barbara, the earth dam of the Sheffield Reservoir was destroyed, but the water released caused little damage. In Santa Barbara, few buildings on State Street escaped damage. Because parts of the main business district and the area near the seashore were built

on land fill, many of the structures there were demolished, and others were so shattered that they had to be razed. In general, however, buildings of reinforced concrete were damaged little, except where workmanship was poor; frame buildings covered with stucco, sheathing, or lath also withstood the shock well. Loss to the sewage system was heavy only in areas of land fill, but the disposal plant was destroyed above the surface of the ground.

- In March of 1978, and continuing sporadically through July of 1978, a swarm of small earthquakes, called micro-earthquakes occurred underneath the northeastern end of the Santa Barbara Channel. Toward the end of the micro-earthquake swarm, in July and early August of 1978, an unusually large amount of oil and tar was reported on local beaches in Santa Barbara. A common occurrence for the Santa Barbara area, the oil from these natural seeps was considered only a minor nuisance. On August 13, 1978, an earthquake occurred just to the southwest of the City of Santa Barbara, about 5 miles beneath the Santa Barbara Channel. There was minimal damage in the City. Sixty-five people were treated for injuries at local hospitals. No deaths were reported.
- On December 22, 2003, at 11:15 a.m. a magnitude 6.5 earthquake struck the central California coast. The event, known as the San Simeon Earthquake, was located 11 kilometers northeast of San Simeon, and 39 kilometers west/northwest of Paso Robles. Although the San Simeon Earthquake was felt in parts of the City, there was no damage.

Probability of Occurrence

The United States Geological Survey (USGS) and their partners, as part of the latest Uniform California Earthquake Rupture Forecast Version 3 (USGS 2015), have estimated the chances of having large earthquakes throughout California over the next 30 years. Statewide, the rate of earthquakes around magnitude 6.7 (the size of the 1994 Northridge earthquake) has been estimated to be one per 6.3 years (more than 99 percent likelihood in the next 30 years); in southern California, the rate is one per 12 years (93 percent likelihood in the next 30 years). Southern California's rates are given in Table 5-3.

Table 5-3. Southern California Region Earthquake Likelihoods

Magnitude (greater than or equal to)	Average Repeat Time (years)	30-year likelihood of one or more events
5	0.24	100%
6	2.3	100%
6.7	12	93%
7	25	75%
7.5	87	36%
8	522	7%

Source: USGS 2015.

Climate Change Considerations

To date, no credible evidence has been provided that links climate to earthquakes; however, climate and weather do play a significant role in the response and recovery from earthquakes. Effects from climate change could create cascading complications and impacts.

Figure 5-2. Santa Barbara County Probability of Shaking 2% in 50 Years

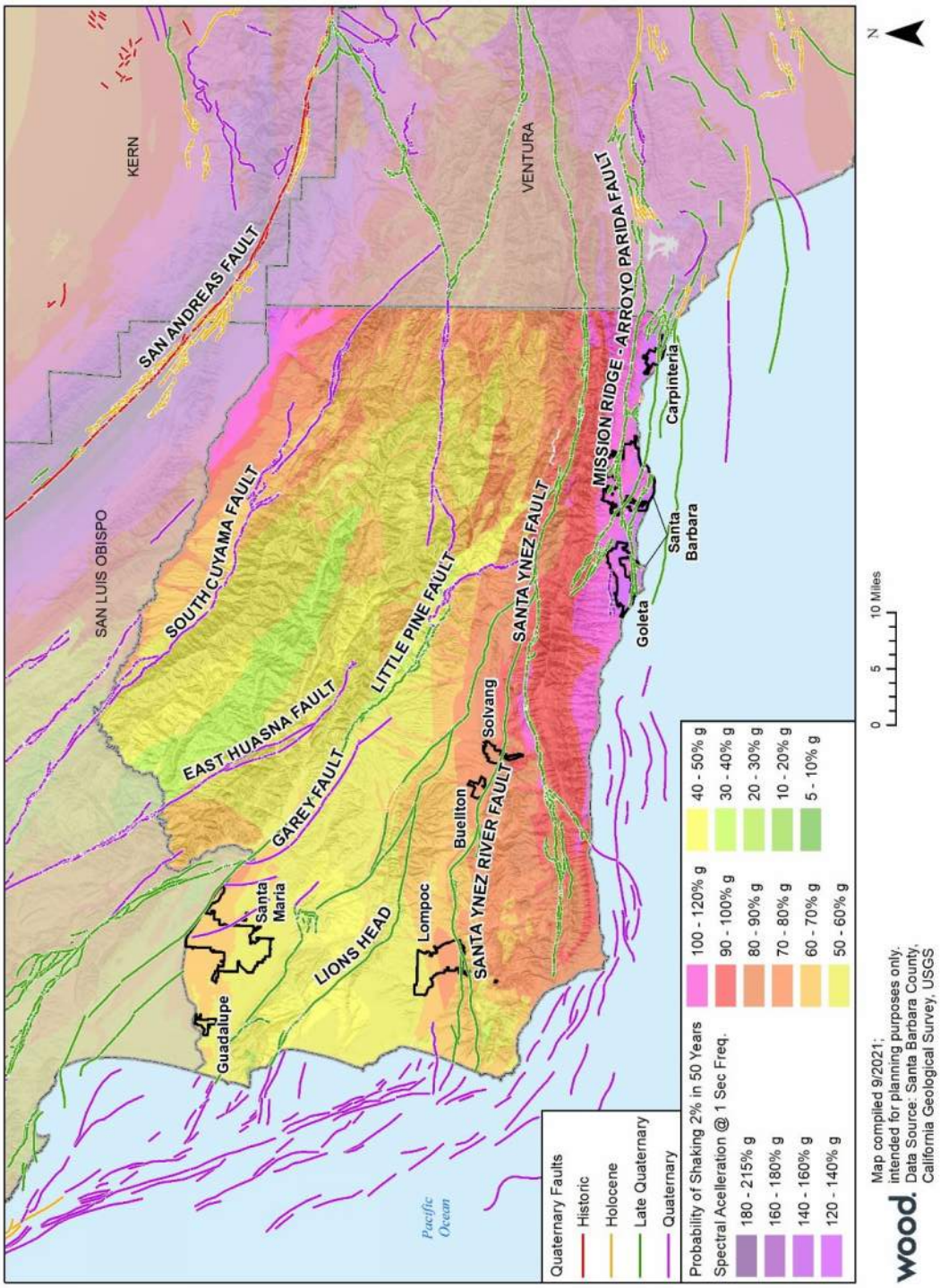
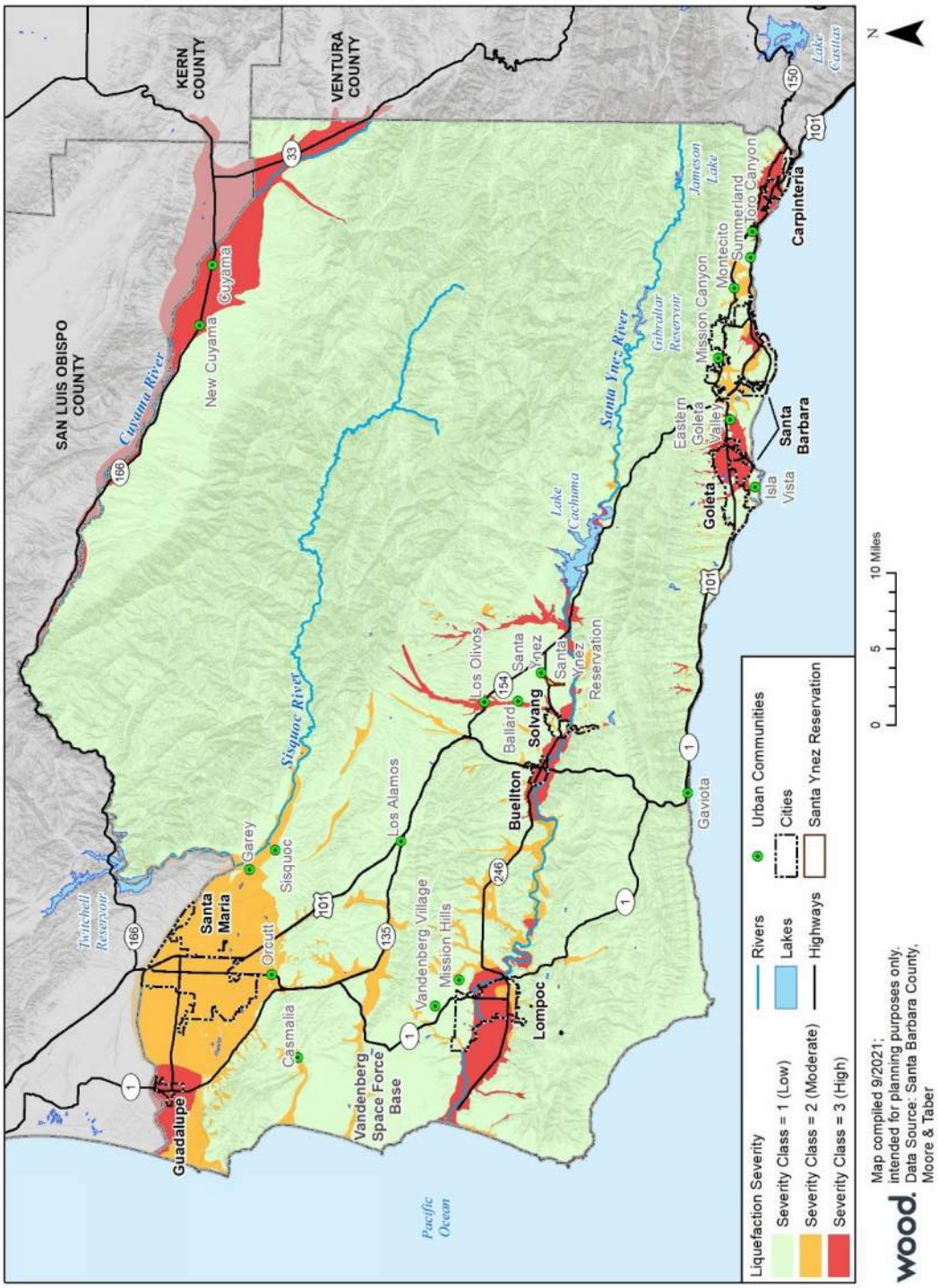


Figure 5-3. Santa Barbara County Liquefaction Severity



5.3.3 Flood

Description of Hazard

A flood is a general and temporary condition of partial or complete inundation on land that is normally dry. Several factors determine the severity of floods, including rainfall intensity and duration, antecedent moisture conditions, surface permeability, and geographic characteristics of the watershed such as shape and slope. Other causes can include a ruptured dam or levee, rapid ice or snow melting in the mountains, under-engineered infrastructure, or even a poorly placed beaver dam that can overwhelm a river or channel and send water spreading over adjacent land or floodplains.

A large amount of rainfall in a short time can result in flash flood conditions, as can a dam failure or other sudden spill. The National Weather Service's definition of a flash flood is a flood occurring in a watershed where the time of travel of the peak of flow from one end of the watershed to the other is less than six hours.

Another form of flooding occurs when coastal storms produce large ocean waves that sweep across coastlines making landfall. Storm surges inundate coastal areas, destroy dunes, and cause flooding. If a storm surge occurs at the same time as high tide, the water height will be even greater. The County historically has been vulnerable to storm surge inundation associated with tropical storms and El Niño.

Location and Extent of Hazard in the City of Santa Barbara

The geographical location, climate, and topography of Santa Barbara City and County make it prone to flooding (Figure 5-4). In regions such as Santa Barbara, without extended periods of below-freezing temperatures, floods usually occur during the season of highest precipitations or during heavy rainfalls after long dry spells. Additionally, due to the Mediterranean climate and the variability of rainfall, stream flow throughout the County is highly variable and directly impacted by rainfall with little snowmelt or base flow from headwaters. Watercourses can experience a high amount of sedimentation during wet years and high amounts of vegetative growth during dry and moderate years.

The drainages in the southern part of the County are characterized by high intensity, short duration runoff events, due to the relatively short distance from the top of the Santa Ynez Mountains to the Pacific Ocean. Runoff from high intensity, short-duration storm events can cause inundation of over bank areas, debris including sediment, rock, downed trees in the water that can plug culverts and bridges, erosion and sloughing of banks, and loss of channel capacity due to sedimentation.

The City is traversed by the floodplains of creeks that drain the Santa Ynez Mountains, with the degree of flood hazard varying substantially by community and creek. Mission Creek has been channelized reducing but not eliminating flood hazards. Flood control debris basins have been constructed on many of these creeks to intercept sediment and debris, reducing the potential for plugging of downstream creek channels and associated flood hazards.

Another contributing factor to flooding is the City's location along the Pacific Ocean. With its six miles of coastline, the City is susceptible to storm surge events following storms off the coast. In particular, low-lying areas, including much of the City's waterfront, are subject to wave attacks,

coastal flooding, and storm surges. Additionally, portions of the City's are subject to flooding due to flash flooding, urban flooding, watershed channel overflow, and downstream flooding (see Section 5.3.12, *Coastal Hazards*).

History of Hazard in the City of Santa Barbara

Flooding has been a major problem in the City of Santa Barbara. The City has several watershed areas that have different types of flooding problems, including over bank riverine flooding, flash floods, tidal flooding/tsunamis, and dam failure. The most common flooding in the City is due to watershed channel flooding and flash flood events.

Between 1906 and 2018, Santa Barbara County experienced 22 significant inland flood events. Eight of these floods received Presidential Disaster Declarations. Section 5.3.4 of the MJHMP describes the floods, including information concerning the nature of the flooding and the extent of the damages.

While there is a detailed account of historical flood events in Santa Barbara County provided in Section 5.0 of the 2022 MJHMP, the following section provides a summary of the more recent significant flood events that affected the City:

- **1998 –** The flooding events of 1998 arrived on a strong El Niño and brought several record-breaking rainfalls with 50-year storm event intensities throughout February. The City of Santa Barbara recorded its wettest month in history, 21.36-inches of rainfall. By the end of the month, many areas in the county had received 600 percent of normal February rainfall. Flood-related damages within Santa Barbara occurred during three major storm periods: February 1-4, February 6-9, and February 22-24. The cost to repair extensive flood damage to public and private property was estimated at $15 million. Just like in 1995, transportation throughout the county was disrupted through closures of roads, the Santa Barbara Airport, and train service. Flood damage was spread throughout the county and the county was declared a Federal Disaster Area on February 9. The floods received a Presidential Disaster Declaration (County Flood Control 1998).
- **February 2, 1998 –** During the first storm on February 2, winds with gusts as high as 63 miles per hour (mph) knocked over hundreds of trees and caused loss of power to thousands of homes across Goleta and Santa Barbara. The next day, 15-foot-high waves damaged pilings under Stearns Wharf and a broken sewer line near Arroyo Burro Beach, closing several nearby beaches due to high levels of bacteria buildup. Gaviota Creek overtopped and flooded the State Beach at the mouth of the creek. At the Gaviota Chevron plant, storm related damage caused a release of hazardous materials. The airport also closed down due to flood, and Highway 101 was shut down in Ventura, cutting off the City to the south (County Flood Control 1998).
- **February 6, 1998 –** With little time to recuperate, the South Coast was hit by a second major storm on February 6. Disruptions of transportation were widespread throughout the South Coast – a downed tree resulted in an accident that closed Highway 101. Along the coast, berms were hastily constructed to protect beachfront property (County Flood Control 1998).

- **2018** – Following the October 2017 Thomas Fire, heavy rains unleashed destructive rivers of water, mud, and debris in Santa Barbara County, particularly Montecito, leaving at least 23 people dead, destroying over 100 homes, and damaging over 300 homes. Rain from the storm fell on hillsides and mountains stripped of trees and vegetation by the Thomas Fire. The National Weather Service, Los Angeles reported that 0.54 inches of rain had fallen in 5 minutes at Montecito. Other figures include 0.73 inches in 10 minutes at KTYD Radio Towers, 0.86 inches in 15 minutes at Carpinteria, 1.11 inches in 30 minutes at Carpinteria, and 1.45 inches in 1 hour at Matilija Canyon (FloodList 2021) (see also, Section 5.3.9, *Landslide*).

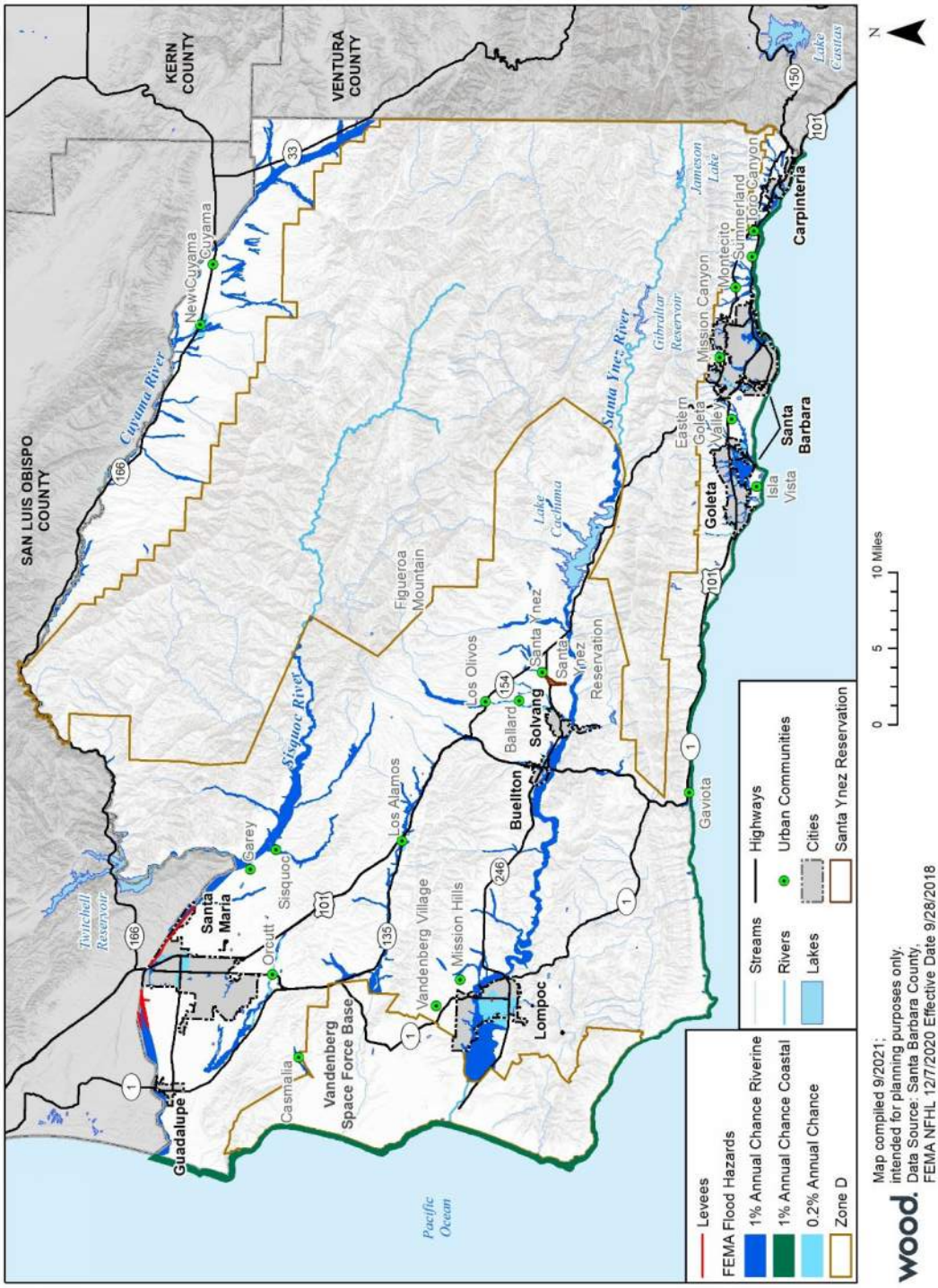
Probability of Occurrence

The 100-year flood is a flood that has a one percent chance in any given year of being equaled or exceeded. The 500-year flood is the flood that has a 0.2 percent chance of being equaled or exceeded in any given year.

Climate Change Consideration

Climate change is projected to amplify existing flood hazards through increased frequency and strength of El Niño events and rainfall intensity. Extreme weather events have become more frequent over the past 40 to 50 years and this trend is projected to continue. Up to half of California's precipitation comes from a relatively small number of intense winter storms, which are expected to become more intense with climate change. For example, what is currently a 200-year storm, or one that has a 1 in 200 chance of occurring in a given year, by 2100 would increase in frequency by 40 to 50 years (to a 1 in 150/160 chance in a given year). This means that the 100-year and 500-year floodplains may expand, and the current floodplains may become 40- to 50-year floodplains (Santa County Barbara Planning and Development Department 2021). The frequency and intensity of heavy rainstorms are projected to increase, causing fluvial flooding along the City's creeks, although overall annual precipitation levels are expected to increase only slightly. For discussion regarding the impacts of climate change on coastal flooding and sea level rise, see Section 5.3.12, *Coastal Hazards*.

Figure 5-4. Santa Barbara County FEMA Flood Hazards



5.3.4 Pandemic/Public Health Emergency

Description of Hazard

Infectious disease emergencies are circumstances caused by biological agents, including organisms such as bacteria, viruses, or toxins, with the potential for significant illness or death in the population.

Infectious disease emergencies may be caused by:

- Naturally occurring diseases spread from person to person (e.g., measles, mumps, meningococcal disease, tuberculosis)
- Foodborne (e.g.: salmonella, E. coli, botulinum toxin, etc.)
- Vectors such as mosquitos can spread diseases (e.g.: West Nile virus, dengue, Zika, malaria).
- Newly emerging infectious diseases (e.g.: Ebola, Zika, SARS, MERS, avian influenza).
- Intentionally caused the spread of disease or toxins known as bioterrorism. Past bioterrorism events include the contamination of restaurant food with E. coli in Oregon (1984) and the release of Sarin gas in the Tokyo subway (1995).

The impact of infectious disease emergencies on the local community and its critical infrastructure will depend on:

- The type of biological agent and availability of treatment for victims
- The availability of prophylaxis for responders and the public
- The scale of exposure and ongoing exposure
- The mode of transmission and whether transmission can be interrupted
- Whether the event is affecting staffing for critical infrastructure within and outside of the county such as transportation, law enforcement, health care, and the medical and food supply chains.

An **outbreak** is when there are more cases than would be normally expected, often suddenly, of an infectious disease in a community or facility.

An **epidemic** is when there are more cases than would be normally expected of infectious disease, often suddenly, in a population of a large geographic area.

A **pandemic** refers to an epidemic that has spread over several countries or continents, usually affecting a large number of people. Examples include pandemic influenza and Severe Acute Respiratory Syndrome or "SARS" and the Coronavirus (COVID-19).

Outbreaks, epidemics, or pandemics can occur when a new virus emerges to which the population has little immunity. The 20th century saw three such pandemics, the most notable of which was the 1918 Spanish influenza pandemic that was responsible for 20 million deaths throughout the world. Secondary impacts include significant economic disruption to a community's infrastructure due to loss of employee work time, essential services and products, and costs of treating or preventing the spread of the disease.

Public health measures are used to control outbreaks, epidemics, or pandemics of infectious diseases, and are especially important for diseases with high morbidity or mortality and limited medical prophylaxis and/or rapid treatment.

Measures to control disease include:

- Legal measures such as isolation and quarantine of persons or products, and legal closure of food establishments.
- Control of contaminated food or water through recall of product or, for water, "Do Not Use", "Do Not Drink" or "Boil Water" orders issued by state or local health departments.

Vector control to eliminate vectors such as mosquitos that carry the disease from person to person. The Vector-Borne Disease Section of the California Department of Public Health identifies the following types of diseases:

- Africanized Honeybees
- Bed Bugs
- Body Lice
- Cat Scratch Disease
- Conenose Bugs
- Hantavirus Cardiopulmonary Syndrome
- Head lice
- Lyme Disease
- Mosquitoes
- Murine Typhus
- Plague
- Ticks
- West Nile Virus
- Red Imported Fire Ants
- Scabies
- Swimmer's Itch
- Tularemia
- Zika Virus

Location and Extent of Hazard in the City of Santa Barbara

Public health emergencies, such as infectious disease hazards or epidemics, occur not only on a local or state level but on a national and global scale. It is likely that most communities in the county, including the City, would be affected, either directly or by secondary impacts. Some indirect consequences may be the diversion of resources that may be otherwise available given the limited regional transportation opportunities and flow of goods and materials to the City.

History of Hazard in the City of Santa Barbara

Outbreaks, epidemics, or pandemics can occur when a new virus emerges to which the population has little immunity.

The 20th century saw several outbreaks, pandemics, and epidemics, the most notable of which was the 1918 Spanish influenza pandemic that was responsible for 40 to 50 million deaths throughout the world. The most notable pandemic of the 21st century is the current COVID-19 pandemic. The COVID-19 pandemic has severely impacted the economic, political, social, and environmental conditions of the City, county, California, the U.S., and the world. Older adults and people who have severe underlying medical conditions like heart or lung disease or diabetes seem to be at higher risk for developing more serious complications from COVID-19 illness; however, numerous stories were reported of young and healthy people who developed the disease and had serious complications. People with COVID-19 have had a wide range of symptoms reported – ranging from mild symptoms to severe illness. Symptoms of COVID-19 include but are not limited to fever or chills, cough, shortness of breath or difficulty breathing, fatigue, muscle or body aches, headache, new loss of taste or smell, sore throat, congestion or runny nose, nausea, or vomiting, and diarrhea. Symptoms may appear 2-14 days after exposure to the virus. Anyone can have mild to severe

symptoms (Centers for Disease Control and Prevention [CDC] 2021). On January 26, 2020, the CDC confirmed the first COVID-19 case in California, the third case in the U.S. As of June 2, 2021, there have been 34,507 confirmed COVID-19 cases within the county and 451 deaths (Santa Barbara County Public Health Department 2021a). In the City of Santa Barbara, there have been 15,065 reported cases and 112 reported deaths related to COVID-19. As of October 2021, 58 percent of Santa Barbara County was fully vaccinated (Santa Barbara County Public Health Department 2021). In the City of Santa Barbara, the County Public Health Department distributes COVID-19 vaccines at the Franklin Health Care Center and numerous participating pharmacies distribute vaccinations as well.

Probability of Occurrence

Disease outbreaks and flu epidemics occur on an ongoing basis. Occasionally these outbreaks require the initiation of the Santa Barbara County Public Health Department Infectious Disease Response Plan but have required little to no support from the City Emergency Operations Center (EOC). There is a continued threat from a novel influenza virus or other emerging epidemic or pandemic disease that would require a disaster response at the EOC level. The disease could affect the City infrastructure, and the ability of the EOC and other city departments to respond due to disease-related loss of staff.

Climate Change Consideration

It is widely accepted that the effects of climate change will facilitate increases in the frequency of infectious diseases. According to the National Institute of Environmental Health Services, many vector-borne and zoonotic diseases are climate-sensitive and ecological shifts associated with climate change are expected to impact the distribution and incidences of these diseases (National Institute of Environmental Health Services 2018). While many vector-borne and zoonotic diseases, such as malaria, yellow fever, dengue, and murine typhus, are rarely seen in the U.S., the City is directly susceptible to vector-borne and zoonotic diseases that are found in warmer climates and vulnerable due to global trade and travel. Changes in temperature and precipitation directly affect vector-borne disease transmission through pathogen-host interaction, and indirectly through ecosystem changes and species composition. As temperatures increases, vectors can spread into new areas that were previously too cold. During warm weather, animal species that carry diseases typically become more active and insects and other pests reproduce more rapidly. As climate change causes warmer temperatures earlier in the spring and later in the autumn, these animals may be active for longer periods, increasing the time that diseases can be transmitted (National Institute of Environmental Health Services 2018).

Further, climate-related natural disasters (e.g., wildfire, drought and water shortage, flood, coastal hazards) also increase the risk of infectious disease by disrupting health services and infrastructures and damaging water and sanitation networks (World Health Organization 2018).

5.3.5 Tsunami

Description of Hazard

A tsunami is a series of long waves generated in the ocean by a sudden displacement of a large volume of water. Underwater earthquakes, landslides, volcanic eruptions, meteoric impacts, or

onshore slope failures cause this displacement. Tsunami waves travel at speeds averaging 450 to 600 miles per hour. As a tsunami nears the coastline, its speed diminishes, its wavelength decreases, and its height increases. Depending on the type of event that creates the tsunami, as well the remoteness of the event, the tsunami could reach land within a few minutes or after several hours. Low-lying areas could experience severe inland inundation of water and deposition of debris more than 3,000 feet inland.

Location and Extent of Hazard in the City of Santa Barbara

As described in Section 5.3.9 of the MJHMP, areas prone to tsunami hazards in the county are limited to coastal areas and offshore areas. The cities of Santa Barbara and Carpinteria are most susceptible to tsunami hazards, given that they are located on or near several offshore geological faults, the more prominent faults being the Mesa Fault, the Santa Ynez Fault in the mountains, and the Santa Rosa Fault (refer to Section 5.3.3 of the MJHMP). Other unnamed faults in the offshore area of the Channel Islands may present tsunami hazards. These faults have been active in the past and can subject the entire county coastal area to seismic action at any time.

History of Hazard in the City of Santa Barbara

The relative threat for local tsunamis in Santa Barbara can be considered low due to low recurrence frequencies. Thirteen possible tsunamis have been observed or recorded in the county from local earthquakes between 1812 and 1988; however, there have been no recorded locally generated tsunamis since 1988. Additionally, these tsunami events were poorly documented, and the precise extent of environmental and public impacts is uncertain (refer to Section 5.3.9 of the MJHMP). The size of these tsunamis may never be known with certainty, but there are unconfirmed estimates of 30-35 feet waves in Santa Barbara City. The estimates are found in various literature and based on anecdotal history only.

- On February 27, 2010, a magnitude 8.8 earthquake occurred along the central coast of Chile and produced a tsunami. For the coast of Southern California, it was one of the largest tsunami episodes since 1964. In general, tsunami waves between 2 and 4 feet were reported. Tsunami waves of around 3 feet were reported by tide gauges across the Santa Barbara Channel. At Santa Barbara Pier, significant beach erosion was reported along with displacement of buoys. The tsunami surge lasted more than 20 hours. The most significant damage occurred along the coasts of Ventura and southern Santa Barbara counties. Numerous reports of dock damage were reported along with beach erosion.
- On March 11, 2011, a magnitude 9.0 earthquake occurred off the Pacific coast of Tohoku, Japan. This earthquake devastated many communities in Japan and caused tsunami effects across the ocean in Santa Barbara City. The only significant impact to Santa Barbara City was to the dredging contractor for the City of Santa Barbara harbor. The City harbor operations documented approximately $1,500 of damages (Public Assistance).

Probability of Occurrence

The University of Southern California (USC) Tsunami Research Group has modeled areas in the county that could potentially be inundated in the event of a tsunami. In 2001, the Tsunami Research Group concluded the walls of the basin that form the Santa Barbara Channel are susceptible to

submarine slope failures in at least two mapped locations (USC 2001). This model is based on potential earthquake sources and hypothetical extreme undersea, near-shore landslide sources. The data was mapped by the California Geological Survey and Cal OES for Tsunami Evacuation Planning. The maps and data are compiled with the best currently available scientific information and represent areas that could be exposed to tsunami hazards during a tsunami event. The tsunami inundation map helps to assist cities and counties in identifying their tsunami hazard areas. Figure 5-5 shows tsunami hazard areas in the City.

Based on the tsunami inundation map (Figure 5-5), several areas along the City's coast have the potential to be inundated by a tsunami. Given, there is a medium probability of an earthquake, which would result in high impacts including potential tsunami events in the City, the City is at minor risk of future tsunami events.

Climate Change Consideration

As previously described, tsunamis are created by earthquakes or other earth movements. To date, no direct relationship has been made between climate change and the occurrences of earthquakes or other earth movements.

5.3.6 Drought and Water Shortage

Description of Hazard

Drought and water shortages are a gradual phenomenon and generally are not signified by one or two dry years. California's and Santa Barbara's extensive system of water supply infrastructure (reservoirs, groundwater basins, and interregional conveyance facilities) generally mitigates the effects of short-term dry periods for most water users. However, drought conditions are present when a region receives below-average precipitation, resulting in prolonged shortages in its water supply, whether atmospheric, surface, or ground water. A drought can last for months or years or may be declared after as few as 15 days.

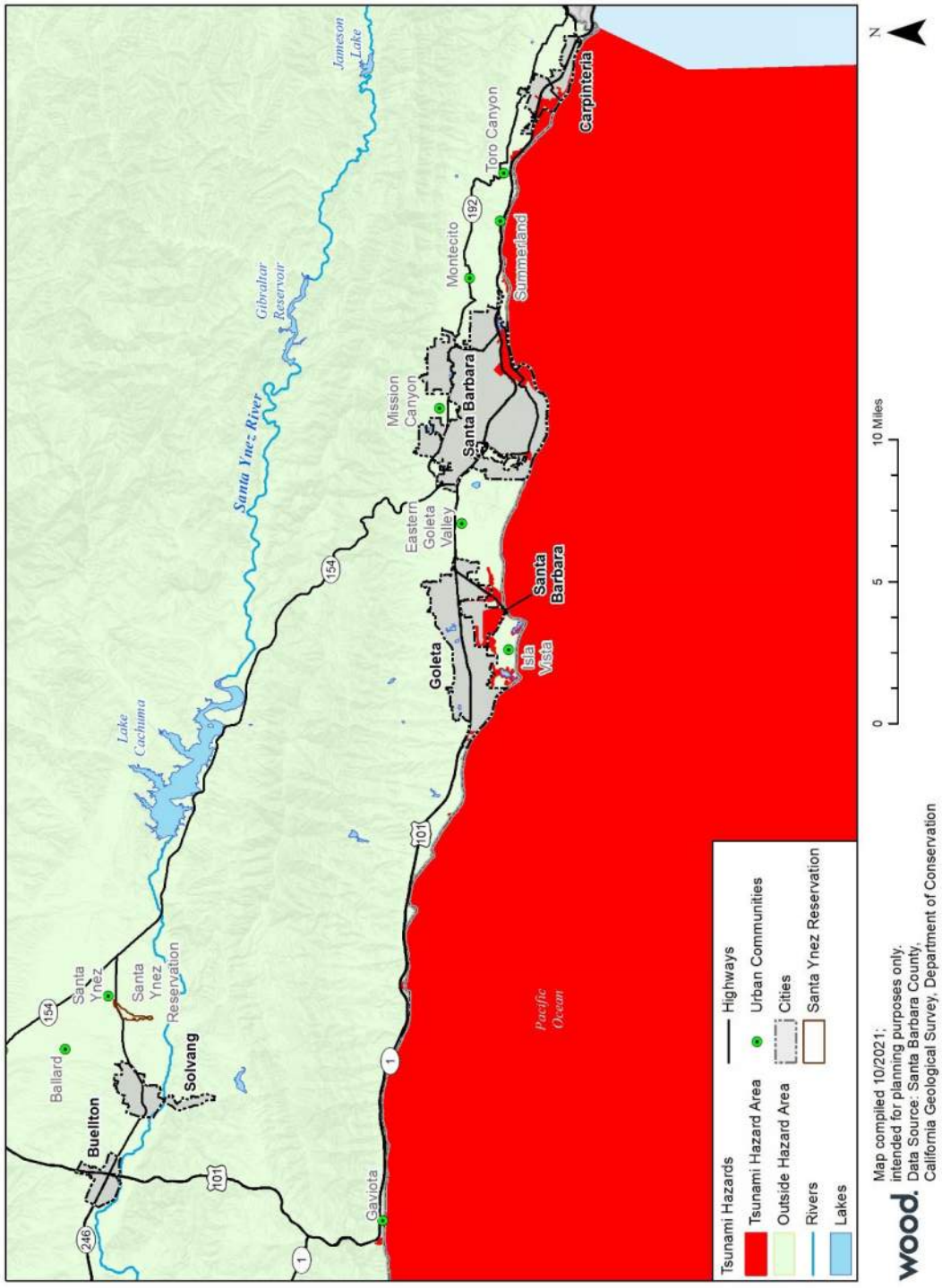
Location and Extent of Hazard in the City of Santa Barbara

The entire county is subject to drought conditions and water shortages.

History of Hazard in the City of Santa Barbara

Three 20th century droughts were of particular importance from a water supply standpoint—the droughts of 1929–1934, 1976–1977, and 1987–1992. More recent multiyear droughts occurred in 2007–2009 and 2012–2017 (DWR 2021). California's most recent multi-year drought occurred from 2012-2017. In January 2014, Santa Barbara County joined the State of California in declaring a local drought emergency, which was the first local emergency declaration of drought in the county's history (County of Santa Barbara 2014). This was the first time the state-imposed mandatory urban water use reduction requirements on water suppliers, and all of California's 58 counties declared local emergencies. Refer to Section 5.3.2 of the MJHMP for a detailed discussion of multi-year droughts that were identified as having significant impacts on the county.

Figure 5-5. South Coast Tsunami Hazard Area



Since August 2020, the period between 2012 and 2016 was one of the documented driest consecutive water years in the county with 50.83 inches in cumulative rainfall (County of Santa Barbara 2021a). Effects of the drought have lowered water storage at Lake Cachuma, one of the county's largest surface water reservoirs, with water storage at 48.4 percent of capacity in late 2021 (County Flood Control District 2021). Although the statewide drought of 2012–2016 was ended by a wet Water Year in 2017, localized drought conditions persisted in the Central Coast region and were not ended until a wet Water Year in 2019 (DWR 2021).

Probability of Occurrence

Droughts are a regularly recurring feature of Santa Barbara County weather that can be affected by overall regional or worldwide climactic patterns. El Niño and La Niña events are natural climate patterns over the Pacific Ocean often with global effects, with influence over the weather of the U.S. southwest that on average occur every two to seven years. The state recently experienced the 5-year significant drought event of 2012-2017; other notable historical droughts included 2007-09, 1987-92, 1976-77, and off-and-on dry conditions spanning more than a decade in the 1920s and 1930s. In any given year, the City can be subject to drought conditions and water shortages. However, out of the last 10 years, the county has been under a locally declared drought emergency for five years; therefore, it is likely drought and associated water shortages will continue and may increase due to climate change considerations, as described further below.

Climate Change Considerations

Climate change has the potential to make drought events more common in the county and City. Extreme heat creates conditions more conducive for the evaporation of moisture from the ground, thereby increasing the possibility of drought. A warming planet could lead to earlier melting of winter snowpacks, leaving lower stream flows and drier conditions in the late spring and summer. Snowpacks are important in terms of providing water storage and ensuring adequate supply in the summer when water is most needed. Changing precipitation distribution and intensity have the potential to cause more of the precipitation that does fall to run-off rather than be stored. The result of these processes is an increased potential for more frequent and more severe periods of drought.

5.3.7 Energy Shortage and Resiliency

Description of Hazard

Energy shortages (or disruptions) are considered a form of lifeline system failure. Disruptions can be the consequence of another hazard or can be a primary hazard, absent of an outside trigger. A failure could involve one, or a combination of the potable water system, power system, natural gas system, wastewater system, communication system, or transportation system. Most power blackouts are not human-caused. They are the result of situations involving unintended events, such as an overwhelming need for power due to weather conditions, equipment failure, or accidents. They may also fail due to natural hazards such as earthquakes, floods, and landslides. These outages can last anywhere from a few minutes to several weeks.

Santa Barbara County has two service providers. Pacific Gas and Electric (PG&E) provides electricity in the northern part of the county, with the termination of services north of the Gaviota area. Southern California Edison (SCE) provides power to the Southern parts of the county, with the

termination of services in Gaviota. The two systems are not connected. Thus, if there is a major interruption of service in the Santa Barbara area, then all services could be denied in either direction. The City of Santa Barbara is served by SCE.

Due to recent massive wildfires throughout California and their ignition originating from utility infrastructure and high winds, the electric utilities have initiated a program to conduct Public Safety Power Shutdowns to prevent wildfire ignitions. The utilities are currently working with the County to minimize power delivery interruption while managing wildfire hazards.

Location and Extent of Hazard in the City of Santa Barbara

The entire county, which includes the City of Santa Barbara, is subject to energy shortages. Electricity service is also highly vulnerable because it is highly dependent on electrical transmission lines and substations functioning properly.

History of Hazard in the City of Santa Barbara

Energy disruptions on a small scale have occurred regularly in Santa Barbara City; especially during strong wind and storm events. One of the largest events affecting electric and natural gas services in the City in recent years was the 2017 Thomas Fire, during which the transmission system running from Ventura County to the City of Goleta was shut down, leaving more than 85,000 customers without power for an extended period during the emergency (SCE 2017). Similar service disruptions, though not quite as extensive, occur in areas affected by wildfires and other disasters or emergencies. Small-scale energy disruptions have occurred regularly in the City.

Probability of Occurrence

In any given year, the City can be subject to energy shortages. A large disruption due to a power failure or rotating brown out is highly likely during strong storm events or during times of extreme heat.

Climate Change Considerations

With increased changes in weather and climate, the energy demands will shift too. The increased prevalence of extreme heat can drive energy demand and increase the need for intentional, unscheduled power shutoffs. Further, the resiliency of power systems can be threatened during a wildfire. As wildfire occurrences associated with climate change increase so does the risk for utility failure. Energy demand and management are critical during disaster response.

5.3.8 Dam Failure

Description of Hazard

Dams fail due to old age, poor design, structural damage, improper siting, landslides flowing into a reservoir, or terrorist actions. Structural damage is often a result of a flood, erosion, or earthquake. A catastrophic dam failure could inundate the area downstream. The force of the water is large enough to carry boulders, trees, automobiles, and even houses along a destructive path downstream. The potential for casualties, environmental damage, and economic loss is great. Damage to electric generating facilities and transmission lines could impact life support systems in communities outside the immediate hazard area.

Location and Extent of Hazard in the City of Santa Barbara

There are two dams in the county (i.e., Gibraltar Dam and Lauro Dam), which, if resulted in dam failure, would impact the City. These dams range in purpose from water supply to flood control.

Gibraltar Dam is owned and operated by the City of Santa Barbara. Gibraltar Dam and reservoir are located on the Santa Ynez River in Santa Barbara County, about 9 miles north of the City and upstream from Lake Cachuma. The City owns and operates the dam and reservoir under a Notice of Appropriation posted on October 11, 1904. Stored water is diverted through Mission Tunnel to the Cater Water Treatment Plant. The dam is a constant radius, concrete arch dam constructed in 1920 with an original capacity of 14,500 acre-feet; it was raised to its current elevation in 1949 and strengthened in 1991. Gibraltar Reservoir is the source of about one-third of the City of Santa Barbara's water supply. Loss of storage capacity due to siltation has been an issue since the dam was constructed. To monitor changes in capacity, and under the requirements of the Upper Santa Ynez River Operations Agreement, the City commissions a bathymetric survey of Gibraltar Reservoir at approximately three-year intervals.

Lauro Dam, which is owned and operated by the U.S. Bureau of Reclamation, is an earthen fill structure located on Diablo Creek at the northern edge of the City. The dam has a crest length of 540 feet and a height of 137 feet. The reservoir has a capacity of 640 acre-feet.

History of Hazard in the City of Santa Barbara

As described in Section 5.6.3 of the 2022 MJHMP, the county has experienced one incident of catastrophic dam failure, which occurred in the community of Mission Canyon. No historical dam failures have occurred within or in the vicinity of the City.

The DWR Division of Safety of Dams (DSOD) provides oversight of the design, construction, and maintenance of jurisdictional-sized and non-Federal dams. With DWR DSOD oversight, many potential dam issues have been addressed and/or resolved in the county (DWR DSOD 2021). Additionally, the USBR, responsible for oversight of federal dams in the county, has improved systems to ensure that peak releases during heavy inflows do not result in excessive downstream flows, which reduces the possibility of inundation from overflows (Santa Barbara County Planning and Development Department 2015).

Probability of Occurrence

Dam failure events are infrequent and usually coincide with the events that cause them, such as earthquakes, landslides, excessive rainfall, and snowmelt. There is a "residual risk" associated with dams; residual risk is the risk that remains after safeguards have been implemented. For dams, the residual risk is associated with events beyond those that the facility was designed to withstand. However, the probability of occurrence of any type of dam failure event is considered to be low in today's regulatory and dam safety oversight environment.

Climate Change Considerations

The potential for climate change to affect the likelihood of dam failure is not fully understood at this point. There is potential for increased precipitation events as a result of climate change conditions to present a future increased risk of dam failure if large inflows to reservoirs occur.

However, this could be offset by generally lower reservoir levels if storage water resources become more limited or stretched in the future due to climate change, drought, and/or population growth.

5.3.9 Landslide

Description of Hazard

Landslides can be defined as the movement of a mass of rock, debris, or earth down an incline. Types of landslides include rock falls, rockslides, deep slope failures, shallow debris flows, and mudflows.

- Slope failure occurs when there is erosion of slopes by surface-water runoff. The intensity of slope wash is dependent on the discharge and velocity of surface runoff and the resistance of surface materials to erosion.
- Mudflows are defined as flows or rivers of liquid mud down a hillside on the surface of normally dry land. They occur when water saturates the ground, usually following long and heavy rainfalls. Mud forms and flows downslope if there is no ground cover such as brush or trees to hold the soil in place.
- Debris flow occurs when water begins to wash material from a slope or when water sheets off of a newly burned stretch of land. Chaparral land is especially susceptible to debris flows after a fire. The flow will pick up speed and debris as it descends the slope. As the system gradually picks up speed it takes on the characteristics of a basic river system, carrying everything in its path along with it.

The most common cause of a landslide is an increase in the downslope gravitational stress applied to slope materials, also known as over-steepening. Over-steepening can be caused by natural processes or by man-made activities. Undercutting of a valley wall by stream erosion or a sea cliff by wave erosion are ways in which over-steeping may occur naturally.

Location and Extent of Hazard in the City of Santa Barbara

Landslides and landslide-prone sedimentary formations are present throughout the coastal plain of western Santa Barbara County. Figure 5-18 of the MJHMP shows the location of soil types throughout the county. Generally, areas with soft soils are more prone to movement. Landslides also occur in the granitic mountains of East Santa Barbara County, although they are less prevalent. Many of these landslides are thought to have occurred under much wetter climatic conditions than at present. Recent landslides are those with fresh or sharp geomorphic expressions suggestive of active (ongoing) movement or movement within the past several decades. Reactivations of existing landslides can be triggered by disturbances such as heavy rainfall, seismic shaking, and/or grading. Many recent landslides are thought to be reactivations of ancient landslides.

Section 5.3.7 of the MJHMP lists the areas in Santa Barbara County where there are geologic formations that can lead to fairly severe landslides as identified by the Santa Barbara County Comprehensive Plan Seismic Safety and Safety Element (Santa Barbara County Planning and Development Department 2015). Some areas of the City are prone to more frequent rain-induced landslides, resulting in disruption to transportation and damage to roadways.

Figure 5-13 of the MJHMP shows the debris flow hazard areas along the South Coast as of 2018, after the Thomas Fire. As shown therein, only a small area of the northeastern portion of the City is susceptible to mudflow and debris flow hazards. However, this hazard area may shift after a debris flow or landslide or other hazards have affected an area, such as wildfire, flooding, or drought (Santa Barbara County Department of Planning and Development 2021).

History of Hazard in the City of Santa Barbara

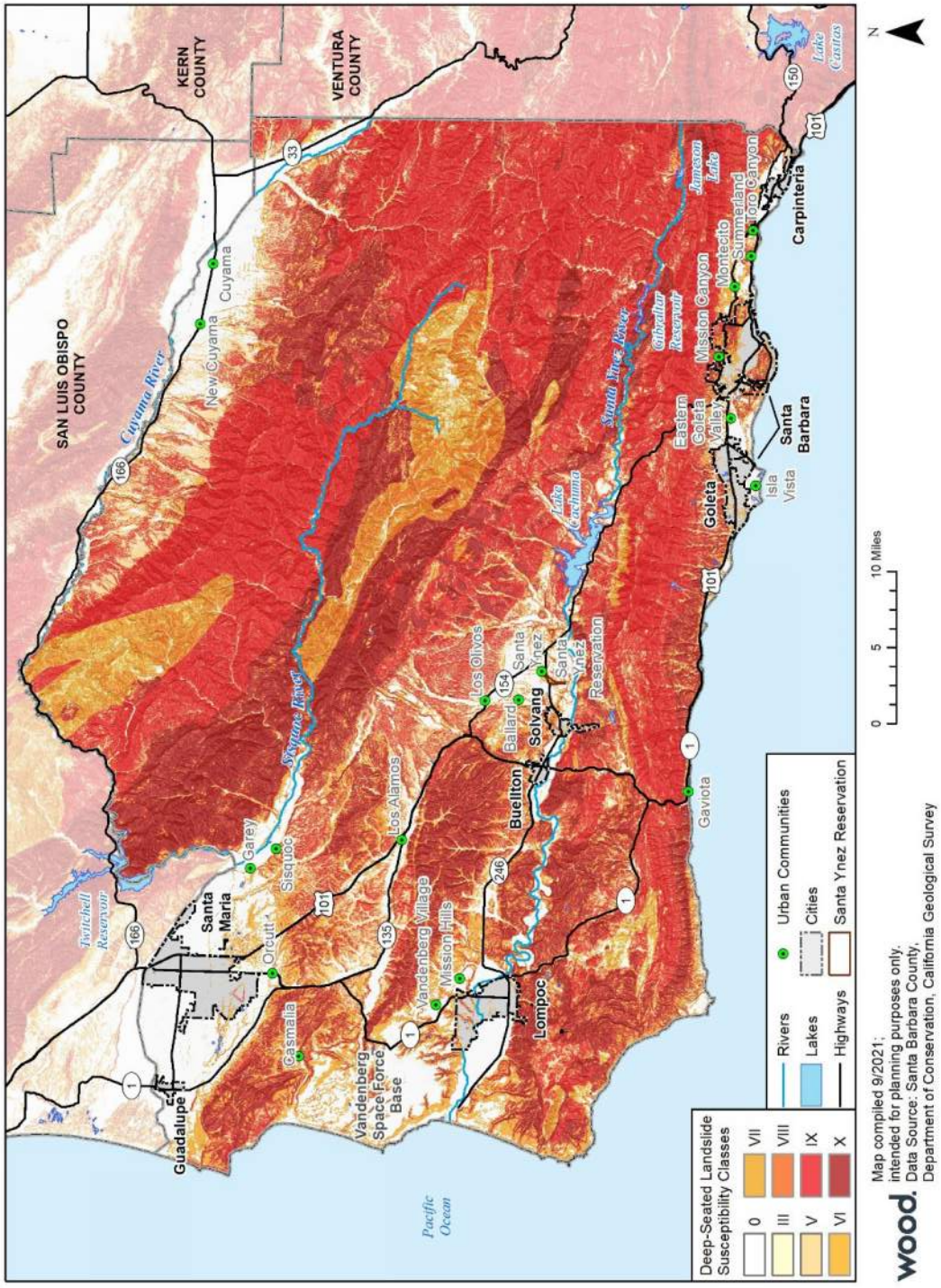
As previously mentioned, Santa Barbara County is prone to landslides; however, many previous landslide occurrences within the county were smaller and are not well documented. The Riviera area of the City has two area of landsliding referred to as the "Conejo Road Landslide" and the "Canon View Road/Sycamore Canyon Landslide". Movement of slopes in these areas were triggered in response to heavy rains in 1982-83 and again in 2005, destroying eight homes. Several large landslides have affected the coastal bluffs in the past, including the El Camino de la Luz landslide in 1978, which encompassed approximately three acres and destroyed two homes; and the bluff in Shoreline Park in 2008, which moved portions of the bluff edge landward 38 feet. Additionally, several historic storm and flood events in the county, particularly storms following intense wildfires, resulted in mudflows and debris flows. The most recent instance of debris flow affecting the City is the 2018 Montecito Debris Flows.

Following the 2017 Thomas Fire, which burned approximately 281,893 acres in Ventura and Santa Barbara Counties, a reported 0.59 inches of rain fell within 30 minutes in the burn scars from the Thomas Fire in the foothills of Montecito on Tuesday, January 9, 2018. Four inches of rain fell in two days, causing massive debris flows and flooding that damaged or destroyed 400 homes, killed 23 residents, and led to the closure of Highway 101 and the UPRR for more than 3 weeks, cutting off the county from communities to the south. California Geological Survey scientists estimated the Montecito debris flow as having speeds of 10-15 mph, being up to 25-30 feet deep, and capable of carrying boulders as large as a tow truck. (California Geological Survey 2019b).

Probability of Occurrence

Figure 5-6 below shows the locations of deep-seated landslide susceptibility in the county as mapped by the California Geological Survey. This map shows the relative likelihood of deep landslide based on the three site factors that most determine susceptibility: prior failure (from a landslide inventory), regional estimates of rock or soil strength, and steepness of slopes. On the most basic level, weak rocks and steep slopes are more likely to generate landslides. The map uses detailed information on the location of past landslides, the location and relative strength of rock units, and the steepness of the slope in a methodology developed by Wilson and Keefer (1985). The result shows the distribution of one very important component of landslide hazard. It is intended to provide infrastructure owners, emergency planners, and the public with a general overview of where landslides are more likely. The map does not include information on landslide triggering events, such as rainstorms or earthquake shaking, nor does it address susceptibility to shallow landslides such as debris flows. Therefore, this map is not appropriate for the evaluation of landslide potential at any specific site (California Geological Survey 2019). The areas shaded in darker red in Figure 5-6 are considered to have a higher probability of landslide occurrence than the low landslide risk areas in the City.

Figure 5-6. Landslide Susceptibility in Santa Barbara County



Based on historical data and given the likelihood of wildfires and intense rainfall events, as well as steep slopes upstream of the City, mudflow and debris flow hazards are likely to occur following wildfire and subsequent rain events. Mudflows and debris flows are usually a cascading effect of severe weather. The probability for more severe and damaging landslides increases during El Niño years or severe winter storms. The potential for debris flows dramatically increases following a wildfire (see also Section 5.3.1, *Wildfire*).

Climate Change Consideration

A 2021 study by the USGS finds that Southern California is likely to see increased post-wildfire landslides and debris flows caused by climate change-induced shifts in the state's wet and dry seasons. Wildfires make the landscape more susceptible to landslides when rainstorms pass through as the water liquefies unstable, dry soil and burned vegetation. Geologists routinely conduct landslide hazard assessments after wildfires occur, but there is often not enough time between a fire and a rainstorm to implement an effective emergency response plan (USGS 2021). Wildfire frequency, higher temperatures, and increased droughts projected to occur under climate change can reduce soil absorption capacity and kill vegetation that holds soil in place, making it unable to absorb as much water, further destabilizing slopes. The results also suggest more intense rainfall events could make landslides much more frequent. Slope failure is expected to become more frequent as more precipitation falls during fewer storm events (refer also to Section 5.3.3, *Flood*). Also, the increased heavy precipitation events may cause instability in areas where landslides were not as likely before. Therefore, resulting landslides may be larger or more widespread.

5.3.10 Train Accident

Description of Hazard

Train accidents are defined as any accidents involving public or private trains carrying passengers or cargo along the rail corridor. Train accidents, like other transportation accidents, are less likely to lead to a state or federal disaster declaration, than other hazards previously and aforementioned.

Location and Extent of Hazard in the City of Santa Barbara

The UPRR carries both freight and passengers through the coastal areas. The county is served by two Amtrak train routes for passenger-only services along the UPRR: the Pacific Surfliner and Coast Starlight (Santa Barbara 2021). The Pacific Surfliner runs adjacent to Highway 101 and the coastline with stops in San Diego, Orange, Los Angeles, and Ventura counties (Santa Barbara 2021). The Coast Starlight connections Seattle and Los Angeles travel south from Seattle with stops in Portland, the San Francisco Bay Area, Sacramento, Paso Robles, San Luis Obispo, and Santa Barbara.

In addition to passenger-only rail services, the Santa Barbara train station receives train movements from the shipment of commodities, such as hazardous materials, fuel (including oil), agriculture, meats, and non-consumables. Train accidents are generally localized and the incidents result in limited impacts at the community level. However, if there are volatile or flammable substances on the train and the train is in a highly populated, death, injuries, and damage to homes, infrastructure, and the environment, including forest fires, can occur. Additionally, a hazardous materials incident

on the rails or roadway has the potential to shut down both rail and highway transportation routes, such as Highway 101, where the two are within proximity to one another.

History of Hazard in the City of Santa Barbara

No major train accidents have occurred in the City of Santa Barbara or Santa Barbara County. However, in the last thirty years, numerous train accidents have occurred throughout the southern California region. For example, in 1991 the Seacliff Incident occurred in Ventura County when a train released 440 gallons of aqueous hydrazine (used to make agricultural, metal, and plastics processing chemicals) and naphthalene (industrial solvent) (Los Angeles Times 1991). The accident required the evacuation of the nearby Seacliff Community along with the shutting down of Highway 101 and took 5 days to clean up.

Probability of Occurrence

Given that no known train accidents have occurred in the City or county, the probability of occurrence is low. While neither of the train accidents described above occurred within the county, due to the scale and scope of train transportation for people and commodities, such events have the potential to occur.

Climate Change Consideration

There is no known linkage between climate change and train accidents; however, because of railroad track proximity along the Pacific Ocean, sea level rise could impact service. It is expected that conditions would be gradual and would not create unforeseen problems or complications.

5.3.11 Aircraft Crash

Description of Hazard

Airline crashes are defined as an accident of private, commercial, or military aircraft on land or oversea. Airline crashes, like other transportation accidents, are less likely to lead to a state or federal disaster declaration, than other hazards previously and aforementioned.

Location and Extent of Hazard in the City of Santa Barbara

In addition to being within the flight pattern of many airports providing regional flights (i.e., Los Angeles International, San Francisco International, Oakland, San Jose International, Burbank Airport, John Wayne Airport, Long Beach Airport, Ontario International Airport), Santa Barbara has one general aviation airport

The Santa Barbara Airport (SBA) is located near Goleta, west of Santa Barbara. SBA encompasses 952 acres and services five major airlines with 12 non-stop destinations. SBA served nearly 786,0000 passengers in 2018 and is the 13th largest airport in California (Santa Barbara Airport 2021). SBA has approximately 32 daily non-stop flights including to Chicago, Dallas, Denver, Las Vegas, Los Angeles, Oakland, Phoenix, Portland, Sacramento, Salt Lake City, San Francisco, and Seattle.

History of Hazard in the City of Santa Barbara

Currently, in the City of Santa Barbara, there has not been a record of a large aircraft incident.

Probability of Occurrence

Given that no known aircraft crashes have occurred in the county or the City, the probability of occurrence is low. However, with the number of general aviation operations, military flights, and its position between Los Angeles/San Diego and the Bay Area, there is a possibility of Santa Barbara County experiencing an airline crash.

Climate Change Consideration

There is no known linkage between climate change and airline crashes. Although bad weather does play a factor in some airline crashes, current aviation technology, and safety standards greatly reduce the risk of potential public and environmental safety concerns, including from weather.

5.3.12 Coastal Hazards

Description of Hazard

Erosion is a natural process that alters existing geomorphic features. Erosion can occur due to several factors, including winter storms, tidal action, wind-generated high surf, wave action, and rising sea levels.

Coastal storms produce large ocean waves that sweep across low-lying coastlines making landfall. Storm surges can inundate coastal areas, destroy dunes, and cause flooding. If a storm surge occurs at the same time as high tide, the water height will be even greater. Historically, the county has also been vulnerable to storm surge inundation associated with El Niño events and a related increase in storm severity.

Location and Extent of Hazard in the City of Santa Barbara

The impacts from sea level rise and erosion in the City will be felt along its six-mile-long coastline. Much of the westerly portion of the City's coastal zone is situated on bluffs overlooking the beach. Bluff areas in the City include the area from approximately Sea Ledge Lane at the west end of the City of Santa Barbara to approximately Santa Barbara Point, as well the far easterly portion of the City by the Bellosguardo Estate. Only a few small portions of the bluff area along the City's shoreline are currently protected by shoreline protection devices. Shoreline protection devices, such as seawalls and rock revetments, are structures along the coast that can provide flood and erosion protection for properties but can result in accelerated erosion of sandy beach areas in front of (seaward) and adjacent to the devices. These bluffs are currently eroding with exposure to waves and as a result of upland erosion and geologic hazards such as landslides (City of Santa Barbara 2020).

The low-lying areas of the City include the City's waterfront, lower downtown area, Airport, and Arroyo Burro County Beach Park. These low-lying areas have experienced coastal flooding due to storms surges and wave attacks, although the currently wide beaches fronting the City of Santa Barbara's waterfront tend to reduce such hazards. In these sandy beaches and low-lying areas in the City, impacts from erosion, tidal inundation, and storm waves are generally limited to the area south of Cabrillo Boulevard (City of Santa Barbara 2020).

Stearns Wharf is exposed to wave damage during large storms and a 100-year coastal event is expected to require temporary closure and significant structural repairs. The harbor includes the

marina, commercial uses, parking, industrial areas, and the City Pier (sometimes called the "harbor pier"), which supports the Coast Guard and houses a fuel dock. Under existing conditions, storm events and the highest high tides (e.g., "King Tides") can dislocate pile caps at the floating docks, and waves can overtop the harbor breakwater and reduce public access (City of Santa Barbara 2020).

Sea level rise coupled with increased frequency, severity, and duration of high tide and storm events related to climate change will result in more frequent and severe extreme events along the coast.

These events could expose the coast to severe flooding and erosion, damage to coastal structures and real estate, and salinity intrusion into delta areas and coastal aquifers (Projecting Future Sea Level, A Report from the California Climate Change Center 2006).

History of Hazard in the City of Santa Barbara

Typically, coastal hazards increase during periods of major storms that can coincide with high tides, causing coastal flooding, coastal bluff erosion, and landslides such as those that were experienced during the 1983, 1998, and 2015/2016 El Niño storms. Segments of the South Coast, in particular, have been subject to significant damage from coastal hazards. Homes along the City's coastline suffered substantial damage during the 1983 and 2015/2016 El Niño events. Subsequent El Niño seasons led to major beach erosion and further damage in some locations.

Historic coastal flooding has occurred along the county's South Coast since the mid-1800s. Between 1862 and 2010, the county had 15 significant floods, 8 of which were deemed a Presidential Disaster Declaration (County of Santa Barbara 2011). Coastal flooding has historically damaged residences, crops, and transportation infrastructure and is highly costly (each costing millions of dollars) (County of Santa Barbara 2017).

Coastal erosion is a recurring and ongoing hazard in south county and is particularly severe along Padaro Lane, Channel Drive, Del Playa Drive, More Mesa, Goleta Beach, Hope Ranch, and Shoreline Park. Coastal erosion hazards have resulted in the adoption of required city and County blufftop setbacks because development in coastal communities generally require a minimum of 75 years of structural life. Many residences along Del Playa Drive in Isla Vista are threatened by coastal erosion and setbacks have eroded to the point many homes now sit on the cliff edge.

Probability of Occurrence

Coastal flooding from tidal inundation and wave attack and associated erosion of coastal bluffs and beaches occurs during many winters but is most pronounced during past major El Niño events, which have return intervals of 2 to 7 years. Although many private coastal properties and public facilities have been protected by rock revetments or seawalls in the County, coastal flooding, and beach and bluff erosion continue in areas such as the City. While the existing probability of occurrence is typically confined to El Niño seasons or major storm events, as discussed below, climate change and sea level rise are projected to increase in frequency and severity of occurrence.

Climate Change Considerations

The County's 2017 Coastal Resiliency Project projects sea level in the county will rise by 10.2 inches in 2030, 27.2 inches by 2060, and 60.2 inches in 2100 (County of Santa Barbara 2017). The

County modeled coastal hazards for coastal armoring and no coastal armoring. Particularly susceptible areas of the county to sea level rise related impacts include Isla Vista, Goleta Beach County Park, and the Santa Barbara Airport, coastal bluff homes in Summerland, Toro Canyon and Padaro Lane, segments of the UPRR and Highway 101 from the City of Carpinteria to the Gaviota Coast, including the City of Santa Barbara (County of Santa Barbara 2017).

Additionally, more specific coastal hazard modeling was performed for the City by Environmental Science Associates as part of the city's 2021 *Sea Level Rise Adaptation and Vulnerability Plan*. This plan similarly concluded that the most susceptible areas of the City include Downtown Santa Barbara, East Beach, and Leadbetter Beach (City of Santa Barbara 2021). See Section 6.7, *Coastal Hazards* for more information about the Sea Level Rise Adaptation Plan's assessment of vulnerabilities in the City from coastal hazards.

Based on these studies, sea levels are projected to rise by as much as 6.6 feet by 2100, though more extreme scenarios project sea levels rising as much as 7.1 feet by 2100; however, these extreme scenarios are based on worst-case GHG emissions assumptions, are highly conservative, and considered to be very unlikely of occurring (refer to Table 5-11 of the MJHMP). While sea level rise projections will continue to change as scientific understanding increases and policy choices manifest, what is clear for the most current projections is that sea levels are bound to increase at a significant rate, further increasing both the probability and severity of coastal hazards throughout all of Santa Barbara County (Ocean Protection Council 2018).

5.3.13 Extreme Heat

Description of Hazard

Extreme heat is defined by FEMA as temperatures that hover 10 degrees Fahrenheit (°F) or more above the regional average high temperature or over 100 °F in California and last for at least three days or even as long as several weeks (FEMA 2021). Extreme heat is a function of heat and relative humidity. A heat index describes how hot the heat-humidity combination makes the air feel. As relative humidity increases, the air seems warmer than it is because the body is less capable of cooling itself or regulating heat via evaporation of perspiration. As the heat index rises, so do health risks such as heat exhaustion, sunstroke, and heatstroke.

While the effects of extreme heat on human health can be severe, so too can its effects be on natural ecosystems, services, infrastructure, and various economic sectors (e.g., agricultural sector). During periods of extreme heat, transportation, gas, power, and other services may be disrupted, and critical infrastructure may be destroyed or damaged (FEMA 2021). The National Institute for Occupational Safety and Health (NIOSH), alongside OSHA, provides a Heat Safety Tool App that offers occupational safety and health recommendations based on the heat index (OSHA 2021). Each extreme heat day or heat wave can present additional risk of other hazards present within the County but is primarily a direct contributor to wildfire hazards and risks (refer to Section 5.3.1, *Wildfire*). As heat increases, the need for additional cooling systems to avoid mechanical failure increases as well. This can increase costs to consumers and may contribute to climate change if fossil fuels are used to generate the electricity needed to operate cooling systems.

Location and Extent of Hazard in the City of Santa Barbara

All of Santa Barbara County can experience extreme heat. Coastal communities such as the City on average have lower temperatures compared to communities in the inland areas of the county and could be less at risk to extreme temperatures although potentially less acclimatized to high temperatures if they occur.

History of Hazard in the City of Santa Barbara

Santa Barbara County and the City have experienced several extreme heat events in the past; however, they are not well documented. One documented event reported as "simoon", occurred on June 17, 1859, where a record temperature of 133 °F was taken during an extreme heat and wind event that struck Santa Barbara in the early afternoon (Noozhawk 2020). More recently, according to the NOAA Storm Events Database, a combination of high pressure and high humidity caused temperatures to spike to between 100 °F and 119 °F on July 22, 2006, throughout southern California, including the county (NOAA 2021). In 2020, heatwaves in the Santa Ynez Valley with temperatures reaching 118 °F caused early grape harvests at wineries (Jervis 2020).

Probability of Occurrence

In any given year, the City can be subject to extreme heat conditions.

Climate Change Considerations

Historically, Santa Barbara County has experienced an average of four extreme heat days a year, however, this is expected to increase to 12 extreme heat events per year by 2030, 19 extreme heat events per year by 2060, and 34 extreme heat events per year by 2100 (Santa Barbara County Planning and Development Department 2021). Due to the rising temperatures, heat waves are likely to become more frequent, which will have direct impacts on human health in terms of heat-related illness. Outdoor laborers will be most vulnerable to the rising temperatures and most at risk for heat-related illnesses. Residents will also be vulnerable to rising temperatures, as many of the homes on the coast do not have air conditioning units, as there was less of a need in the past, and therefore may be less prepared compared to the inland region of the county to adapt to extreme heat events.

Cascading impacts include increased stress on water quantity and quality, degraded air quality, and increased potential for more severe or catastrophic natural events such as heavy rain, droughts, and wildfire. Another cascading impact includes increased duration and intensity of wildfires with warmer temperatures.

Extreme heat has also been shown to accelerate wear and tear on the natural gas system and electrical infrastructure. Projected increases in summer demand associated with rising temperatures may increase risks to energy infrastructure and may exceed the capacity of existing substations and distribution line infrastructure and systems.

5.3.14 Hazardous Materials Release

Description of Hazard

Hazardous Waste/Materials are widely used or created at facilities such as hospitals, wastewater treatments plants, universities, and industrial/manufacturing warehouses. Several household products such as cleaning supplies and paint are also considered hazardous materials. Hazardous materials include:

- Explosives;
- Flammable, non-flammable, and poisonous gases;
- Flammable liquids;
- Flammable, spontaneously combustible, and dangerous when wet solids;
- Oxidizers and organic peroxides;
- Poisons and infectious substances;
- Radioactive materials; and
- Corrosive materials.

Both mobile and external hazardous materials releases can spread and affect a wide area, through the release of plumes of chemical, biological, or radiological elements or leaks or spills. Conversely, internal releases are more likely to be confined to the structure the material is stored in.

Chemicals may be corrosive or otherwise damaging over time. A hazardous materials release could also result in fire or explosion. Contamination may be carried out of the immediate area of the incident by people, vehicles, wind, and water. Weather conditions can increase the size and intensity of the Hazardous Materials Release. Typography, such as hills and canyons, can increase the size of the release or make it more difficult to contain.

Location and Extent of Hazard in the City of Santa Barbara

The locations and identity of facilities that store hazardous materials are reported to local and federal governments. Many facilities have their own hazardous materials guides and response plans, including transportation companies that transport hazardous materials.

The release of hazardous materials into the environment can cause a multitude of problems. Although these incidents can happen almost anywhere, certain areas of the City are at higher risk, such as near roadways that are frequently used to transport hazardous materials and locations with industrial facilities that use, store, and/or dispose of such materials. Areas crossed by railways, waterways, airways, and pipelines also have increased potential for mishaps.

History of Hazard in the City of Santa Barbara

Several significant hazardous material incidents have occurred in the County in the past century, and include the oil spills which occurred in 1969, 1997, 2007, 2008, 2015, and 2020 (see Section 5.3.15, *Oil Spill* for a detailed discussion of these incidents and risks associated with oil spill-related hazards). Approximately 550 hazardous materials incidents in the City were reported to the Cal OES Warning Center from 2006 through 2021, which is the largest number of incidents by far when compared to any other city within the county. These incidents include both transportation and

fixed-facility incidents. This list does not capture all hazardous material spills within the City, only those that were significant enough to be reported to Cal OES (refer to Table 5-18 of the MJHMP for a summary of hazardous materials incidents reported to Cal OES in Santa Barbara County by location and type). The data indicates that hazardous materials incidents can occur across the county with a greater frequency in the more developed areas.

Probability of Occurrence

Given that 550 significant hazardous materials incidents occurred within the City over 15 years (i.e., between 2006 and 2021), these incidents occur approximately 37 times per year or twice per month. Incidences can occur during the production, storage, transportation, use, or disposal of hazardous materials. Communities can be at risk if a chemical is used unsafely or released in harmful amounts into the environment. Hazardous materials can cause death, serious injury, long-lasting health effects, and damage to buildings, the environment, homes, and other property.

Climate Change Consideration

There are no known effects of climate change on human-caused hazards including hazardous material and waste incidents. However, the weather may play a factor in hazardous material releases. While there is little evidence to link climate change increase occurrences of hazardous material releases, it could impact the response and recovery efforts.

5.3.15 Oil Spill

Description of Hazard

An oil spill is a release of liquid petroleum hydrocarbon into the environment due to human activity or technological error that results in pollution of land, water, and air. Oil releases also occur naturally through oil seeps either on land or underwater. Marine oil spills, whether accidental or intentional, can result from the release of crude oil from offshore oil platforms, drilling rigs, wells, pipelines, tank trucks, and marine tank vessels (tankers). Refined petroleum products such as gasoline, diesel, and heavier fuels such as bunker fuel used by cargo ships are also sources of potential oil spill releases. Depending on the origin, size, and duration of the release, an oil spill can have serious impacts on air and water quality, public health, plant and animal habitat, and biological resources.

Clean up and recovery is time and cost consuming, and dependent on weather conditions such as wind and rain. Tidal and Current conditions may also make the spill more dynamic.

Location and Extent of Hazard in the City of Santa Barbara

This hazard can occur in any part of Santa Barbara County where existing oil and gas operations are located, either onshore through supply pipelines and well facilities or offshore where there are several platforms and undersea pipelines. Currently, there are 19 offshore oil platforms off the coast of Santa Barbara County as well as two onshore refineries and six oil separation and treatment plants (refer to Figure 5-32 of the MJHMP; County Department of Planning and Development 2017).

History of Hazard in the City of Santa Barbara

The City has experienced several large oil spills. In 1969, an estimated total of 100,000 barrels (4.2 million gallons) of crude oil was spilled from Platform A of a Union Oil drilling rig platform into the ocean and onto nearby shores over several months. In 2015, a 24-inch subterranean pipeline owned and operated by Plains All America Pipeline ruptured on the Gaviota Coast, west of Refugio State Park. Much of the crude oil spilled ran down a storm drain and into a ravine under the freeway and entered the ocean. The size of the spill ranged from 100,000 to 140,000 gallons, covering the Santa Barbara County coastline and extending nearly 9 miles out into the ocean. Refer to Section 5.6.7 of the MJHMP for a detailed description of these incidents and other oil spills in the county.

Probability of Occurrence

In any given year, Santa Barbara City could be subject to oil spills onshore or offshore.

Climate Change Considerations

With increased changes in weather, climate, and economics, the demands for oil and gas production may shift. This shift in demand could increase production, distribution, and transportation of oil products; thus, increasing the potential oil spill occurrences.

6.0 VULNERABILITY ASSESSMENT

The vulnerability assessment builds on the hazard assessment provided in Section 5.0 of the LHMP and Chapter 5.0 of the 2022 MJHMP to estimate losses where data is available and consider a specific list of critical facilities identified within the City of Santa Barbara. The City identified 233 critical facilities to be included in the Vulnerability Assessment portion of the LHMP. These facilities primarily included utilities, government, and educational structures as well as bridges. Of the available data, it was shown that these buildings are worth approximately $117,303,136 in total building value (i.e., structural and content value) (Table 6-1). No values were able to be obtained for many major facilities, so the actual value may be much more than this amount.

Table 6-1. Critical Facilities in the City of Santa Barbara

Type	Name	Address	Total Building Value
Communications	Vic Trace Ac		-
Paging Tower	Dial Page, Inc	923 Laguna Street	-
Paging Tower	Dial Page, Inc	320 West Pueblo Street	-
Community Center	Recreation	1232 De La Vina Street	-
Community Center	Recreation	100 E. Carrillo Street	-
Community Center	Lower Westside Community Center	629 Coronel Place	-
Community Center	Franklin Community Center	1136 E. Montecito Street	-
Hydrology Field	Hydrology Field Installations	735 Anacapa Street	$463,890

Type	Name	Address	Total Building Value
Reservoir	Escondido Pump Station and Reservoir	2300 Skyline Way	-
Reservoir	La Cornilla Pump Station and Vic Trace Reservoir	1631 La Coronilla Drive	-
Utilities	Sheffield Pump Station	2375 Foothill Road	-
Utilities	Skofield Pump Station	2117 Mount Calvary	-
Utilities	Laguna Pump Station	236 E. Cabrillo Blvd	-
Water District	Goleta West Water District	J Road	-
Water Treatment Plant	Cater Water Treatment Plant	1150 San Roque Road	-
Water Treatment Plant	Ortega Well Treatment Plant	220 E. Ortega Street	-
Water Treatment Plant	Ortega Well Treatment Plant	631 Garden St	-
Water Treatment Plant	Sheffield Treatment Plant	530 Mountain Drive	-
Water Treatment Plant	Charles E. Meyer Main Desalination Plant	525 E. Yananoli St.	-
Water Treatment Plant	SCADA / MCC Building	525 E. Yananoli St.	-
Water Treatment Plant	El Estero Water Resources Center	520 E. Yananoli St.	-
Clinic	McDonald Building Human Resources	1226 Anacapa Street	$1,036,791
Clinic	Sansum Clinic-Pesetas	215 Pesetas Ln	-
Clinic	Santa Barbara Community Dialysis Center	222 Pesetas Lane	-
Clinic	Valle Verde Health Facility- SNF	900 Calle De Los Amigos	-
Clinic	La Cumbre Senior Living Concepts	3880 Via Lucero	-
Clinic	Vista Del Monte Sunridge SNF	3775 Modoc Road	-
Clinic	Sansum Clinic-Hitchcock	51 Hitchcock	-
Clinic	Samarkand- Smith Center- SNF	2566 Treasure Drive	-
Clinic	Mission Terrace Convalescent Hospital	623 West Junipero Street	-
Clinic	Sansum Clinic- Ob/ Gyn	515 W. Pueblo St	-
Clinic	Cottage Rehabilitation Hospital	2415 De La Vina Street	-
Clinic	Sansum Clinic- Pueblo	317 Pueblo St	-
Clinic	Santa Barbara Cottage Hospital	Bath At Pueblo	-
Clinic	Santa Barbara Convalescent Hospital	2225 De La Vina Street	-
Clinic	Santa Barbara Neighborhood Clinic- Westside	628 W. Micheltorena Street	-
Clinic	Santa Barbara Artificial Kidney Center	1704 State Street, #2	-

Type	Name	Address	Total Building Value
Clinic	Santa Barbara Neighborhood Clinic- Eastside	915 N Milpas St	-
Clinic	PhD Franklin Clinic	1136 Montecito St	-
Clinic	PhD Children's Medical Services	1111 Chapala Street	$375,583
EMS Station	American Medical Response Station 3	415 West Figueroa Street	-
EMS Station	American Medical Response Station 4	1025 Castillo Street	-
Nursing Home	Cliff View Terrace	1020 Cliff Drive	-
Nursing Home	Alto Lucero Transitional Care	3880 Via Lucero	-
Nursing Home	The Californian	2225 De La Vina St	-
Nursing Home	Alexander Court	325 W Islay St	-
Nursing Home	Samarkand Skilled Nursing Facility	2566 Treasure Dr	-
Nursing Home	Samarkand of Santa Barbara	2550 Treasure Drive	-
Nursing Home	Wood Glen Hall, Inc.	3010 Foothill Road	-
Nursing Home	Mission Villa	321 West Mission Street	-
Nursing Home	Vista Del Monte	3775 Modoc Road	-
Nursing Home	Valle Verde Health Facility	900 Calle De Los Amigos	-
Nursing Home	Alexander Gardens	2120 Santa Barbara Street	-
Nursing Home	Mission Terrace Convalescent Hospital	623 W Junipero St	-
Nursing Home	Oak Cottage of Santa Barbara Memory Care	1820 Delavina Street	-
Nursing Home	Garden Court at Villa Santa Barbara	227 E. Anapamu Street	-
Nursing Home	Villa Alamar	45 East Alamar	-
Nursing Home	Villa Riviera	1621 Grand Avenue	-
Nursing Home	Mountain House	37 Mountain Drive	-
Nursing Home	At Home in Santa Barbara	1801 Bath Street	-
Veteran Services	Sb Veterans Memorial Bldg.	112 W. Cabrillo Blvd.	$2,034,893
Airport Patrol	Santa Barbara Airport Patrol	601 Firestone Road	-
Colleges / Universities	Fielding Graduate University	2020 De La Vina St	-
Colleges / Universities	The Santa Barbara and Ventura Colleges of Law At Santa Barbara	20 E Victoria St	-
Colleges / Universities	Antioch University-Santa Barbara	602 Anacapa Street	-
Colleges / Universities	Santa Barbara City College	721 Cliff Drive	-
Court	County Courthouse	1100 Anacapa Street	$40,553,793
Court	Sb Superior Court Building	118 E. Figueroa Street	$9,343,534
Court	County Courthouse Annex	1100 Anacapa St	$6,023,849
Court	Court Services Bldg.	118 E. Figueroa Street	$357,608

Type	Name	Address	Total Building Value
Education	Saint Vincent Orphanage and School Building	925 De La Vina Street	-
Education	Santa Barbara Unified Early Childhood	1030 E. Yanonali St.	-
Education	Adelante Charter	1102 E. Yanonali St.	-
Education	Franklin Elementary	1111 E. Mason St.	-
Education	Harding University Partnership	1625 Robbins St.	-
Education	Monte Vista Elementary	730 N. Hope Ave.	-
Education	Alta Vista Alternative High	215 E. Ortega St.	-
Education	McKinley Elementary	350 Loma Alta Dr.	-
Education	Roosevelt Elementary	1990 Laguna St.	-
Education	Open Alternative	4025 Foothill Rd.	-
Education	Monroe Elementary	431 Flora Vista Dr.	-
Education	Alta Vista Alternative Junior High	215 E. Ortega St.	-
Education	La Cumbre Junior High	2255 Modoc Rd.	-
Education	Santa Barbara Community Academy	850 Portesuello Ave.	-
Education	Adams Elementary	2701 Las Positas Rd.	-
Education	Santa Barbara Junior High	721 E. Cota St.	-
Education	Santa Barbara Senior High	700 E. Anapamu St.	-
Education	La Cuesta Continuation High	710 Santa Barbara St.	-
Education	Washington Elementary	290 Lighthouse Rd.	-
Education	Hope Elementary	3970-A La Colina Rd.	-
Education	La Colina Junior High	4025 Foothill Rd.	-
Education	Cleveland Elementary	123 Alameda Padre Serra	-
Education	Peabody Charter	3018 Calle Noguera	-
Education	Providence-SBCS	3723 Modoc Rd	-
Education	El Montecito School San Roque	3225 Calle Pinon	-
Education	Notre Dame School	33 E Micheltorena St	-
Education	Bishop Garcia Diego High School	4000 La Colina Rd	-
Education	Sunrise Montessori School	1201 E Yanonali St	-
Education	Providence	630 E Canon Perdido St	-
Education	Santa Barbara Middle School	1321 Alameda Padre Serra	-
Education	The Knox School of Santa Barbara	1525 Santa Barbara St	-
Education	Eureka School of Santa Barbara	3324 State St Ste M	-
Education	St Therese Classical Academy	33 E Micheltorena St	-
Fire Station	Fire Station 4	19 N. Ontare Road	-
Fire Station	Fire Station 5	2505 Modoc Road	-
Fire Station	Fire Station 6	1802 Cliff Drive	-
Fire Station	Fire Station 1	121 W. Carrillo St	-

Type	Name	Address	Total Building Value
Fire Station	Fire Station 3	415 E. Sola Street	-
Fire Station	Fire Station 7	605 Mission Ridge Road	-
Fire Station	Fire Training	30 S. Olive Street (2 S. Cesar Chavez)	-
Fire Station	Fire Station 2	819 Cacique	-
Fire Station	Airport Fire Station 8	40 Hartley Place	-
Government	Administration Building	105 E. Anapamu Street	$27,266,352
Government	Engineering Building	123 E. Anapamu Street	$11,145,938
Government	Sbch East Wing	1105 Santa Barbara Street	$7,308,080
Government	Probation Building	117 E. Carrillo Street	$4,216,037
Government	Hall Of Records	1100 Anacapa Street	$4,179,732
Government	Schwartz Building	130 E Victoria St	$2,652,501
Government	City Hall	735 Anacapa Street	-
Government	Public Works	220 E. Ortega Street	-
Government	Public Works	630 Garden Street	-
Government	Community Development	630 Garden Street	-
Government	Public Works	630 Garden Street	-
Government	Public Works Yard	635 Laguna Street	-
Government	Admin Well Corp. at Parks Department	402 East Ortega Street	-
Government	Parks And Recreation	620 Laguna St.	-
Government	ADMHS Offices	2034 De La Vina Street	$145,154
Government	Sb Child Support Office	4 East Carrillo Street	$199,401
Harbor Patrol	Santa Barbara Waterfront Harbor Patrol	132 Harbor Way A, Po Box 1990	-
Historic Site	Virginia Hotel	17 And 23 West Haley Street	-
Historic Site	Mission Santa Barbara	2201 Laguna Street	-
Historic Site	Janssens-Orella-Birk-Building	1029 - 1031 State Street	-
Historic Site	Hill-Carrillo Adobe	11 East Carrillo Street	-
Historic Site	Old Lobero Theatre	33 E. Canon Perdido	-
Historic Site	Casa De La Guerra	808-818 State Street, 813 - 819 Anacapa Street, 9 - 25 E. De La Guerra Street	-
Historic Site	Santa Barbara Presidio	123 East Canon Perdido Street	-
Historic Site	Hastings Adobe	414 W. Montecito Street	-
Historic Site	Covarrubias Adobe	715 Santa Barbara Street	-
Historic Site	Rafael Gonzalez House	835 Laguna Street	-
Historic Site	Faith Mission	409 State Street	-
Historic Site	Los Banos Del Mar	401 Shoreline Drive	-
Historic Site	Andalucía Building	316 - 324 State Street	-
Historic Site	Burton Mound	129 W. Mason At Burton Circle	-
Police	Police Department	215 E. Figueroa St.	-

Type	Name	Address	Total Building Value
Post Office	US Post Office Main	836 Anacapa Street	-
Airport	Santa Barbara Airport	500 James Fowler Road	-
Bridge	Bridge	'Olive Mill Road' / 'U.S. Highway 101'	-
Bridge	Bridge	'State Route 192' / 'Mission Creek'	-
Bridge	Bridge	HWY 101 Sb' / 'Castillo Street'	-
Bridge	Bridge	HWY 101 Sb' / 'Carrillo Street'	-
Bridge	Bridge	HWY 101 Sb' / 'Mission Street'	-
Bridge	Bridge	HWY 101 Nb' / 'Mission Street'	-
Bridge	Bridge	'State Route 225' / UPRR	-
Bridge	Bridge	HWY 101 Sb' / 'Garden Street'	-
Bridge	Bridge	HWY 101 Nb' / 'Garden Street'	-
Bridge	Bridge	HWY 101 Sb' / 'State Street'	-
Bridge	Bridge	HWY 101 Nb' / 'State Street'	-
Bridge	Bridge	HWY 101' / 'Sycamore Creek'	-
Bridge	Bridge	HWY 101' / 'Cacique Street'	-
Bridge	Bridge	'Mission Canyon Rd' / 'Mission Creek'	-
Bridge	Bridge	'Las Canoas Rd' / 'Rattlesnake Canyon'	-
Bridge	Bridge	'Ontare Road' / 'San Roque Creek'	-
Bridge	Bridge	'Hollister Ave' / 'Carneros Creek'	-
Bridge	Bridge	'Gutierrez St' / 'Mission Creek'	-
Bridge	Bridge	'State St' / 'Mission Creek'	-
Bridge	Bridge	'Castillo Street' / 'Mission Creek'	-
Bridge	Bridge	'Carrillo St' / 'Mission Creek'	-
Bridge	Bridge	'State Street' / 'San Roque Creek'	-
Bridge	Bridge	'Pueblo St' / 'Mission Creek'	-
Bridge	Bridge	'Montecito St' / 'Mission Creek'	-
Bridge	Bridge	'James Fowler Road' / 'San Pedro Creek'	-
Bridge	Bridge	'Quinientos St' / 'Sycamore Creek'	-
Bridge	Bridge	'Torino Drive' / 'Arroyo Burro Creek'	-
Bridge	Bridge	'Por Lamar Dr' / 'Sycamore Creek'	-
Bridge	Bridge	'Ninos Dr' / 'Sycamore Creek'	-
Bridge	Bridge	'Zoological Garden' / 'Sycamore Creek'	-
Bridge	Bridge	'Carpinteria St' / 'Sycamore Creek'	-
Bridge	Bridge	'De La Guerra St' / 'Mission Creek'	-
Bridge	Bridge	'Firestone' / 'Carneros Creek'	-
Bridge	Bridge	'Pedregosa Street' / 'Mission Creek'	-
Bridge	Bridge	'Calle De Los Amigo' / 'Arroyo Burro Creek'	-
Bridge	Bridge	'Fairview Ave' / 'Up Rr & Amtrak'	-
Bridge	Bridge	'East Cabrillo Blvd' / 'Laguna Channel'	-

Type	Name	Address	Total Building Value
Bridge	Bridge	'E Mason Street' / 'Sycamore Canyon Creek'	-
Bridge	Bridge	'De La Vina St' / 'Mission Creek'	-
Bridge	Bridge	'Ortega Street' / 'Mission Creek'	-
Bridge	Bridge	'Primavera Road' / 'Cieneguitas Creek'	-
Bridge	Bridge	'Hope Avenue' / 'Arroyo Burro Creek'	-
Bridge	Bridge	HWY 101 Sb' / 'Cabrillo Blvd'	-
Bridge	Bridge	HWY 101 Nb' / 'Cabrillo Blvd'	-
Bridge	Bridge	'State Route 192' / 'San Roque Canyon'	-
Bridge	Bridge	'State Route 192' / 'Sycamore Canyon Creek'	-
Bridge	Bridge	'State St (Wb)' / 'Us Highway 101'	-
Bridge	Bridge	'State St (Eb)' / 'Us Highway 101'	-
Bridge	Bridge	'State Route 225' / HWY 101'	-
Bridge	Bridge	HWY 101 Nb' / 'Carrillo Street'	-
Bridge	Bridge	HWY 101 Nb Rt Lane' / 'Mission Creek'	-
Bridge	Bridge	HWY 101' / 'Quarantina Street'	-
Bridge	Bridge	HWY 101' / 'Salsipuedes Street'	-
Bridge	Bridge	HWY 101 Sb' / 'Mission Creek'	-
Bridge	Bridge	HWY 101 Nb' / 'Mission Creek'	-
Bridge	Bridge	HWY 101 Sb' / 'Mission Creek'	-
Bridge	Bridge	HWY 101 Nb' / 'Mission Creek'	-
Bridge	Bridge	HWY 101' / 'Chapala St Equalizer'	-
Bridge	Bridge	'La Cumbre Road' / HWY 101'	-
Bridge	Bridge	'Micheltorena St' / HWY UPRR Mission'	-
Bridge	Bridge	HWY 101' / 'Milpas Street'	-
Bridge	Bridge	HWY 101' / 'Cacique Street'	-
Bridge	Bridge	'Cliff Drive' / 'Arroyo Burro Creek'	-
Bridge	Bridge	'Hollister Avenue' / 'San Pedro Creek'	-
Bridge	Bridge	'Mission St' / 'Mission Creek'	-
Bridge	Bridge	'Alamar Ave' / 'Mission Creek'	-
Bridge	Bridge	'State Street' / 'Mission Creek'	-
Bridge	Bridge	'Valerio St' / 'Mission Creek'	-
Bridge	Bridge	'Junipero Street' / 'Mission Creek'	-
Bridge	Bridge	'Tallant Road' / 'Mission Creek'	-
Bridge	Bridge	'Yanonali Street' / 'Laguna Drainage Channel'	-
Bridge	Bridge	'East Cabrillo Blvd' / 'Sycamore Creek'	-
Bridge	Bridge	'Chapala Street' / 'Mission Creek'	-
Bridge	Bridge	'Punta Gorda Road' / 'Punta Gorda Creek'	-

Type	Name	Address	Total Building Value
Bridge	Bridge	'Cliff Drive' / 'Hillside'	-
Bridge	Bridge	'Anapamu Street' / 'Old Mission Creek'	-
Bridge	Bridge	HWY 101 Nb' / 'Castillo Street'	-
Bridge	Bridge	'State Route 154' / 'La Colina Rd'	-
Bridge	Bridge	'State Route 154' / 'Primavera Rd'	-
Bridge	Bridge	'Hollister Avenue' / 'Tecolotito Creek'	-
Bridge	Bridge	'Arrellaga Street' / 'Mission Creek'	-
Bridge	Bridge	'De La Vina St' / 'Mission Creek'	-
Bridge	Bridge	'Islay St' / 'Mission Creek'	-
Bridge	Bridge	'Bath St' / 'Mission Creek'	-
Bridge	Bridge	'Matthews Street' / 'San Pedro Creek'	-
Government	Buses/Vehicles		-
Train Depot	Southern Pacific Train Depot	209 State Street	-

Using a GIS and the mapped extents of the hazards affecting the City, it was determined which critical facilities are exposed to which hazards depending on whether they fall within the mapped hazard area. The results of the exposure analysis are included in this section. A further description of the threats and methodologies used in this analysis is provided in Chapter 6.0, *Vulnerability Assessment* of the 2022 MJHMP. As the City continues to assess its vulnerability, the collection of better and more complete data will help to improve the risk assessment process to direct planning and mitigation decisions.

Table 6-2. Summary of Potential Impacts on Critical Facilities

Hazard Type	Specific Risk	Count	% of Critical Facilities Impacted	Exposure ($)
Wildfire	Moderate Wildfire Threat	6	3%	-
	Very High Wildfire Threat	1	0.5%	-
Earthquake	High Liquefaction Potential	75	32%	$2,034,893
	Moderate Liquefaction Potential	61	26%	-
Flood	1% Chance FEMA Flood Zone	73	31%	$2,034,893
	0.2% Chance FEMA Flood Zone	6	3%	-
Tsunami		23	10%	$2,034,893
Dam Failure	Lauro and Glen Annie Dam Failure	21	9%	-
Landslide	Class 7 and 9	40	17%	-
Coastal Hazards	Sea Level Rise (2030)	14	6%	-
	Sea Level Rise (2060)	19	8%	-

6.1 WILDFIRE

The City and surrounding landscape exhibit a complex wildfire environment that presents a significant wildfire risk due to steep and varied terrain, a mosaic of different vegetation types, and a Wildland-Urban Interface (WUI) development pattern. The southern side of the Santa Ynez Mountains, including portions of the City, has a significant history of devastating wildland fires, including 2 of the state's 20 most destructive wildfires—the 1990 Paint Fire and the 2017 Thomas Fire. The Santa Barbara Fire Department recognizes the catastrophic impact of wildfire in the community and is committed to reducing hazards and risk through fire protection, fuel hazard reduction, public education, preparedness, and community involvement.

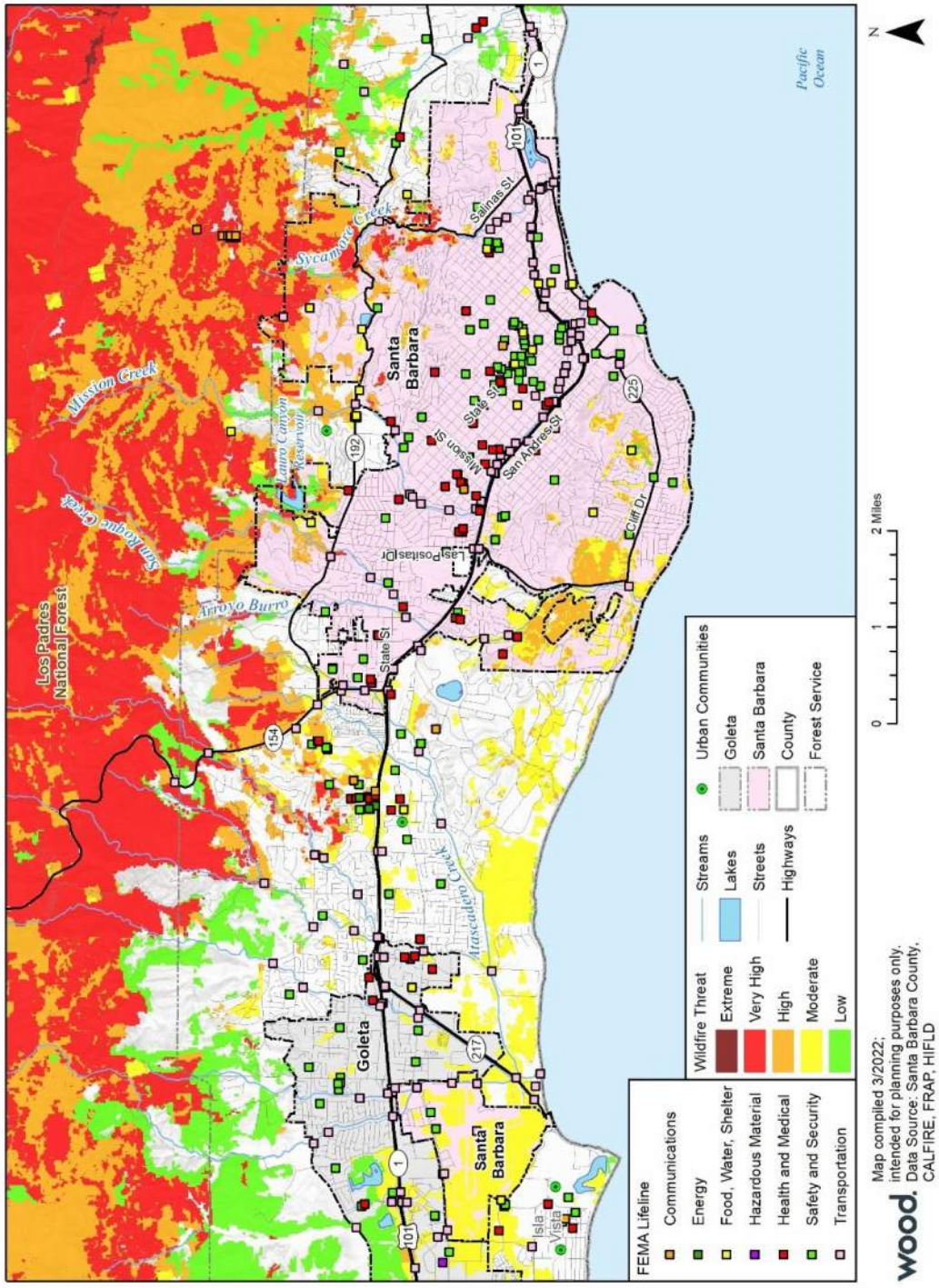
Santa Barbara County has extensive areas within mapped Fire Hazard Severity Zones and Wildland-Urban Interface (WUI) areas. These hazard areas generate vulnerability for life and structures, including critical facilities, throughout the county, but most severely within rural foothills areas where dry vegetation, steep slopes, and difficult access combine to create a high probability of wildfire. The City is surrounded by wildland vegetation and the western and southern slopes of the Santa Ynez Mountains. The City contains WUI area and has therefore been designated as a WUI community at risk. Based on these maps, the City has 321 acres (2.55 percent) within Very High Wildfire Threat areas, 746 acres (5.91 percent) within High Wildfire Threat areas, 942 acres (7.47 percent) within Moderate Wildfire Threat areas, and 94 acres (0.74 percent) within Low Wildfire Threat areas. Most of these areas are residential with limited vulnerabilities in commercial, agricultural, and industrial areas.

Based on the GIS analysis conducted for the 2022 MJHMP, in Santa Barbara, 561 improved properties with a total value of over $687 million are vulnerable to wildfire. In Santa Barbara, approximately 1,333 residents live in very high, high, moderate, or low wildfire threat areas. This information is summarized in Table 6-3 below (see also, Section 6.3.1, *Wildfire* of the 2022 MJHMP). Figure 6-1 shows the fire threat in the City. Fire threat is a combination of two factors: 1) fire frequency or the likelihood of a given area burning, and 2) potential fire behavior. These two factors are combined to create four threat classes ranging from Moderate to Extreme. While the probability for the City is likely lower due to the urban environment and the Pacific Ocean to the south, the threat remains Moderate. However, northern portions of the City are adjacent to High and Very High threat areas.

Table 6-3. City of Santa Barbara at Risk to Wildfire Threat

Property Type	Improved Parcel Count by Wildfire Threat Level						Total Value	Population
	Extreme	Very High	High	Moderate	Low	Total		
Agricultural	0	1	0	0	0	1	$90,528	
Commercial	0	0	1	6	0	7	$48,704,948	
Exempt	0	0	1	3	0	4	$4,194,834	
Industrial	0	0	0	1	0	1	$69,301,580	
Mixed Use	0	0	0	0	0	0	$0	0
Residential	0	60	198	253	33	544	$562,254,207	1,333
Improved Vacant	0	0	3	1	0	4	$2,935,184	
Total	**0**	**61**	**203**	**264**	**33**	**561**	**$687,481,281**	**1,333**

Figure 6-1. City of Santa Barbara Critical Facilities within Wildfire Threat Zones

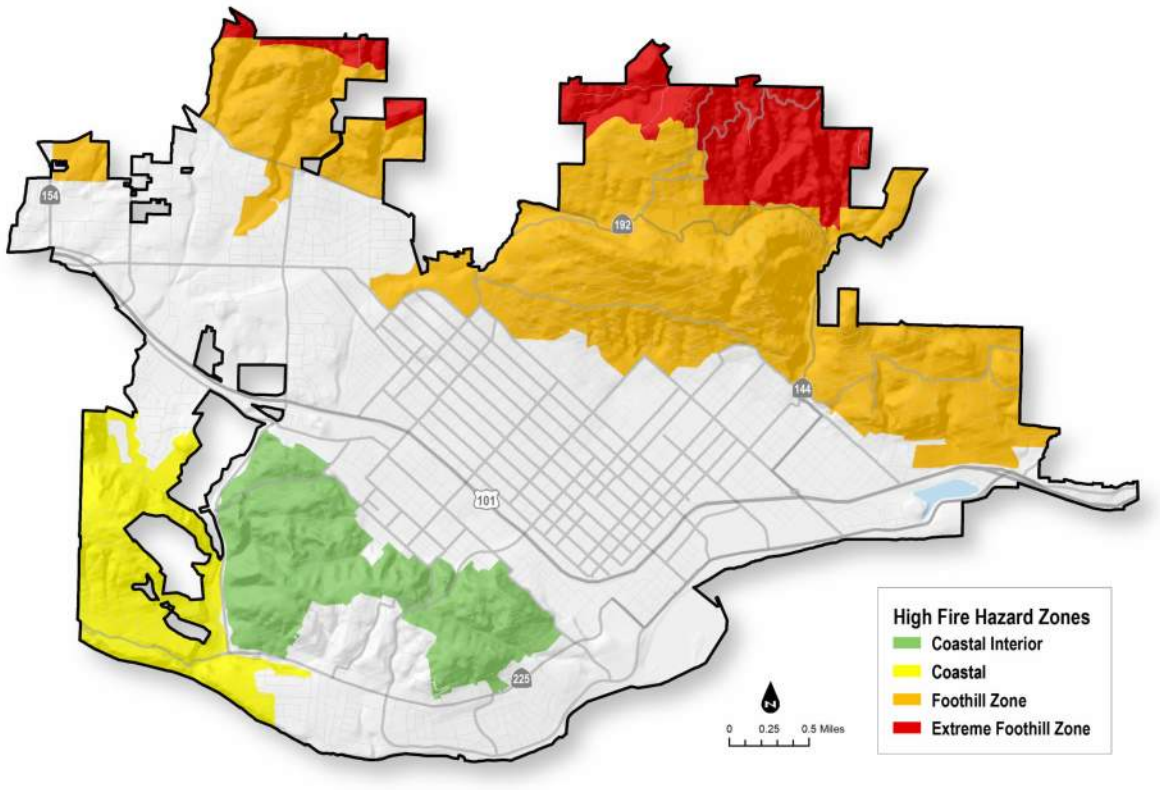


Seven of the City's critical facilities fall within Very High or Moderate wildfire threat areas, as listed in Table 6-4 (see also, Section 6.3.1, *Wildfire* of the 2022 MJHMP).

Table 6-4. City of Santa Barbara Critical Facilities Vulnerable to Wildfire

Type	Critical Facility	Hazard Source/Type	Total Building Value
Water Treatment Plant	Cater Water Treatment Plant	Moderate Wildfire Threat	-
Clinic	Sansum Clinic	Moderate Wildfire Threat	-
Airport	Santa Barbara Airport	Moderate Wildfire Threat	-
Bridge	Bridge	Very High Wildfire Threat	-
Bridge	Bridge	Moderate Wildfire Threat	-
Bridge	Bridge	Moderate Wildfire Threat	-
Bridge	Bridge	Moderate Wildfire Threat	-

The City has also delineated local High Fire Hazard Zones, linking to local wildfire management and response strategies in the CWPP. The CWPP is maintained to protect lives, property, and natural resources threatened by wildland fire. Development of the CWPP included an assessment of wildfire hazard to identify the High Fire Hazard Area of the City. The hazard assessment was used to evaluate the extent of the City's four High Fire Hazard Area Zones (Extreme Foothill, Foothill, Coastal Interior, and Coastal).



The CWPP includes an assessment of wildfire hazard, which involved modeling potential fire behavior in the City under extreme wind and weather conditions, consistent with conditions experienced during a Sundowner wind event. Other wildfire hazard variables were evaluated (terrain, weather, fuels, development patterns, fire department response, structure density, etc.) to identify the High Fire Hazard

6.2 EARTHQUAKE & LIQUEFACTION

Chapter 6.0, *Vulnerabilities Assessment* of the 2022 MJHMP addresses regional seismicity under two scenarios that include the City of Santa Barbara. The 2,500-year scenario considers general seismicity from multiple faults in the region and a 7.0 magnitude event. The methodology utilizes probabilistic seismic hazard contour maps developed by the U.S. Geological Survey (USGS) for the 2018 update of the National Seismic Hazard Maps that are included with Hazus-MH. A deterministic scenario was also prepared to predict the outcome of a specific earthquake event. The deterministic scenarios used USGS provided ShakeMap datasets to model a Magnitude 7.4 earthquake of the Red Mountain Fault. This scenario assesses the effect that an earthquake sourced from this fault would generate in terms of damages and losses for the chosen area of interest (i.e., southern Santa Barbara County, including the City). Figure 6-2 is the ShakeMap produced for this scenario.

As described in the MJHMP, regional losses to people and property would include the City. As shown in the Red Mountain Fault ShakeMap scenario, the south and central parts of the county would perceive much stronger shaking and would likely receive the most severe damage when compared to the rest of the county. The entire City would perceive severe to extreme shaking and would likely receive moderate/heavy to very heavy damage. Direct effects of ground shaking could damage buildings and create dangerous debris and unstable structures. Displaced residents would likely seek shelter in the City, including residents from outside the City. Further, fires often occur after an earthquake. Because of the number of fires and the lack of water to fight the fires, they can often burn out of control.

Unreinforced masonry building type structures consist of buildings made of unreinforced concrete and brick, hollow concrete blocks, clay tiles, and adobe. Buildings constructed of these materials are heavy and brittle and typically provide little earthquake resistance. In small earthquakes, unreinforced buildings can crack, and in strong earthquakes, they tend to collapse. The City does not have any known unreinforced masonry buildings.

The City lies in an area with high, moderate, and low liquefaction severity classes. Regional earthquakes could cause liquefaction in the City, which could damage buildings and utilities when soils become unstable. Based on the GIS analysis conducted for the 2022 MJHMP, the City has 123,784 improved parcels valued at over $21 billion in liquefaction severity zones. Based on this analysis, which accounts for residents only and not workers, 52,849 residents are living in this hazard zone within the City. While liquefaction would not likely affect all areas uniformly during an earthquake, this analysis indicates the extent and scale of vulnerabilities to liquefaction during a large earthquake.

Table 6-5. City of Santa Barbara at Risk to Liquefaction Hazard by Property Type

Property Type	Improved Parcel Count	Total Value	Population
High Liquefaction Hazard			
Agricultural	0	$0	
Commercial	441	$770,747,018	
Exempt	26	$40,500,456	

Property Type	Improved Parcel Count	Total Value	Population
Industrial	193	$386,752,938	
Mixed Use	43	$171,822,528	105
Residential	2,212	$2,036,799,933	5,419
Improved Vacant	9	$3,921,284	
Total High Liquefaction	**2,924**	**$3,410,544,157**	**5,525**
Moderate Liquefaction Hazard			
Agricultural	0	$0	
Commercial	432	$933,498,844	
Exempt	48	$179,684,078	
Industrial	113	$109,571,348	
Mixed Use	29	$153,807,638	71
Residential	5,868	$2,849,407,328	14,377
Improved Vacant	7	$4,990,218	
Total Moderate Liquefaction	**6,497**	**$4,230,959,453**	**14,448**
Low Liquefaction Hazard			
Agricultural	3	$1,476,116	
Commercial	755	$2,296,776,766	
Exempt	113	$2,098,371,104	
Industrial	7	$5,104,908	
Mixed Use	40	$131,219,472	98
Residential	13,379	$9,195,180,227	32,779
Improved Vacant	66	$60,205,324	
Total Low Liquefaction	**14,363**	**$13,788,333,916**	**32,877**
Total Liquefaction Hazard	**23,784**	**$21,429,837,526**	**52,849**

As listed in Table 6-6, all critical facilities in the City would be vulnerable to damage or destruction from ground shaking and liquefaction during a significant regional earthquake (Figure 6-3; see also, Section 6.2.1, *Earthquake (Groundshaking)* and Section 6.3.3, *Liquefaction (Earthquake)* of the 2022 MJHMP).

Table 6-6. City of Santa Barbara Critical Facilities Vulnerable to Groundshaking & Liquefaction

Type	Name	Address	Total Building Value
Communications	Vic Trace Ac		-
Paging Tower	Dial Page, Inc	923 Laguna Street	-
Paging Tower	Dial Page, Inc	320 West Pueblo Street	-
Community Center	Recreation	1232 De La Vina Street	-
Community Center	Recreation	100 E. Carrillo Street	-
Community Center	Lower Westside Community Center	629 Coronel Place	-

Type	Name	Address	Total Building Value
Community Center	Franklin Community Center	1136 E. Montecito Street	-
Hydrology Field	Hydrology Field Installations	735 Anacapa Street	$463,890
Reservoir	Escondido Pump Station and Reservoir	2300 Skyline Way	-
Reservoir	La Cornilla Pump Station and Vic Trace Reservoir	1631 La Coronilla Drive	-
Utilities	Sheffield Pump Station	2375 Foothill Road	-
Utilities	Skofield Pump Station	2117 Mount Calvary	-
Utilities	Laguna Pump Station	236 E. Cabrillo Blvd	-
Water District	Goleta West Water District	J Road	-
Water Treatment Plant	Cater Water Treatment Plant	1150 San Roque Road	-
Water Treatment Plant	Ortega Well Treatment Plant	220 E. Ortega Street	-
Water Treatment Plant	Ortega Well Treatment Plant	631 Garden St	-
Water Treatment Plant	Sheffield Treatment Plant	530 Mountain Drive	-
Water Treatment Plant	Charles E. Meyer Main Desalination Plant	525 E. Yananoli St.	-
Water Treatment Plant	SCADA / MCC Building	525 E. Yananoli St.	-
Water Treatment Plant	El Estero Water Resources Center	520 E. Yananoli St.	-
Clinic	McDonald Building Human Resources	1226 Anacapa Street	$1,036,791
Clinic	Sansum Clinic-Pesetas	215 Pesetas Ln	-
Clinic	Santa Barbara Community Dialysis Center	222 Pesetas Lane	-
Clinic	Valle Verde Health Facility- SNF	900 Calle De Los Amigos	-
Clinic	La Cumbre Senior Living Concepts	3880 Via Lucero	-
Clinic	Vista Del Monte Sunridge SNF	3775 Modoc Road	-
Clinic	Sansum Clinic-Hitchcock	51 Hitchcock	-
Clinic	Samarkand- Smith Center- SNF	2566 Treasure Drive	-
Clinic	Mission Terrace Convalescent Hospital	623 West Junipero Street	-
Clinic	Sansum Clinic- Ob/ Gyn	515 W. Pueblo St	-
Clinic	Cottage Rehabilitation Hospital	2415 De La Vina Street	-
Clinic	Sansum Clinic- Pueblo	317 Pueblo St	-
Clinic	Santa Barbara Cottage Hospital	Bath At Pueblo	-
Clinic	Santa Barbara Convalescent Hospital	2225 De La Vina Street	-

Type	Name	Address	Total Building Value
Clinic	Santa Barbara Neighborhood Clinic- Westside	628 W. Micheltorena Street	-
Clinic	Santa Barbara Artificial Kidney Center	1704 State Street, #2	-
Clinic	Santa Barbara Neighborhood Clinic- Eastside	915 N Milpas St	-
Clinic	PhD Franklin Clinic	1136 Montecito St	-
Clinic	PhD Children's Medical Services	1111 Chapala Street	$375,583
EMS Station	American Medical Response Station 3	415 West Figueroa Street	-
EMS Station	American Medical Response Station 4	1025 Castillo Street	-
Nursing Home	Cliff View Terrace	1020 Cliff Drive	-
Nursing Home	Alto Lucero Transitional Care	3880 Via Lucero	-
Nursing Home	The Californian	2225 De La Vina St	-
Nursing Home	Alexander Court	325 W Islay St	-
Nursing Home	Samarkand Skilled Nursing Facility	2566 Treasure Dr	-
Nursing Home	Samarkand of Santa Barbara	2550 Treasure Drive	-
Nursing Home	Wood Glen Hall, Inc.	3010 Foothill Road	-
Nursing Home	Mission Villa	321 West Mission Street	-
Nursing Home	Vista Del Monte	3775 Modoc Road	-
Nursing Home	Valle Verde Health Facility	900 Calle De Los Amigos	-
Nursing Home	Alexander Gardens	2120 Santa Barbara Street	-
Nursing Home	Mission Terrace Convalescent Hospital	623 W Junipero St	-
Nursing Home	Oak Cottage of Santa Barbara Memory Care	1820 Delavina Street	-
Nursing Home	Garden Court at Villa Santa Barbara	227 E. Anapamu Street	-
Nursing Home	Villa Alamar	45 East Alamar	-
Nursing Home	Villa Riviera	1621 Grand Avenue	-
Nursing Home	Mountain House	37 Mountain Drive	-
Nursing Home	At Home in Santa Barbara	1801 Bath Street	-
Veteran Services	Sb Veterans Memorial Bldg.	112 W. Cabrillo Blvd.	$2,034,893
Aiport Patrol	Santa Barbara Airport Patrol	601 Firestone Road	-
Colleges / Universities	Fielding Graduate University	2020 De La Vina St	-
Colleges / Universities	The Santa Barbara and Ventura Colleges of Law At Santa Barbara	20 E Victoria St	-
Colleges / Universities	Antioch University-Santa Barbara	602 Anacapa Street	-
Colleges / Universities	Santa Barbara City College	721 Cliff Drive	-

Type	Name	Address	Total Building Value
Court	County Courthouse	1100 Anacapa Street	$40,553,793
Court	Sb Superior Court Building	118 E. Figueroa Street	$9,343,534
Court	County Courthouse Annex	1100 Anacapa St	$6,023,849
Court	Court Services Bldg	118 E. Figueroa Street	$357,608
Education	Saint Vincent Orphanage and School Building	925 De La Vina Street	-
Education	Santa Barbara Unified Early Childhood	1030 E. Yanonali St.	-
Education	Adelante Charter	1102 E. Yanonali St.	-
Education	Franklin Elementary	1111 E. Mason St.	-
Education	Harding University Partnership	1625 Robbins St.	-
Education	Monte Vista Elementary	730 N. Hope Ave.	-
Education	Alta Vista Alternative High	215 E. Ortega St.	-
Education	McKinley Elementary	350 Loma Alta Dr.	-
Education	Roosevelt Elementary	1990 Laguna St.	-
Education	Open Alternative	4025 Foothill Rd.	-
Education	Monroe Elementary	431 Flora Vista Dr.	-
Education	Alta Vista Alternative Junior High	215 E. Ortega St.	-
Education	La Cumbre Junior High	2255 Modoc Rd.	-
Education	Santa Barbara Community Academy	850 Portesuello Ave.	-
Education	Adams Elementary	2701 Las Positas Rd.	-
Education	Santa Barbara Junior High	721 E. Cota St.	-
Education	Santa Barbara Senior High	700 E. Anapamu St.	-
Education	La Cuesta Continuation High	710 Santa Barbara St.	-
Education	Washington Elementary	290 Lighthouse Rd.	-
Education	Hope Elementary	3970-A La Colina Rd.	-
Education	La Colina Junior High	4025 Foothill Rd.	-
Education	Cleveland Elementary	123 Alameda Padre Serra	-
Education	Peabody Charter	3018 Calle Noguera	-
Education	Providence-SBCS	3723 Modoc Rd	-
Education	El Montecito School San Roque	3225 Calle Pinon	-
Education	Notre Dame School	33 E Micheltorena St	-
Education	Bishop Garcia Diego High School	4000 La Colina Rd	-
Education	Sunrise Montessori School	1201 E Yanonali St	-
Education	Providence	630 E Canon Perdido St	-
Education	Santa Barbara Middle School	1321 Alameda Padre Serra	-
Education	The Knox School of Santa Barbara	1525 Santa Barbara St	-
Education	Eureka School of Santa Barbara	3324 State St Ste M	-
Education	St Therese Classical Academy	33 E Micheltorena St	-

Type	Name	Address	Total Building Value
Fire Station	Fire Station 4	19 N. Ontare Road	-
Fire Station	Fire Station 5	2505 Modoc Road	-
Fire Station	Fire Station 6	1802 Cliff Drive	-
Fire Station	Fire Station 1	121 W. Carrillo St	-
Fire Station	Fire Station 3	415 E. Sola Street	-
Fire Station	Fire Station 7	605 Mission Ridge Road	-
Fire Station	Fire Training	30 S. Olive Street (2 S. Cesar Chavez)	-
Fire Station	Fire Station 2	819 Cacique	-
Fire Station	Airport Fire Station 8	40 Hartley Place	-
Government	Administration Building	105 E. Anapamu Street	$27,266,352
Government	Engineering Building	123 E. Anapamu Street	$11,145,938
Government	Sbch East Wing	1105 Santa Barbara Street	$7,308,080
Government	Probation Building	117 E. Carrillo Street	$4,216,037
Government	Hall Of Records	1100 Anacapa Street	$4,179,732
Government	Schwartz Building	130 E Victoria St	$2,652,501
Government	City Hall	735 Anacapa Street	-
Government	Public Works	220 E. Ortega Street	-
Government	Public Works	630 Garden Street	-
Government	Community Development	630 Garden Street	-
Government	Public Works	630 Garden Street	-
Government	Public Works Yard	635 Laguna Street	-
Government	Admin Well Corp. at Parks Department	402 East Ortega Street	-
Government	Parks And Recreation	620 Laguna St.	-
Government	ADMHS Offices	2034 De La Vina Street	$145,154
Government	Sb Child Support Office	4 East Carrillo Street	$199,401
Harbor Patrol	Santa Barbara Waterfront Harbor Patrol	132 Harbor Way A, Po Box 1990	-
Historic Site	Virginia Hotel	17 And 23 West Haley Street	-
Historic Site	Mission Santa Barbara	2201 Laguna Street	-
Historic Site	Janssens-Orella-Birk-Building	1029 - 1031 State Street	-
Historic Site	Hill-Carrillo Adobe	11 East Carrillo Street	-
Historic Site	Old Lobero Theatre	33 E. Canon Perdido	-
Historic Site	Casa De La Guerra	808-818 State Street, 813 - 819 Anacapa Street, 9 - 25 E. De La Guerra Street	-
Historic Site	Santa Barbara Presidio	123 East Canon Perdido Street	-
Historic Site	Hastings Adobe	414 W. Montecito Street	-
Historic Site	Covarrubias Adobe	715 Santa Barbara Street	-
Historic Site	Rafael Gonzalez House	835 Laguna Street	-
Historic Site	Faith Mission	409 State Street	-

Type	Name	Address	Total Building Value
Historic Site	Los Banos Del Mar	401 Shoreline Drive	-
Historic Site	Andalucía Building	316 - 324 State Street	-
Historic Site	Burton Mound	129 W. Mason At Burton Circle	-
Police	Police Department	215 E. Figueroa St.	-
Post Office	US Post Office Main	836 Anacapa Street	-
Airport	Santa Barbara Airport	500 James Fowler Road	-
Bridge	Bridge	'Olive Mill Road' / 'U.S. Highway 101'	-
Bridge	Bridge	'State Route 192' / 'Mission Creek'	-
Bridge	Bridge	HWY 101 Sb' / 'Castillo Street'	-
Bridge	Bridge	HWY 101 Sb' / 'Carrillo Street'	-
Bridge	Bridge	HWY 101 Sb' / 'Mission Street'	-
Bridge	Bridge	HWY 101 Nb' / 'Mission Street'	-
Bridge	Bridge	'State Route 225' / UPRR	-
Bridge	Bridge	HWY 101 Sb' / 'Garden Street'	-
Bridge	Bridge	HWY 101 Nb' / 'Garden Street'	-
Bridge	Bridge	HWY 101 Sb' / 'State Street'	-
Bridge	Bridge	HWY 101 Nb' / 'State Street'	-
Bridge	Bridge	HWY 101' / 'Sycamore Creek'	-
Bridge	Bridge	HWY 101' / 'Cacique Street'	-
Bridge	Bridge	'Mission Canyon Rd' / 'Mission Creek'	-
Bridge	Bridge	'Las Canoas Rd' / 'Rattlesnake Canyon'	-
Bridge	Bridge	'Ontare Road' / 'San Roque Creek'	-
Bridge	Bridge	'Hollister Ave' / 'Carneros Creek'	-
Bridge	Bridge	'Gutierrez St' / 'Mission Creek'	-
Bridge	Bridge	'State St' / 'Mission Creek'	-
Bridge	Bridge	'Castillo Street' / 'Mission Creek'	-
Bridge	Bridge	'Carrillo St' / 'Mission Creek'	-
Bridge	Bridge	'State Street' / 'San Roque Creek'	-
Bridge	Bridge	'Pueblo St' / 'Mission Creek'	-
Bridge	Bridge	'Montecito St' / 'Mission Creek'	-
Bridge	Bridge	'James Fowler Road' / 'San Pedro Creek'	-
Bridge	Bridge	'Quinientos St' / 'Sycamore Creek'	-
Bridge	Bridge	'Torino Drive' / 'Arroyo Burro Creek'	-
Bridge	Bridge	'Por Lamar Dr' / 'Sycamore Creek'	-
Bridge	Bridge	'Ninos Dr' / 'Sycamore Creek'	-
Bridge	Bridge	'Zoological Garden' / 'Sycamore Creek'	-
Bridge	Bridge	'Carpinteria St' / 'Sycamore Creek'	-
Bridge	Bridge	'De La Guerra St' / 'Mission Creek'	-
Bridge	Bridge	'Firestone' / 'Carneros Creek'	-
Bridge	Bridge	'Pedregosa Street' / 'Mission Creek'	-

Type	Name	Address	Total Building Value
Bridge	Bridge	'Calle De Los Amigo' / 'Arroyo Burro Creek'	-
Bridge	Bridge	'Fairview Ave' / 'Up Rr & Amtrak'	-
Bridge	Bridge	'East Cabrillo Blvd' / 'Laguna Channel'	-
Bridge	Bridge	'E Mason Street' / 'Sycamore Canyon Creek'	-
Bridge	Bridge	'De La Vina St' / 'Mission Creek'	-
Bridge	Bridge	'Ortega Street' / 'Mission Creek'	-
Bridge	Bridge	'Primavera Road' / 'Cieneguitas Creek'	-
Bridge	Bridge	'Hope Avenue' / 'Arroyo Burro Creek'	-
Bridge	Bridge	HWY 101 Sb' / 'Cabrillo Blvd'	-
Bridge	Bridge	HWY 101 Nb' / 'Cabrillo Blvd'	-
Bridge	Bridge	'State Route 192' / 'San Roque Canyon'	-
Bridge	Bridge	'State Route 192' / 'Sycamore Canyon Creek'	-
Bridge	Bridge	'State St (Wb)' / 'Us Highway 101'	-
Bridge	Bridge	'State St (Eb)' / 'Us Highway 101'	-
Bridge	Bridge	'State Route 225' / HWY 101'	-
Bridge	Bridge	HWY 101 Nb' / 'Carrillo Street'	-
Bridge	Bridge	HWY 101 Nb Rt Lane' / 'Mission Creek'	-
Bridge	Bridge	HWY 101' / 'Quarantina Street'	-
Bridge	Bridge	HWY 101' / 'Salsipuedes Street'	-
Bridge	Bridge	HWY 101 Sb' / 'Mission Creek'	-
Bridge	Bridge	HWY 101 Nb' / 'Mission Creek'	-
Bridge	Bridge	HWY 101 Sb' / 'Mission Creek'	-
Bridge	Bridge	HWY 101 Nb' / 'Mission Creek'	-
Bridge	Bridge	HWY 101' / 'Chapala St Equalizer'	-
Bridge	Bridge	'La Cumbre Road' / HWY 101'	-
Bridge	Bridge	'Micheltorena St' / HWY UPRR Mission'	-
Bridge	Bridge	HWY 101' / 'Milpas Street'	-
Bridge	Bridge	HWY 101' / 'Cacique Street'	-
Bridge	Bridge	'Cliff Drive' / 'Arroyo Burro Creek'	-
Bridge	Bridge	'Hollister Avenue' / 'San Pedro Creek'	-
Bridge	Bridge	'Mission St' / 'Mission Creek'	-
Bridge	Bridge	'Alamar Ave' / 'Mission Creek'	-
Bridge	Bridge	'State Street' / 'Mission Creek'	-
Bridge	Bridge	'Valerio St' / 'Mission Creek'	-
Bridge	Bridge	'Junipero Street' / 'Mission Creek'	-
Bridge	Bridge	'Tallant Road' / 'Mission Creek'	-
Bridge	Bridge	'Yanonali Street' / 'Laguna Drainage Channel'	-

Type	Name	Address	Total Building Value
Bridge	Bridge	'East Cabrillo Blvd' / 'Sycamore Creek'	-
Bridge	Bridge	'Chapala Street' / 'Mission Creek'	-
Bridge	Bridge	'Punta Gorda Road' / 'Punta Gorda Creek'	-
Bridge	Bridge	'Cliff Drive' / 'Hillside'	-
Bridge	Bridge	'Anapamu Street' / 'Old Mission Creek'	-
Bridge	Bridge	HWY 101 Nb' / 'Castillo Street'	-
Bridge	Bridge	'State Route 154' / 'La Colina Rd'	-
Bridge	Bridge	'State Route 154' / 'Primavera Rd'	-
Bridge	Bridge	'Hollister Avenue' / 'Tecolotito Creek'	-
Bridge	Bridge	'Arrellaga Street' / 'Mission Creek'	-
Bridge	Bridge	'De La Vina St' / 'Mission Creek'	-
Bridge	Bridge	'Islay St' / 'Mission Creek'	-
Bridge	Bridge	'Bath St' / 'Mission Creek'	-
Bridge	Bridge	'Matthews Street' / 'San Pedro Creek'	-
Government	Buses/Vehicles		-
Train Depot	Southern Pacific Train Depot	209 State Street	-

Figure 6-2. City of Santa Barbara Critical Facilities and Earthquake Groundshaking Potential (Red Mountain Fault 7.4 Magnitude ShakeMap)

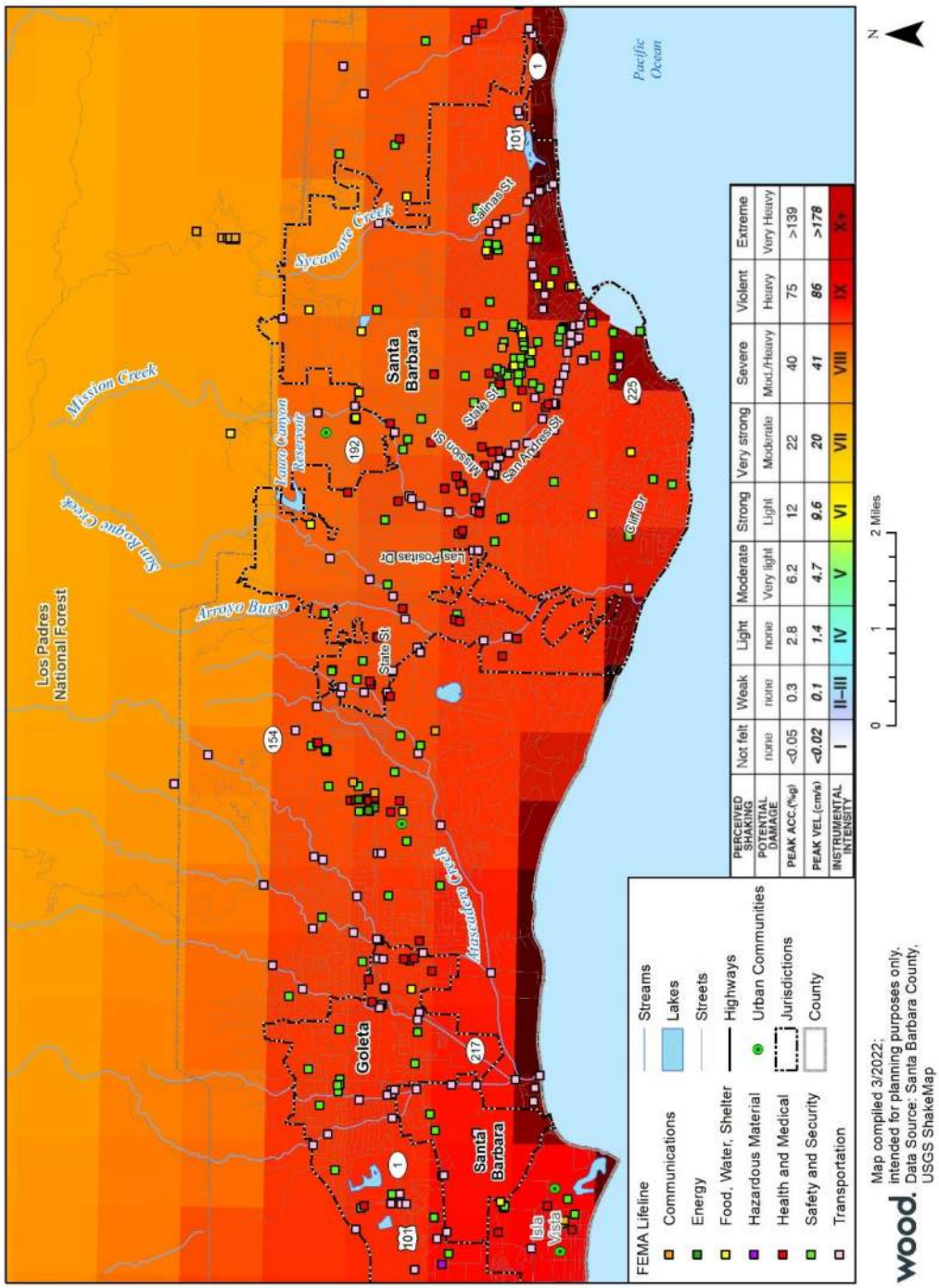
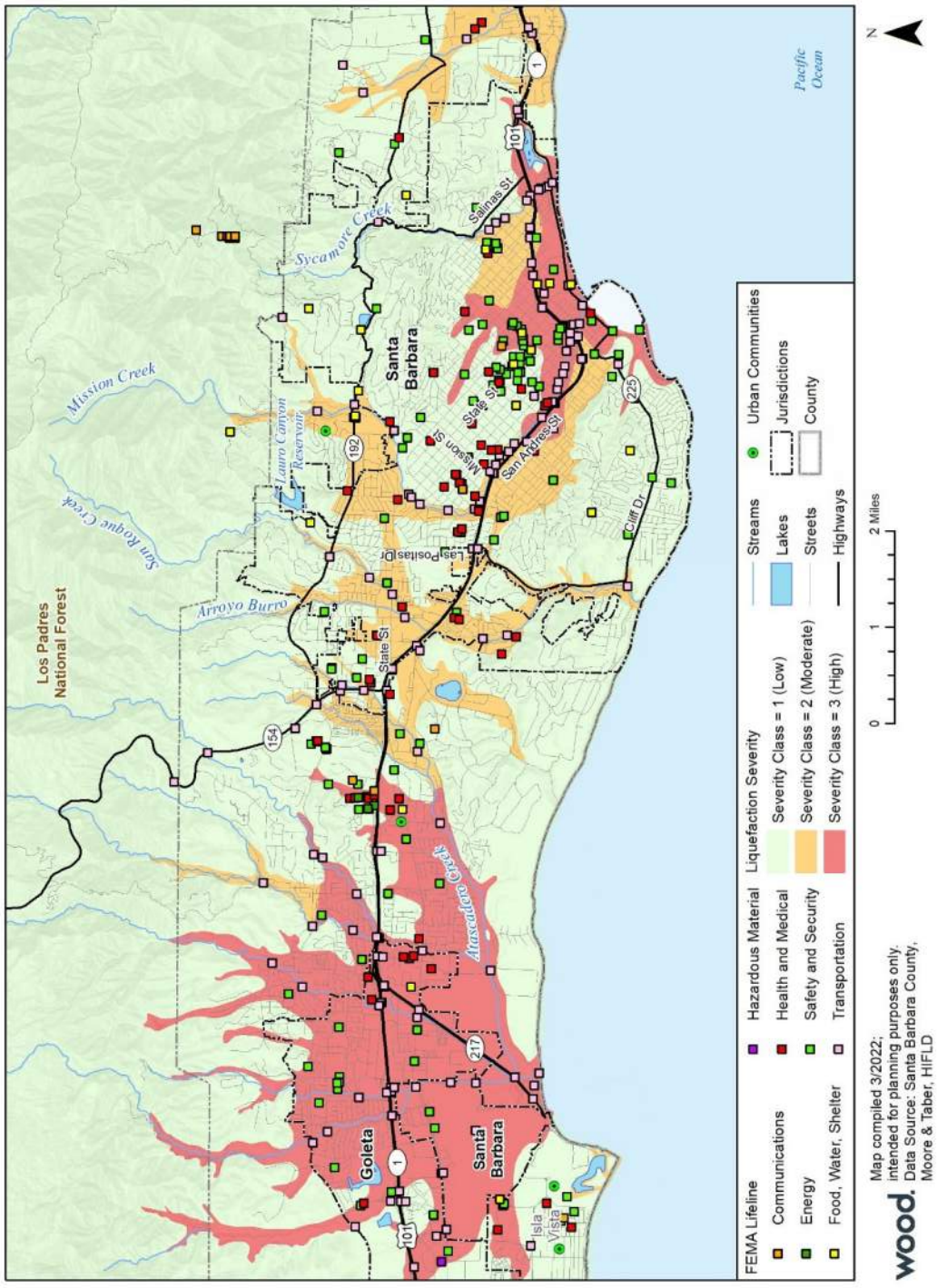


Figure 6-3. City of Santa Barbara Critical Facilities and Liquefaction Potential



6.3 FLOOD

The geographical location, climate, and topography of the South Coast make some areas of the City prone to flooding, particularly near the coastline and low-lying creek corridors. Flooding presents a hazard to development in floodplains. In addition to the damage to properties, flooding can also cut off access to utilities, emergency services, transportation, and may impact the overall economic well-being of an area. Emergency response can be interrupted by damaged roads and infrastructure. Fire can break out as a result of dysfunctional electrical equipment. Hazardous materials can also get into floodways, causing health concerns and polluted water supplies. During a flood, the drinking water supply can be contaminated. Climate change is expected to increase the frequency and intensity of heavy rainstorms that cause riverine flooding.

Based on the GIS analysis conducted for the 2022 MJHMP, the City has 1,792 improved parcels valued at over $1.9 billion in the 1-percent annual chance floodplain. Based on this analysis, which accounts for residents only and not workers, 3,339 residents are living in the 1-percent annual chance floodplain throughout the City. An additional 515 improved parcels and over $564 million in value fall within the 0.2-percent annual chance floodplain. Areas of the City vulnerable to the 0.2-percent annual chance riverine flood are home to 1,063 residents. Development in the 0.2-percent annual chance floodplain is typically not regulated, thus a large flood event could be extremely damaging in the City. This information is summarized in Table 6-7 below.

Table 6-7. City of Santa Barbara FEMA Floodplain Exposure and Loss

Property Type	Improved Parcel Count	Total Value	Estimated Loss	Population
Riverine 1% Annual Chance Floodplain Exposure and Loss				
Commercial	238	$503,338,458	$125,834,615	
Exempt	20	$60,896,806	$15,224,202	
Industrial	166	$242,179,170	$60,544,793	
Mixed Use	23	$81,217,906	$20,304,477	
Residential	1,340	$1,031,372,627	$257,843,157	
Improved Vacant	5	$2,968,766	$742,192	
Total 1% Chance	**1,792**	**$1,921,973,733**	**$480,493,433**	3,339
Riverine 0.2% Annual Chance Floodplain Exposure and Loss				
Commercial	73	$147,840,838	$36,960,210	
Exempt	5	$27,790,650	$6,947,663	
Industrial	3	$80,753,765	$20,188,441	
Mixed Use	5	$30,479,344	$7,619,836	
Residential	429	$277,449,645	$69,362,411	
Total 0.2% Chance	**515**	**$564,314,242**	**$141,078,561**	1,063
Total Flood Hazard	**2,307**	**$2,486,287,975**	**$624,571,994**	**4,403**

As listed in Table 6-8, 79 critical facilities in the City with a total value of $2,034,893 would be vulnerable to damage or destruction from 1-percent or 0.2-percent annual chance flood (Figure 6-4; see also, Section 6.3.3, *Flood* of the 2022 MJHMP).

Table 6-8. City of Santa Barbara Critical Facilities at Risk to Flood Hazard

Type	Critical Facility	FEMA Flood Chance	Total Building Value
Utilities	Sheffield Pump Station	1% Chance	-
Utilities	Laguna Pump Station	1% Chance	-
Water District	Goleta West Water District	1% Chance	-
Water Treatment Plant	Charles E. Meyer Main Desalination Plant	1% Chance	-
Water Treatment Plant	SCADA / MCC Building	1% Chance	-
Clinic	Vista Del Monte Sunridge SNF	1% Chance	-
Clinic	Mission Terrace Convalescent Hospital	0.2% Chance	-
Clinic	Sansum Clinic- Ob/ Gyn	1% Chance	-
Nursing Home	Vista Del Monte	1% Chance	-
Nursing Home	Mission Terrace Convalescent Hospital	0.2% Chance	-
Veteran Services	Sb Veterans Memorial Bldg.	1% Chance	$2,034,893
Airport Patrol	Santa Barbara Airport Patrol	1% Chance	-
Education	Santa Barbara Junior High	1% Chance	-
Education	Providence-SBCS	1% Chance	-
Education	El Montecito School San Roque	1% Chance	-
Fire Station	Fire Training	1% Chance	-
Fire Station	Airport Fire Station 8	1% Chance	-
Government	Public Works Yard	1% Chance	-
Government	Admin Well Corp. at Parks Department	1% Chance	-
Government	Parks And Recreation	1% Chance	-
Historic Site	Hastings Adobe	1% Chance	-
Historic Site	Los Banos Del Mar	1% Chance	-
Historic Site	Burton Mound	1% Chance	-
Airport	Santa Barbara Airport	1% Chance	-
Bridge	Bridge	1% Chance	-
Bridge	Bridge	1% Chance	-
Bridge	Bridge	1% Chance	-
Bridge	Bridge	1% Chance	-
Bridge	Bridge	1% Chance	-
Bridge	Bridge	1% Chance	-
Bridge	Bridge	1% Chance	-
Bridge	Bridge	1% Chance	-
Bridge	Bridge	1% Chance	-
Bridge	Bridge	0.2% Chance	-
Bridge	Bridge	1% Chance	-
Bridge	Bridge	1% Chance	-
Bridge	Bridge	0.2% Chance	-
Bridge	Bridge	1% Chance	-
Bridge	Bridge	1% Chance	-
Bridge	Bridge	1% Chance	-

Type	Critical Facility	FEMA Flood Chance	Total Building Value
Bridge	Bridge	1% Chance	-
Bridge	Bridge	0.2% Chance	-
Bridge	Bridge	1% Chance	-
Bridge	Bridge	1% Chance	-
Bridge	Bridge	1% Chance	-
Bridge	Bridge	1% Chance	-
Bridge	Bridge	1% Chance	-
Bridge	Bridge	1% Chance	-
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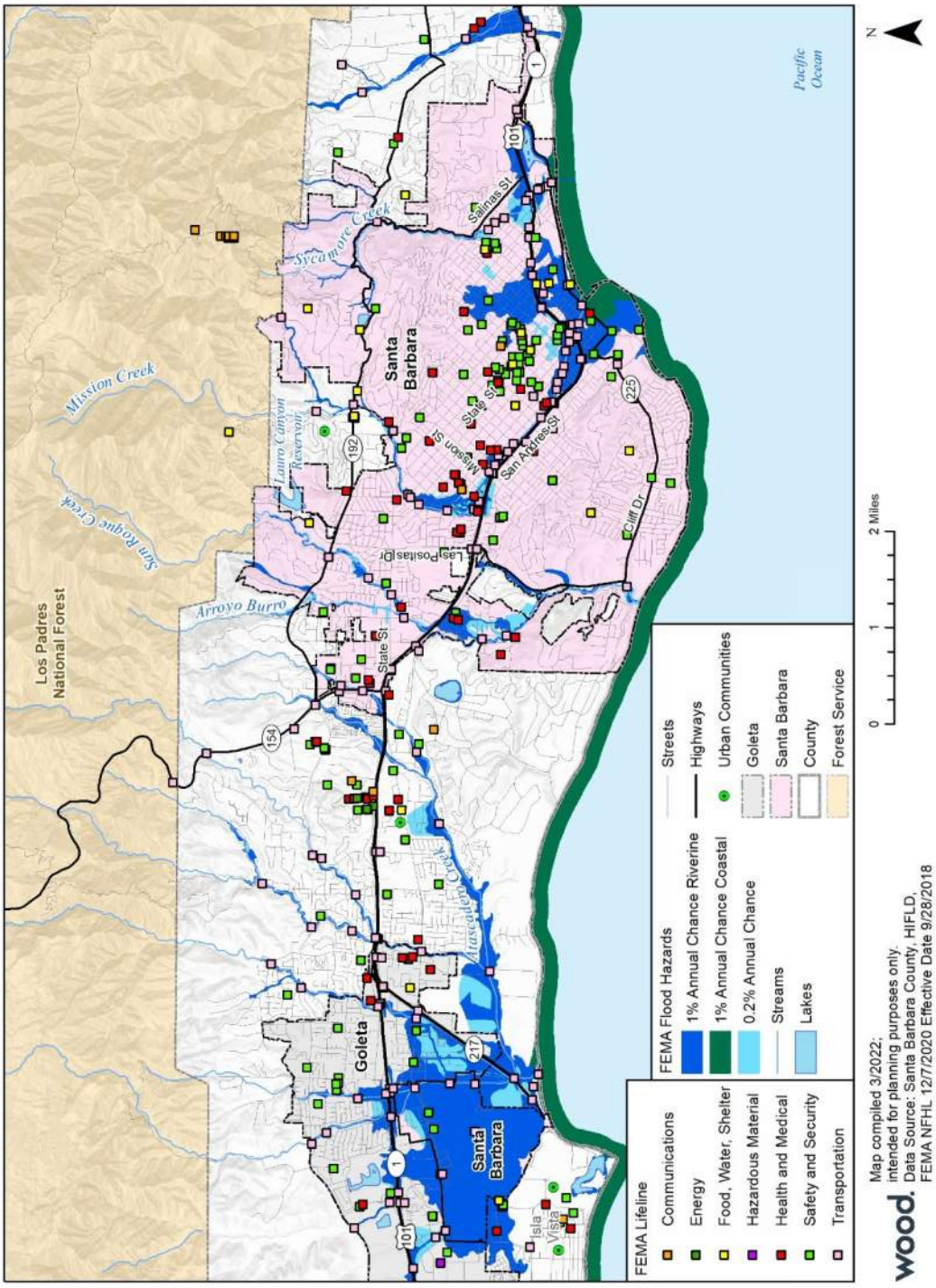
Bridge	Bridge	1% Chance	-
Bridge	Bridge	1% Chance	-
Bridge	Bridge	1% Chance	-
Bridge	Bridge	1% Chance	-
Bridge	Bridge	1% Chance	-
Bridge	Bridge	1% Chance	-
Bridge	Bridge	1% Chance	-
Bridge	Bridge	0.2% Chance	-
Bridge	Bridge	1% Chance	-
Bridge	Bridge	1% Chance	-
Airport	Bridge	1% Chance	-
Bridge	Bridge	1% Chance	-
Bridge	Bridge	1% Chance	-
Bridge	Bridge	1% Chance	-
Bridge	Bridge	1% Chance	-
Bridge	Bridge	1% Chance	-
Bridge	Bridge	1% Chance	-
Bridge	Bridge	1% Chance	-
Bridge	Bridge	1% Chance	-
Bridge	Bridge	1% Chance	-
Bridge	Bridge	1% Chance	-
Bridge	Bridge	1% Chance	-
Bridge	Bridge	1% Chance	-
Bridge	Bridge	1% Chance	-
Bridge	Bridge	1% Chance	-
Train Depot	Southern Pacific Train Depot	1% Chance	-

Figure 6-4. City of Santa Barbara Critical Facilities in FEMA Flood Hazard Zones



6.4 TSUNAMI

Based on the GIS analysis conducted for the 2022 MJHMP, the City has 890 improved parcels valued at over $1.3 billion in the tsunami hazard zone. Based on this analysis, which accounts for residents only and not workers, 1,580 residents are living in the tsunami hazard zone throughout the City. This information is summarized in Table 6-9 below and depicted in Figure 6-5.

Table 6-9. City of Santa Barbara at Risk to Tsunami Hazard

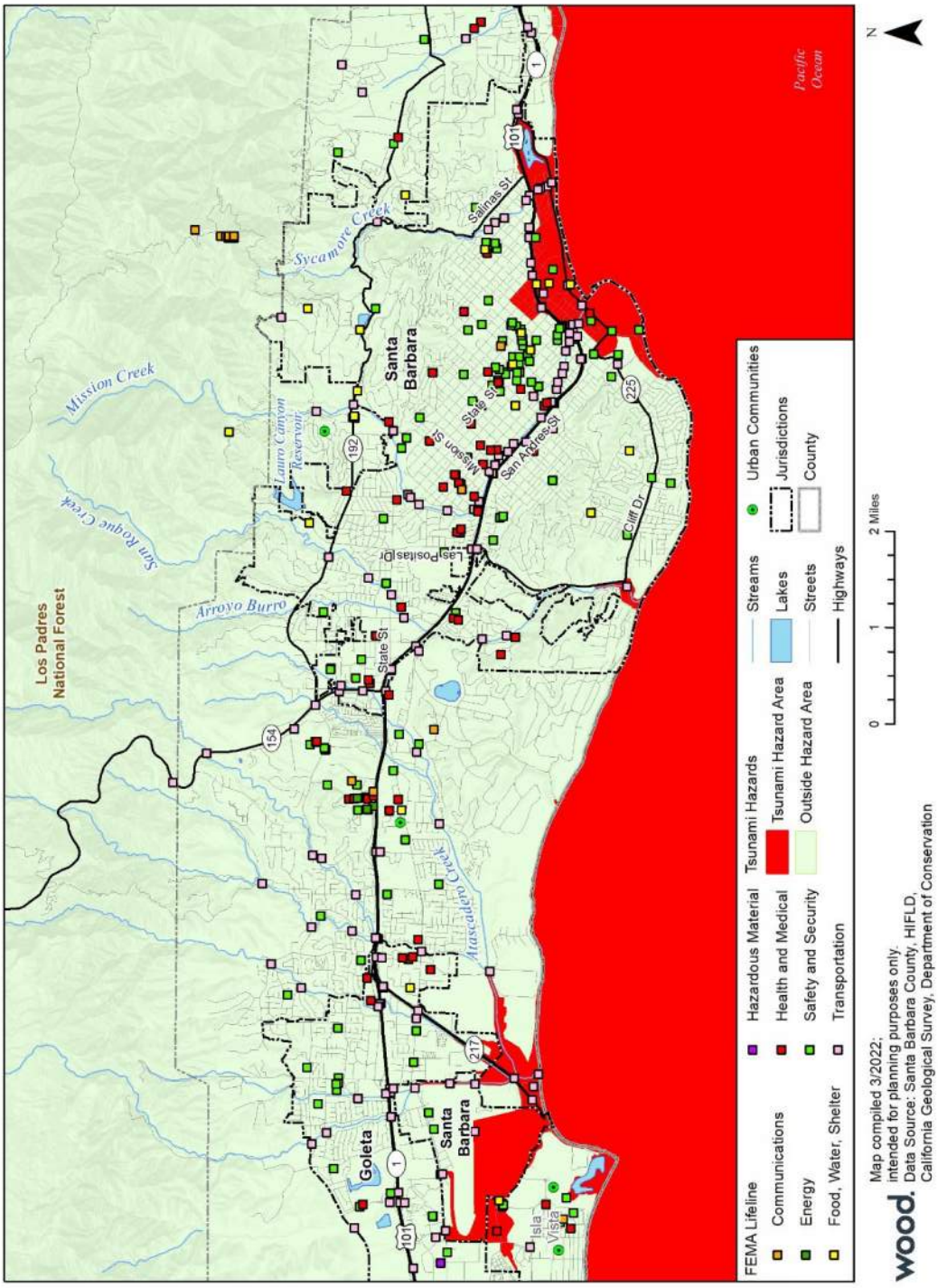
Property Type	Improved Parcel Count	Total Value	Population
Commercial	113	$225,256,702	
Exempt	4	$12,479,014	
Industrial	128	$186,632,753	
Mixed Use	7	$12,260,718	17
Residential	638	$951,704,762	1,563
Improved Vacant	3	$1,794,022	
Total	**890**	**$1,388,333,948**	**1,580**

As listed in Table 6-10, 23 critical facilities in the City would be vulnerable to damage or destruction from tsunami inundation (See also, Section 6.3.9, *Tsunami* of the 2022 MJHMP).

Table 6-10. City of Santa Barbara Critical Facilities Vulnerable to Tsunami

Type	Name	Total Building Value
Utilities	Laguna Pump Station	-
Water Treatment Plant	Charles E. Meyer Main Desalination Plant	-
Water Treatment Plant	Scada / Mcc Building	-
Water Treatment Plant	El Estero Water Resources Center	-
Veteran Services	Sb Veterans Memorial Bldg.	$2,034,893
Fire Station	Fire Training	-
Fire Station	Fire Station 2	-
Harbor Patrol	Santa Barbara Waterfront Harbor Patrol	-
Historic Site	Los Banos Del Mar	-
Historic Site	Burton Mound	-
Airport	Santa Barbara Airport	-
Bridge	Bridge	-
Bridge	Bridge	-
Bridge	Bridge	-
Bridge	Bridge	-
Bridge	Bridge	-
Bridge	Bridge	-
Bridge	Bridge	-
Bridge	Bridge	-
Bridge	Bridge	-
Bridge	Bridge	-
Bridge	Bridge	-
Bridge	Bridge	-

Figure 6-5. City of Santa Barbara Critical Facilities in Tsunami Hazard Zone



6.5 DAM FAILURE

Lauro Dam is of the largest concern to the City of Santa Barbara. Failure of Lauro Dam would inundate portions of the City with relatively little evacuation time. Based on the GIS analysis conducted for the 2022 MJHMP, in Santa Barbara, 1,224 properties with a total value of $808 million are vulnerable to the catastrophic flooding that would occur if Lauro Dam failed. Approximately 2,754 residents within the inundation zone may need to be evacuated, cared for, and possibly permanently relocated. This information is summarized in Table 6-11 below.

Table 6-11. City of Santa Barbara at Risk to Dam Inundation Hazard

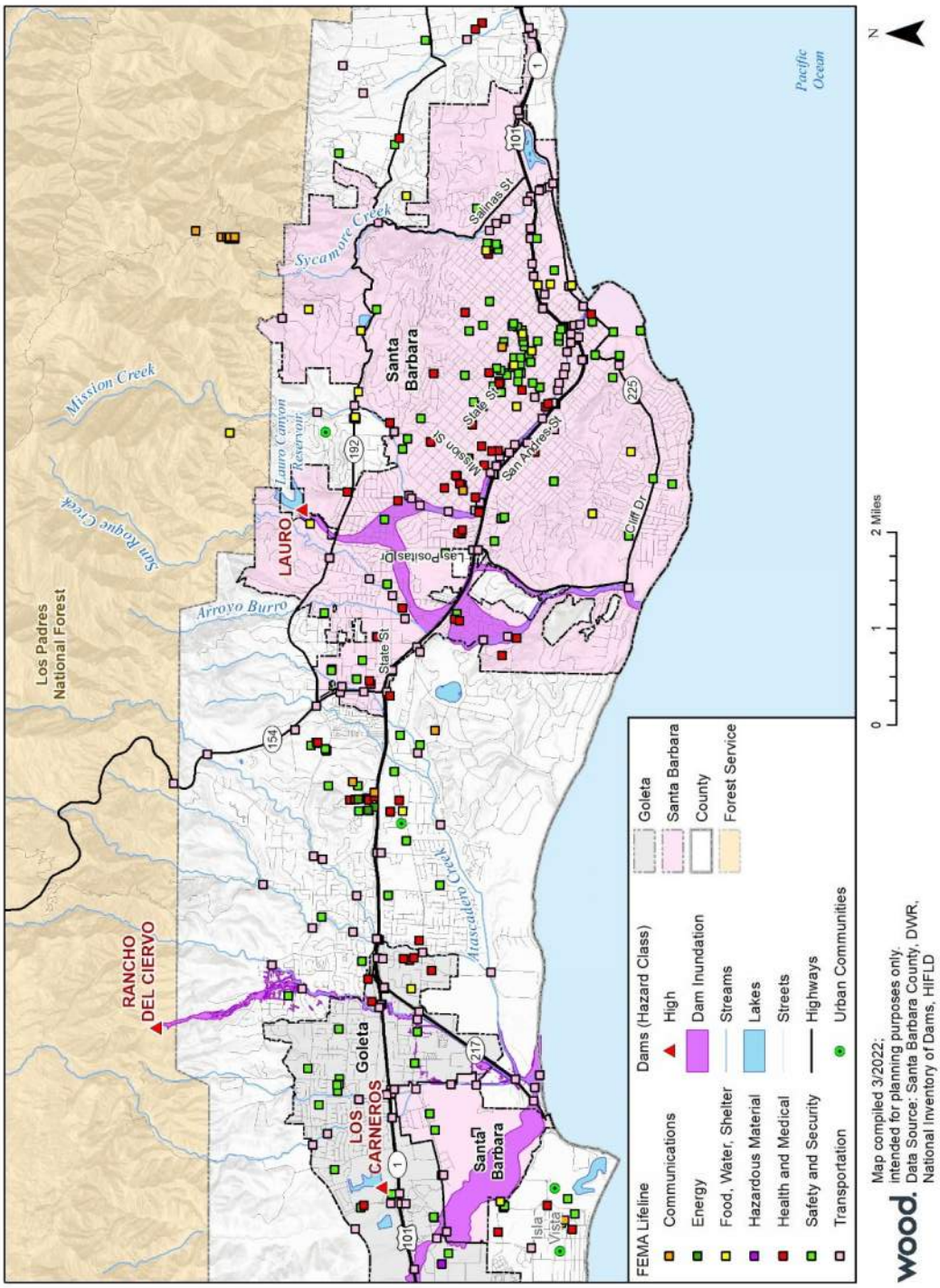
Property Type	Improved Parcel Count	Total Value	Population
Commercial	88	$133,647,498	
Exempt	11	$57,291,886	
Industrial	1	$163,005	
Mixed Use	1	$919,448	2
Residential	1,123	$616,614,786	2,751
Total	**1,224**	**$808,636,623**	**2,754**

As listed in Table 6-12, 21 critical facilities in the City would be vulnerable to damage or destruction from dam inundation (Figure 6-6; see also, Section 6.6.3, *Dam Failure* of the 2022 MJHMP). All but one of these facilities would be affected by the failure of the Lauro Dam. One bridge would be affected by the failure of the Glen Annie Dam.

Table 6-12. City of Santa Barbara Critical Facilities Vulnerable to Inundation from Dam Failure

Type	Name	Dam Name	Total Building Value
Clinic	Vista Del Monte Sunridge SNF	Lauro	-
Nursing Home	VISTA DEL MONTE	Lauro	-
Education	PEABODY CHARTER	Lauro	-
Education	PROVIDENCE-SBCS	Lauro	-
Bridge	Bridge	Lauro	-
Bridge	Bridge	Lauro	-
Bridge	Bridge	Lauro	-
Bridge	Bridge	Lauro	-
Bridge	Bridge	Lauro	-
Bridge	Bridge	Lauro	-
Bridge	Bridge	Lauro	-
Bridge	Bridge	Lauro	-
Bridge	Bridge	Lauro	-
Bridge	Bridge	Lauro	-
Bridge	Bridge	Lauro	-
Bridge	Bridge	Lauro	-
Bridge	Bridge	Lauro	-
Bridge	Bridge	Lauro	-
Bridge	Bridge	Glen Annie	-
Bridge	Bridge	Lauro	-
Bridge	Bridge	Lauro	-
Bridge	Bridge	Lauro	-

Figure 6-6. City of Santa Barbara Critical Facilities in Dam Inundation Zone



6.6 LANDSLIDE

As described in Section 5.3.9, *Landslides*, landslides are most common on steep slopes made of loose soil and other material such as those found in the City, but they can also happen on shallower slopes. The City has 9,925 improved parcels that lie within Class 5, 7, 8, 9, or 10 landslide hazard zones, amounting to $7.6 billion and home to 23,758 residents.

Table 6-13. City of Santa Barbara Improved Properties at Risk to Landslide Summary

Class 5 Parcel County	Class 7 Parcel Count	Class 8 Parcel Count	Class 9 Parcel Count	Class 10 Parcel Count	Total Improved Parcel Count	Total Value	Population
10	6,961	16	1,551	1,387	9,925	$7,652,734,542	23,758

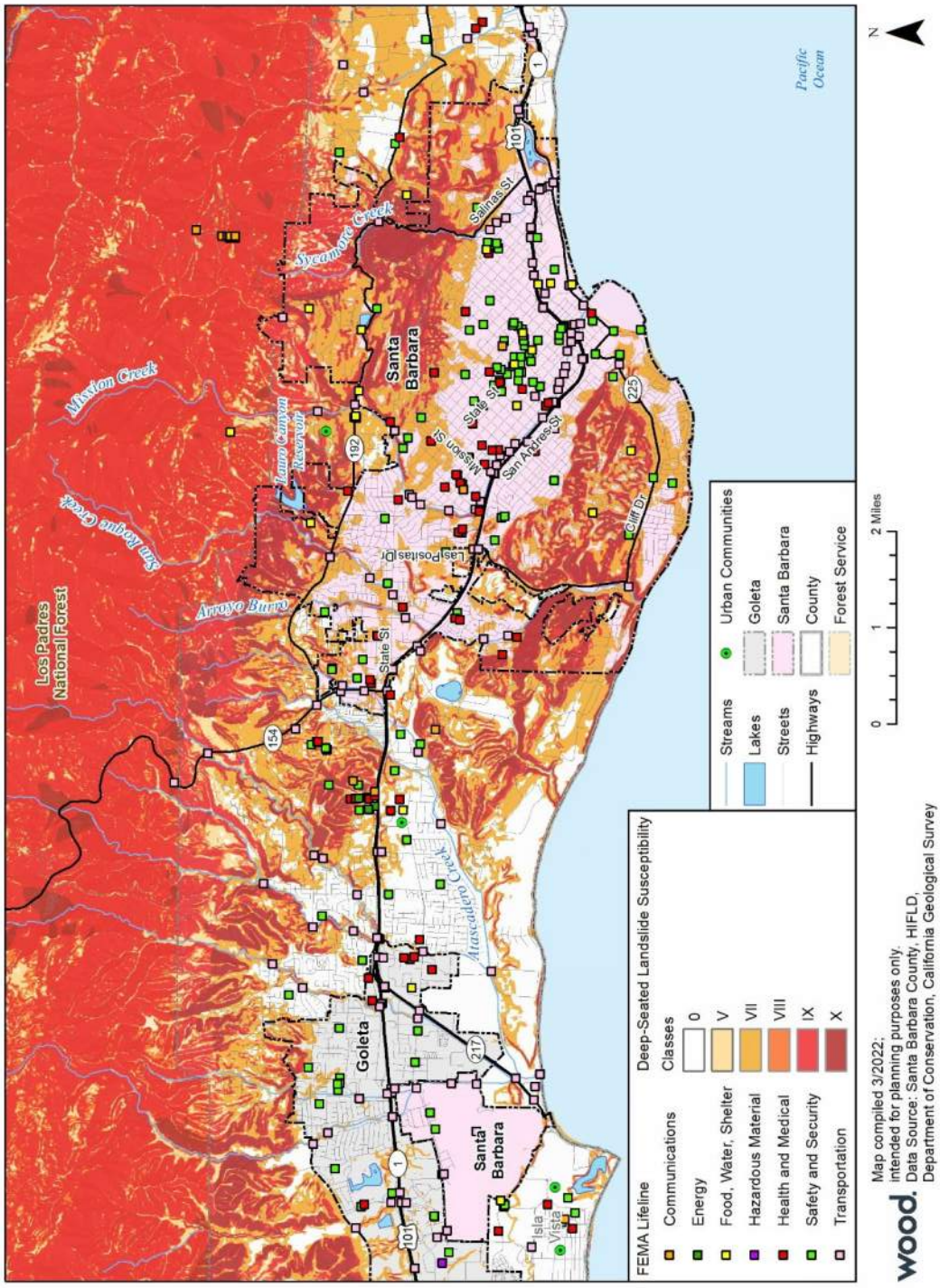
Further, as listed in Table 6-14, 40 critical facilities in the City would be vulnerable to damage or destruction from landslides (Figure 6-7; see also, Section 6.3.7, *Landslide* of the 2022 MJHMP).

Table 6-14. City of Santa Barbara Critical Facilities Vulnerable to Landslide

Type	Name	Landslide Severity Class	Total Building Value
Reservoir	Escondido Pump Station and Reservoir	7	-
Utilities	Sheffield Pump Station	7	-
Utilities	Skofield Pump Station	7	-
Water Treatment Plant	Cater Water Treatment Plant	7	-
Clinic	Valle Verde Health Facility- SNF	7	-
Clinic	La Cumbre Senior Living Concepts	7	-
Clinic	Sansum Clinic-Hitchcock	7	-
Clinic	Samarkand- Smith Center- SNF	7	-
Nursing Home	Alto Lucero Transitional Care	7	-
Nursing Home	Samarkand Of Santa Barbara	7	-
Nursing Home	Wood Glen Hall, Inc.	7	-
Nursing Home	Valle Verde Health Facility	7	-
Nursing Home	Alexander Gardens	9	-
Nursing Home	Mission Terrace Convalescent Hospital	7	-
Nursing Home	Villa Riviera	9	-
Nursing Home	Mountain House	7	-
Colleges / Universities	Santa Barbara City College	7	-
Education	Roosevelt Elementary	7	-
Education	Open Alternative	9	-
Education	Monroe Elementary	7	-

Type	Name	Landslide Severity Class	Total Building Value
Education	Adams Elementary	7	-
Education	La Colina Junior High	7	-
Education	Cleveland Elementary	9	-
Education	Eureka School of Santa Barbara	7	-
Fire Station	Fire Station 6	7	-
Fire Station	Fire Station 3	7	-
Fire Station	Fire Station 7	7	-
Historic Site	Los Banos Del Mar	7	-
Bridge	Bridge	7	-
Bridge	Bridge	7	-
Bridge	Bridge	7	-
Bridge	Bridge	7	-
Bridge	Bridge	7	-
Bridge	Bridge	7	-
Bridge	Bridge	7	-
Bridge	Bridge	7	-
Bridge	Bridge	9	-
Bridge	Bridge	7	-
Bridge	Bridge	9	-
Bridge	Bridge	7	-

Figure 6-7. City of Santa Barbara Critical Facilities within Landslide Susceptibility Zones



6.7 COASTAL HAZARDS

In 2021 the City approved a Sea Level Rise Adaption Plan and Vulnerability Assessment that quantifies the exposure of identified assets and resources to projected future coastal flood and erosion hazards. The purpose of the Sea Level Rise Adaption Plan and Vulnerability Assessment is to identify vulnerabilities to coastal hazards expected from sea-level rise in the City of Santa Barbara and possible actions to prepare for and adapt to sea-level rise. The plan can be found at www.SantaBarbaraca.gov/slr and is hereby incorporated by reference into this plan.

The City's 2021 Sea Level Rise Adaptation Plan and Vulnerability Assessment only included the main portion of the City and not the Airport and Goleta Slough. Sea level rise vulnerabilities at the Airport and Goleta Slough area were analyzed as part of the 2015 Goleta Slough Area Sea Level Rise And Management Plan. An updated vulnerability assessment and sea level rise adaptation plan is currently being developed for the City's Airport area.

The following analysis is based on the Santa Barbara County Climate Vulnerability Assessment to be consistent with the methodology contained for the greater Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan. Based on the MJHMP's analysis, approximately 100 acres of the City are susceptible to coastal hazards and sea level rise by 2030 (10.2 inches) and 145 acres by 2060 (27.2 inches). Based on the GIS analysis conducted for the 2022 MJHMP, the City has 1,014 improved parcels valued at over $1,6 billion in sea level rise coastal hazard zones. Based on this analysis, which accounts for residents only and not workers, 1,436 residents are living in this hazard zone within the City.

Table 6-15. City of Santa Barbara at Risk to Sea Level Rise Coastal Hazards by Property Type

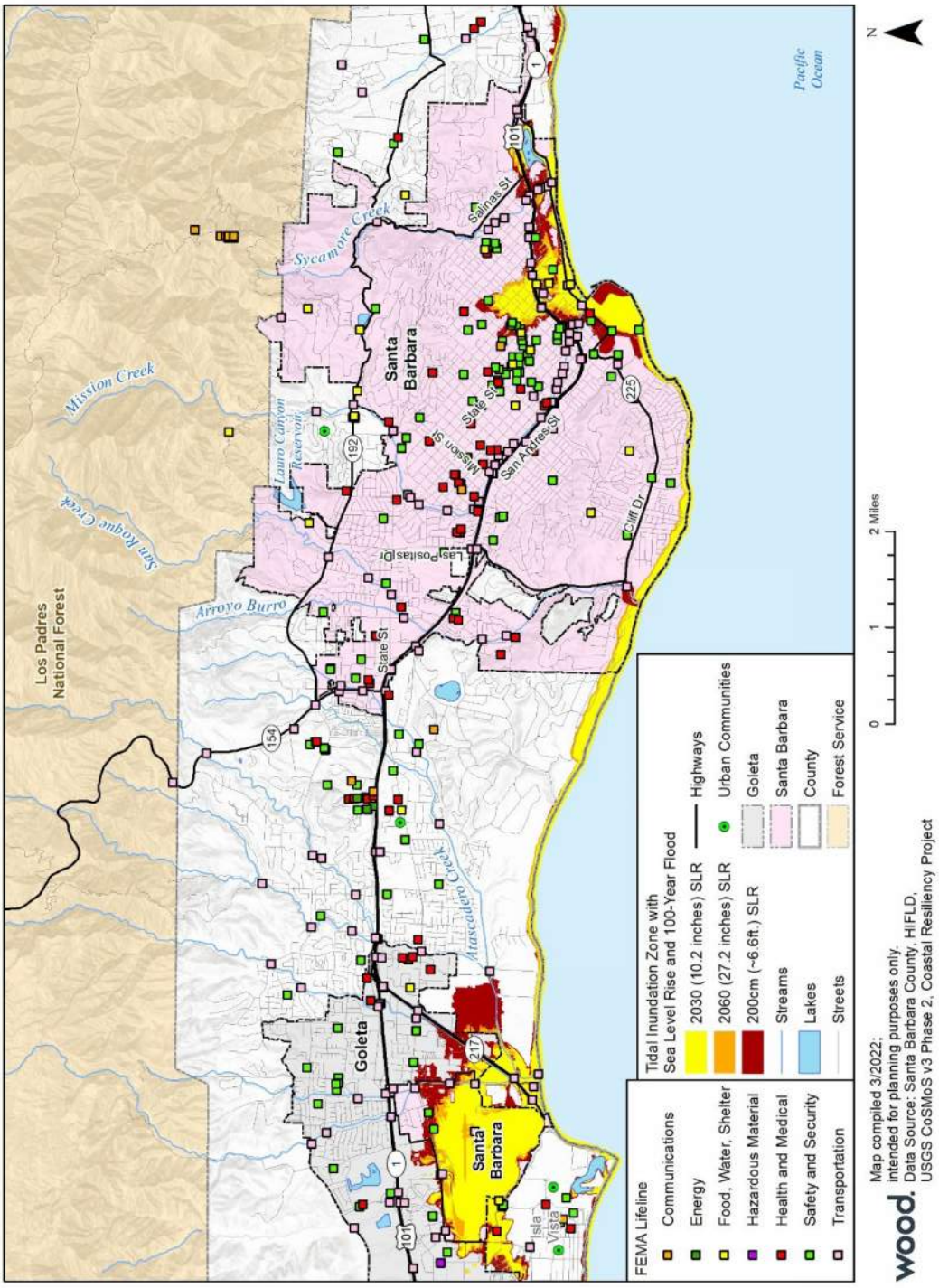
Property Type	Improved Parcel Count	Total Value	Population
2030 Sea Level Rise			
Commercial	84	$187,609,824	
Exempt	3	$618,954	
Industrial	98	$143,146,390	
Mixed Use	5	$21,117,388	12
Residential	231	$340,247,270	566
Improved Vacant	1	$68,994	
Total	**422**	**$692,808,820**	**578**
2060 Sea Level Rise			
Commercial	109	$236,143,706	
Exempt	5	$926,740	
Industrial	126	$213,313,565	
Mixed Use	13	$48,788,222	32
Residential	337	$464,798,276	826
Improved Vacant	2	$657,114	
Total	**592**	**$964,627,623**	**858**
Total Sea Level Rise Hazard	**1,014**	**$1,657,436,442**	**1,436**

Additionally, 14 critical facilities area vulnerable to damage or destruction from coastal hazards and sea level rise by 2030, and 19 critical facilities are vulnerable by 2060 (Table 6-16) (Figure 6-8; see also, Section 6.3.6, *Coastal Hazards* of the 2022 MJHMP).

Table 6-16. City of Santa Barbara Critical Facilities Vulnerable to Coastal Hazards

Type	Name	2030	2060	Total Building Value
Utilities	Laguna Pump Station	Yes	Yes	-
Water District	Goleta West Water District	No	Yes	-
Water Treatment Plant	Charles E. Meyer Main Desalination Plant	No	Yes	-
Water Treatment Plant	Scada / Mcc Building	No	Yes	-
Government	Public Works Yard	Yes	Yes	-
Government	Admin Well Corp. at Parks Department	Yes	Yes	-
Government	Parks And Recreation	Yes	Yes	-
Harbor Patrol	Santa Barbara Waterfront Harbor Patrol	Yes	Yes	-
Airport	Santa Barbara Airport	Yes	Yes	-
Bridge	Bridge	Yes	Yes	-
Bridge	Bridge	Yes	Yes	-
Bridge	Bridge	Yes	Yes	-
Bridge	Bridge	No	Yes	-
Bridge	Bridge	Yes	Yes	-
Bridge	Bridge	Yes	Yes	-
Bridge	Bridge	Yes	Yes	-
Bridge	Bridge	No	Yes	-
Bridge	Bridge	Yes	Yes	-
Bridge	Bridge	Yes	Yes	-

Figure 6-8. City of Santa Barbara Critical Facilities in Sea Level Rise Coastal Hazard Zones



7.0 MITIGATION STRATEGY

In preparation for the 2022 LHMP update, the City's LPT made no revisions to the countywide goals and objectives because they continue to reflect the needs of the City; see also, Chapter 7.0, *Mitigation Plan* of the 2022 MJHMP. This section contains the City's updated and most current mitigation strategy as of 2022.

7.1 MITIGATION GOALS AND OBJECTIVES

The City's LPT developed the following goals and objectives for the 2022 update. These goals and objectives represent a vision of long-term hazard reduction or enhancement of capabilities. These preliminary goals, objectives, and actions were developed to represent a vision of long-term hazard reduction or enhancement of capabilities. To help further the development of these goals and objectives, the LPT compiled and reviewed current jurisdictional sources, including the City's planning documents, codes, and ordinances, and specifically discussed hazard-related goals, objectives, and actions as they related to the overall LHMP.

The updated goals and objectives of this plan are:

Goal 1: Promote disaster-resistant development and strive to minimize the risks of hazards

Objective 1A: Minimize development in known hazard areas. When development must be sited in hazardous areas, minimize the impacts of hazards through hazard-resistant designs or phasing of development based on degree of hazard.

Objective 1B: Minimize hazard frequency, severity, and risks through mitigation projects and programs.

Objective 1C: Continue to assess hazards in the City based on best available science and information.

Goal 2: Prioritize hazard mitigation for critical facilities and community assets

Objective 2A: Plan for redundancy of critical services and infrastructure (energy, transportation, water supply) in the event of a hazard.

Objective 2B: Implement hazard mitigation projects for critical facilities, public transportation systems, and public services that are essential for basic city functions. Upgrade and replace aging critical facilities and infrastructure.

Objective 2C: Promote mitigation projects that have co-benefits and that minimize impacts to existing development, the local economy, natural resources, community and historical assets, and the public shoreline, parks, open spaces, and recreation areas.

Objective 2D: Promote mitigation projects that benefit or minimize impacts to vulnerable populations that may have a higher sensitivity and lower adaptive capacity to hazards.

Objective 2E: Promote mitigation projects and programs that respond to climate change and build resiliency partnerships and coordination locally, regionally, and statewide.

Goal 3: Actively promote understanding, support, and funding for hazard mitigation by participating agencies and the public.

Objective 3.A: Engage, inform, and educate the public on tools and resources to improve community resilience to hazards, reduce vulnerability, and increase awareness and support of hazard mitigation activities.

Objective 3.B: Ensure effective outreach and communications to vulnerable and disadvantaged communities.

Objective 3.C: Increase awareness and encourage the incorporation of hazard mitigation principles and practice among public, private, and nonprofit sectors, including all participating agencies.

Objective 3.D: Ensure interagency coordination and joint partnerships with the County, cities, state, tribal, and federal governments.

Objective 3.E: Continuously improve the City's capability and efficiency at administering pre- and post-disaster mitigation programs.

Objective 3.F: Monitor and publicize the effectiveness of mitigation actions implemented in the City.

Objective 3.G: Position the City to apply for and receive grant funding from FEMA and other sources.

Goal 4: Promote community resilience to hazard events

Objective 4A: Integrate hazard mitigation with public policy and standard business practices.

Objective 4B: Create community resilience plans and resource hubs

Objective 4C: Incentivize resilience actions in the community.

Goal 5: Minimize the risks to life and property associated with urban and human-caused hazards

Objective 5A: Minimize risks from biological hazards, including disease, invasive species, and agricultural pests.

Objective 5B: Be prepared and respond to urban hazards, including terrorism, cyber threats, and civil disturbance.

Objective 5C: Minimize risks from energy production, including hazardous oil and gas activities.

Goal 6: Update and improve emergency response planning and programs

Objective 6A: Provide effective life safety measures and reduce property loss.

Objective 6B: Ensure rapid resumption of basic City services after an emergency.

Objective 6C: Accurately document and record response efforts to ensure cost recovery.

Goal 7: Prepare to adapt and recover from the impacts of climate change and ensure regional resiliency.

Objective 7A: Promote projects and programs that reduce greenhouse gas emissions, utilize carbon free energy, and reduce the potential of further impacts from climate change

Objective 7B: Identify, assess, and prepare for the impacts of climate change.

Objective 7C: Use the latest climate science to implement hazard mitigation strategies in response to climate change.

7.2 MITIGATION PROGRESS

Since 2017, the City has incorporated the LHMP goals, objectives, and mitigation actions into its local plans and processes, including the General Plan Safety Element by reference, specific hazard planning efforts (e.g., Sea Level Rise Adaptation Plan), the City's grant pursuits, and capital improvement planning. Ongoing monitoring and evaluation of the LHMP by the City ensured mitigations are implemented and tracked. Key mitigation actions completed since 2017 include improving the resilience of coastal structures, including Stearns Wharf and Mesa Lane and 1,000 Steps Coastal Access, beginning upgrades to the Laguna Pump Station and the Santa Barbara Police Station, and completing the Sea Level Rise Adaptation Plan and Vulnerability Assessment. The City's LPT reviewed the mitigation actions listed in the 2017 LHMP to determine the status of each action. Once reviewed, deferred projects from 2017 were renumbered to reflect 2022 updates (see Table 7-1).

Table 7-1. Status of City of Santa Barbara Previous Mitigation Actions

Mitigation Action No.	Mitigation Action Description	Status	Comments	In 2022 Update?
2016-1	Pedregosa Storm Drain	Deferred	Construction will significantly reduce flooding in the Mission Creek area around Pedregosa	X
2016-2	Replacement Storm Drain Outfall (Airport)	Canceled	Previously from 2011 – This project is planned but not budgeted. Will significantly reduce flooding on Hollister Avenue.	
2016-3	Flood Wall Construction (Airport)	Deferred	Flood Wall Construction - Around buildings 223, 304, 314, and 315 to protect these structures from flooding. Eliminate frequent water intrusion into buildings and subsequent clean-up costs due to storm events, many of which are less than 10-year events.	X
2016-4	Honda Valley Hillside Stabilization in a location of High-Pressure Gas Line Serving City	Deferred	A high-pressure gas line serving the City is located in an area of Honda Valley where stabilization of soil is needed.	X
2016-5	Hidden Valley Park Slope Stability	Deferred	To reduce risk to life and property from slides and flooding.	X
2016-6	Stevens Park Eastern Access Erosion Remediation	Deferred	A benefit to secure life and property and the preservation of an effective and ecologically sound creek system.	X
2016-7	Francheschi Park/Mission Ridge	Deferred	Deferred due to lack of funding – a retaining wall is crucial to evacuation and emergency response.	X

Mitigation Action No.	Mitigation Action Description	Status	Comments	In 2022 Update?
	Hillside geotechnical stabilization of retaining wall			
2016-8	Bluff Retreat Management at Shoreline Park	Deferred	Deferred due to lack of funding – This project is ongoing due to continuous bluff erosion.	X
2016-9	Rehabilitate Coastal Access Stairs at 1000 Steps	In Progress	In DART Process. Rehabilitation of damaged steps and drainage improvements anticipated in 2022.	X
2016-10	New Police Department	In Progress	PD Station funding through Measure C and potential bond	X
2016-11	High Fire Area Roadways	Deferred	Previously from 2011 - Erosions and landslides due to steep slopes and unreinforced retaining walls will hamper evacuation and emergency response. Renamed to Unreinforced Retaining Walls and Unstable Slopes project	X
2016-12	Laguna Pump Station	In Progress	The project is currently being funding by FEMA Mitigation Grant Funding – 2023	X
2016-13	Replace deluge system on Stearns Wharf	Completed	Continues to be an ongoing maintenance Project to promote firefighting on Stearns Wharf, which is a historical site in the Waterfront area.	
2016-14	Backup generator for Waterfront Department Operating Center.	Completed	Upgraded power needed for Harbor Patrol and Waterfront DOC.	
2016-15	Current Harbor facilities are old early 60s type construction – seismic renovation needed for safety	Deferred	Current Harbor facilities are early 60s type construction that would not withstand a large earthquake. Seismic evaluation is needed.	X
2016-16	Mesa Lane Coastal Access	Completed	The lowest portion of the Mesa Lane steps was replaced in 2012. Replacement of the upper portion is deferred.	
2016-17	Salsipuedes Street Storm Drain Improvement	Deferred	Potential improvements include the connection of storm drain inlets on Micheltorena Street to the existing storm drain on Salsipuedes Street and the construction of a new storm drain pipe along Salsipuedes and Victoria Streets. Pipes continue to be identified; funding for the project is from Measure C	X
2016 -18	Corrugated Metal Pipe Repairs	Deferred	Repair through slip lining or completely replace the highest priority corrugated metal pipe drain lines annually. Pipes are being identified; funding for the project is from Measure C.	X
2016-19	Gutierrez Storm Drain Improvements	Canceled	Construct additional storm drains to reduce the duration and severity of flooding when the upstream storm drain system is overwhelmed. The project is intended to improve the ability to remove runoff from the area by providing increased inlet	

Mitigation Action No.	Mitigation Action Description	Status	Comments	In 2022 Update?
			capacity and by providing larger conduits between the street inlets and the box culverts under Hwy 101. Current funding for the project with Hazard Mitigation Grant	
2016-20	Goleta Slough Mouth Management	Deferred	The project will control the water level in the Goleta Slough to minimize flood hazards, mosquito population blooms, and waterfowl attractants that pose a greater bird-strike risk. The project will be designed to minimize adverse effects to the Federally endangered tidewater goby and steelhead trout, while avoiding significant flood and bird-strike hazards such as those experienced in November 2012, May 2013, and February 2014. Currently waiting on Federal environmental regulators	X
2016-21	Hollister Drainage Improvement	Deferred	The project includes establishing new swales to connect to an existing culvert emptying to Carneros Creek. To preserve the wetland habitat within the project site, the swales will be "eco-channels" which are constructed to allow a certain depth of water to still fill the wetlands but now allow the water to overflow into Hollister Avenue. There will be a significant component of wetland enhancement/planting to offset any detrimental impacts of the project to the wetland habitat. Continued wetland disruption.	X
2016-22	Sea Level Rise Adaptation Plan	Completed	Comprehensive Sea Level Rise Adaptation Plan completed in 2021.	
2016-23	Review/Revise the City's Critical Facilities List	In Progress	Develop a more comprehensive list of Critical Facilities that would include hospitals, skilled nursing facilities, and private companies; as applicable.	X

7.3 MITIGATION APPROACH

A simplified Benefit-Cost Review was applied to both deferred and new mitigation actions to prioritize the mitigation recommendations for implementation. The priority for implementing mitigation recommendations depends upon the overall cost-effectiveness of the recommendation when considering monetary and non-monetary costs and benefits associated with each action. Additionally, the following questions were considered when developing the Benefit-Cost Review:

- How many people will benefit from the action?
- How large an area is impacted?
- How critical are the facilities that benefit from the action?
- Environmentally, does it make sense to do this project for the overall community?

Section 7.4, *Implementation Plan* provides a benefit-cost review for each mitigation recommendation, as well as a relative priority rank (High, Medium, and Low) based upon the judgment of the Planning Team. The general category guidelines are listed below:

- High – Benefits are perceived to exceed costs without further study or evaluation
- Medium – Benefits are perceived to exceed costs but may require further study or evaluation before implementation
- Low – Benefits and costs evaluation requires additional evaluation before implementation

Discussion of the rationale for these priorities is included in the mitigation action descriptions below.

7.4 IMPLEMENTATION PLAN

2022-1. Pedregosa Storm Drain

Priority: High	
Mitigation Strategy Description	This storm drain was recorded as part of the Storm Drain System Data Collection and Inspection Services, Phase 2. The City retrieved a Pipeline Assessment Certification Program ranking on portions of this storm drain. The City is determining the priority and scope of repair for this known drainage issue. Additional video of the pipe will be necessary following a storm drain clearing effort as the first camera was unable to traverse debris in certain areas.
Relevant Objective	Reducing significant flooding
Applicable Hazards	Flood
Estimated Timeline for Completion	2030
Estimated Cost/Funding Source	Measure C/Streets Capital Fund – estimated cost of project $700,000
Responsible Agency/Department	Public Works – Streets Division
Other Comments	Adapted from 2016-1 in the 2016 LHMP

2022-2. Honda Valley Hillside Stabilization

Priority: High	
Mitigation Strategy Description	Honda Valley Hillside Stabilization in a location of High-Pressure Gas line Serving the City. An area near a roadway and private property where high-pressure gas lines are buried erodes frequently due to runoff and the steepness of the slope. This necessitates stabilization of the continually eroding hillside containing the gas line. An engineering consultant would prepare plans for slope stabilization and native revegetation, and infrastructure relocation if necessary. Identify Funding Prepare scope of work Hire consultation firm to design job

	Acquire all necessary permits. Write Specifications Bid construction Construct project
Relevant Objective	The benefits of public safety and a secure utility delivery would outweigh the likely financial costs of planning and implementation of a slope stabilization project.
Applicable Hazards	Flooding, Landslide/Coastal Erosion
Estimated Timeline for Completion	2026
Estimated Cost/Funding Source	The benefits of public safety and a secure utility delivery would outweigh the likely financial costs of planning and implementation of a slope stabilization project.
Responsible Agency/Department	Parks & Recreation – Parks Division
Other Comments	City of Santa Barbara Parks and Recreation Department working with City of Santa Barbara Public Works and the Gas Company Adapted from 2016-4 in the 2016 LHMP

2022-3. Hidden Valley Park Slope Stability

Priority: High	
Mitigation Strategy Description	At numerous locations throughout the park, slope stability problems are reoccurring along steep creek banks causing public safety hazards from slides and flooding, as well as stability issues on private and public property that lines the park. Potential hazards to park users and public and private economic losses would be reduced if the slopes were stabilized. Identify Funding Hire consultation firm to design job Acquire all necessary permits. Write Specifications Bid construction Construct project
Relevant Objective	Reduced risk to life and property from slides and flooding would outweigh likely fiscal costs.
Applicable Hazards	Flooding
Estimated Timeline for Completion	2026
Estimated Cost/Funding Source	Funding has not been specified
Responsible Agency/Department	Parks & Recreation – Parks Division
Other Comments	City of Santa Barbara Parks and Recreation working with County of Santa Barbara Flood Control and City of Santa Barbara Creeks Division. Adapted from 2016-5 in the 2016 LHMP

2022-4. Stevens Park Eastern Access Erosion Remediation

Priority: High	
Mitigation Strategy Description	The sole emergency access point to the majority of Stevens Park is subject to severe erosion, undercutting, potential slope failure, and substantial sedimentation into San Rogue Creek from storm damage and poor drainage. To reduce the hazard to life and property from slides and flooding and to maintain a functional flood control system the area must be repaired employing bank stabilization, revegetation, and appropriate drainage control. Identify Funding Prepare scope of work Hire consultation firm to design job Acquire all necessary permits. Write Specifications Bid construction Construct project
Relevant Objective	The benefit of secure life and property and the preservation of an effective and ecologically sound creek system would outweigh the likely fiscal costs.
Applicable Hazards	Flooding, Landslide/Coastal Erosion
Estimated Timeline for Completion	2024
Estimated Cost/Funding Source	Funding has not been specified
Responsible Agency/Department	Parks & Recreation – Parks Division
Other Comments	The benefit of secure life and property and the preservation of an effective and ecologically sound creek system would outweigh the likely fiscal costs. Adapted from 2016-6 in the 2016 LHMP

2022-5. Francheschi Park/Mission Ridge Hillside Geotechnical

Priority: High	
Mitigation Strategy Description	Francheschi Park/Mission Ridge Hillside geotechnical stabilization of retaining wall Improve storm drain infrastructure improvements
Relevant Objective	Retaining wall is crucial to ingress and egress in the area; especially for evacuation and emergency response
Applicable Hazards	Flooding, Landslide/Coastal Erosion
Estimated Timeline for Completion	2025
Estimated Cost/Funding Source	Funding has not been specified
Responsible Agency/Department	Parks & Recreation – Parks Division
Other Comments	Adapted from 2016-7 in the 2016 LHMP

2022-6. Bluff Retreat Management at Shoreline Park

Priority: High	
Mitigation Strategy Description	Since the late '90s, the Park's bluff has been subject to numerous slides. Management of sidewalks and parkway needs to be continually addressed.
Relevant Objective	Currently, the erosion of the park continues and will continue. Keeping the management of sidewalks and vegetation in the area is an ongoing issue.
Applicable Hazards	Sea Level Rise, Landslide Coastal Erosion, Tsunami
Estimated Timeline for Completion	2028
Estimated Cost/Funding Source	Currently an unfunded project
Responsible Agency/Department	Parks & Recreation – Parks Division Public Works - Engineering
Other Comments	Adapted from 2016-8 in the 2016 LHMP

2022-7. Rehabilitate Coastal Stairs at 1000 Steps

Priority: High	
Mitigation Strategy Description	Coastal erosion to the access on the beach has been ongoing. The lower portion of the stairway needs to be rebuilt to maintain coastal access for first responders at this location.
Relevant Objective	Civil engineering plans are completed and permitting is in the process as of summer 2019. Construction is anticipated to be completed in summer 2022.
Applicable Hazards	Sea Level Rise, Landslide/Coastal Erosion, Tsunami
Estimated Timeline for Completion	2023
Estimated Cost/Funding Source	$800,000
Responsible Agency/Department	Parks & Recreation – Parks Division Public Works - Engineering
Other Comments	Adapted from 2016-9 in the 2016 LHMP

2022-8. New Police Department

Priority: High	
Mitigation Strategy Description	The police building has been assessed by an outside architectural firm and has been determined that the building needs seismic renovation.
Relevant Objective	Critical facility seismic renovation
Applicable Hazards	Earthquake
Estimated Timeline for Completion	2026
Estimated Cost/Funding Source	Measure C Funding and potential bond will assist in funding the new Police Department - $96,000,000
Responsible Agency/Department	Police Department Community Development – Planning Division
Other Comments	Adapted from 2016-10 in the 2016 LHMP

2022-9. Unreinforced Retaining Walls and Unstable Slopes

Priority: High	
Mitigation Strategy Description	Many steep-sloped areas are subject to erosion and have already partially failed in areas due to past flooding events. Gravity and unreinforced retaining walls subject to landslides, earthquakes, and fires are at a higher risk of failing in an emergency event. Reinforcement and replacement of the walls would protect infrastructure, access, and the residents of the Riviera. The City is determining whether an unreinforced wall on Marilyn Way is a good fit for LHP.
Relevant Objective	Erosions and landslides will hamper emergency responders from accessing these high fire areas and will drastically slow down calls times if these roads are hampered.
Applicable Hazards	Flooding, Wildfire, Landslide/Coastal Erosion
Estimated Timeline for Completion	2036
Estimated Cost/Funding Source	$30,000,000
Responsible Agency/Department	Public Works, Engineering Fire Dept., Fire Prevention Bureau, Wildland Specialist
Other Comments	Adapted from 2016-11 in the 2016 LHMP

2022-10. Seismic Upgrades to City Facility in the Harbor

Priority: High	
Mitigation Strategy Description	Current Harbor facilities are old early 60s type construction – seismic renovation needed for safety
Relevant Objective	Critical Facility needing seismic upgrades for safety
Applicable Hazards	Earthquake
Estimated Timeline for Completion	2032
Estimated Cost/Funding Source	$5 Million
Responsible Agency/Department	Waterfront – Operations Division Public Works – Engineering Division
Other Comments	Adapted from 2016-15 in the 2016 LHMP

2022-11. Salsipuedes Street Storm Drain Improvements

Priority: High	
Mitigation Strategy Description	The project first involves the study of existing public and private storm drain facilities beginning on Salsipuedes Street at Micheltorena Street and continuing south to Victoria Street. Potential improvements include the connection of storm drain inlets on Micheltorena Street to an existing storm drain on Salsipuedes Street and the construction of a new storm drain pipe along Salsipuedes and Victoria Streets.
Relevant Objective	Public Works will pursue the completion of an initial study and design for this project if grant funding or a cost-sharing agreement with County Flood Control can be secured to cover 50% of the cost for construction.
Applicable Hazards	Flooding

Priority: High	
Estimated Timeline for Completion	2035
Estimated Cost/Funding Source	$1,500,000
Responsible Agency/Department	Public Works – Engineering Division
Other Comments	Adapted from 2016-17 in the 2016 LHMP

2022-12. Corrugated Metal Pipe Repairs

Priority: High	
Mitigation Strategy Description	Studies done in several areas within the City noted many corrugated metal pipes would need to be replaced. This project would seek to repair through slip lining, spiral wound lining, or replacement of the highest priority corrugated metal pipe drain lines.
Relevant Objective	Many of the City-owned corrugated metal pipes were installed over 50 years ago and may require replacement. Due to the lack of funding for this project, repairs are typically only completed as emergency maintenance projects in response to failures evident at the street level (typically as sinkholes following rain events). 2019 – Currently pipes are being identified. The City will review findings from an ongoing Pipeline Assessment Certification Program and create a replacement plan
Applicable Hazards	Flooding
Estimated Timeline for Completion	2028
Estimated Cost/Funding Source	Measure C Funding - $20,000,000
Responsible Agency/Department	Public Works – Engineering Division
Other Comments	Adapted from 2016-18 in the 2016 LHMP

2022-13. Goleta Slough Mouth Management

Priority: Medium	
Mitigation Strategy Description	This project will control the water level in the Goleta Slough to minimize flood hazards, mosquito population blooms, and waterfowl attractants that pose a greater bird-strike risk. This project will be designed to minimize adverse effects to the Federally endangered tidewater goby and steelhead trout, while avoiding significant flood and bird-strike hazards such as those experienced in November 2012, May 2013, and February 2014.
Relevant Objective	The Federal Aviation Administration (FAA) requires that wildlife strike risk be avoided to the maximum extent feasible within environmental constraints. The Santa Barbara County Flood Control District completed an Environmental Impact Report for their maintenance activities, including slough mouth management in 2011. 2019 – Continue to work with environmental regulators.
Applicable Hazards	Flooding, Sea Level Rise, Agricultural Pests/Disease, Commercial Aircraft
Estimated Timeline for Completion	2030
Estimated Cost/Funding Source	Discussion with the County regarding potential mitigations. Funding sources include funding from FAA and the Airport. - $300,000

Priority: Medium	
Responsible Agency/Department	Airport – Operations Division Public Works – Engineering Division
Other Comments	Adapted from 2016-20 in the 2016 LHMP

2022-14. Hollister Drainage Improvement

Priority: Medium	
Mitigation Strategy Description	The project includes establishing new swales to connect to an existing culvert emptying to Carneros Creek. To preserve the wetland habitat within the project site, the swales will be "eco-channels" which are constructed to allow a certain depth of water to still fill the wetlands but now allow the water to overflow into Hollister Avenue. There will be a significant component of wetland enhancement/planting to offset any detrimental impacts of the project to the wetland habitat.
Relevant Objective	Hollister Avenue is an important access route to the Airport and needs to remain a safe and dependable route to the Airport in moderate and heavy rains. The project is consistent with Public Works Engineering standards that require roads to be adequately drained during a 10-year storm. 2019 – Not planned due to mitigating wetland disruptions.
Applicable Hazards	Flooding
Estimated Timeline for Completion	2030
Estimated Cost/Funding Source	Airport Project funding - $500,000
Responsible Agency/Department	Airport – Operations Division
Other Comments	The area south of Hollister Avenue and east and west of Los Carneros Way is twelve-acre moisture of upland and wetland habitats. The area is drained by several poorly defined swales, which have not been maintained for many years. In moderate storm events (3–5-year storms), the swales, which are severely choked by bulrush, back up with storm runoff and flood over Hollister Avenue. The depth of water on Hollister Avenue is as much as 12 inches and the road has to be closed for safety reasons. Adapted from 2016-21 in the 2016 LHMP

2022-15. Review/Revise City's Critical Facilities List

Priority: Medium	
Mitigation Strategy Description	Develop a more comprehensive list of Critical Facilities that would include hospitals, skilled nursing facilities, and private companies; as applicable.
Relevant Objective	To have a comprehensive Hazard Mitigation Plan, the City will need to develop a critical infrastructure list that includes outside agencies and businesses, such as hospitals, skilled nursing facilities, dialysis clinics, etc.
Applicable Hazards	All
Estimated Timeline for Completion	2023
Estimated Cost/Funding Source	In-Kind staff cost
Responsible Agency/Department	Finance – Risk Management

Priority: Medium	
	Community Development – Long Range Planning Division Fire – Office of Emergency Services
Other Comments	Adapted from 2016-23 in the 2016 LHMP

2022-16. Sycamore Creek Flood Control and Restoration Project

Priority: High	
Mitigation Strategy Description	The proposed project is an effort to prevent flooding in the Lower Eastside, relieve major flow constriction points, and improve overall flow capacity and system reliability. Work consists of several bridge replacements and channel widening, along with additional improvements to the entire lower reach of Sycamore Creek.
Relevant Objective	The list of undersized bridges includes Indio Muerto Street Bridge, Zoo Bridge, El Escorial Bridge, Railroad Bridge, and the Por La Mar Bridge. The reaches between the bridges are also significantly undersized.
Applicable Hazards	Flooding
Estimated Timeline for Completion	2032
Estimated Cost/Funding Source	$50,000,000
Responsible Agency/Department	Public Works - Streets Division
Other Comments	

2022-17. Parma Park Debris Basin

Priority: High	
Mitigation Strategy Description	The proposed project is an effort to prevent flooding and erosion along Sycamore Creek, its tributary areas, and downstream properties. Work consists of clearing debris and vegetation to restore the basin's capacity to its original conditions.
Relevant Objective	Parma Park basin was impacted by the Thomas Fire and subsequent debris flows.
Applicable Hazards	Flooding
Estimated Timeline for Completion	2030
Estimated Cost/Funding Source	$5,000,000
Responsible Agency/Department	Parks & Recreation – Parks Division Public Works – Streets Division
Other Comments	

2022-18. Creeks Development Standards

Priority: Medium	
Mitigation Strategy Description	Establish creek development standards for new development and redevelopment along the City's creeks inland of the Coastal Zone and prepare or update guidelines for restoration, an increase of pervious surfaces, and appropriate land uses within designated creek buffers.

Priority: Medium	
Relevant Objective	Protection and restoration of creeks and their riparian corridors is a priority for flood control in conjunction with adaptation planning for climate change.
Applicable Hazards	Flooding
Estimated Timeline for Completion	2030
Estimated Cost/Funding Source	$100,000/Grant or General Fund
Responsible Agency/Department	Community Development – Long Range Planning Division
Other Comments	Creek development standards, specifically numeric development setbacks, protect from flood, erosion, and geologic hazards and provide an area for habitat support. Numeric creek setbacks and buffer standards have been developed in the Coastal Land Use Plan for the Coastal Zone. This project would provide appropriate standards for the inland areas of the City. The policy direction for this project is found in the 2011 Environmental Resources Element and 2012 Climate Action Plan.

2022-19. Automatic Reservoir Isolations Valves

Priority: High	
Mitigation Strategy Description	The City's 14 potable water reservoirs should be retrofitted with automatic isolation valves, which would shut in the event of a water main break caused by an earthquake or other force.
Relevant Objective	The reservoirs all range in capacity from 1 to 10 million gallons. Retrofitting each reservoir with automatic isolation valves is important for protecting the City's water supply from an earthquake event and also protecting surrounding structures from a flood event resulting from a free-flowing pipe from the reservoir.
Applicable Hazards	Earthquake, Flooding
Estimated Timeline for Completion	2025
Estimated Cost/Funding Source	$1,400,000
Responsible Agency/Department	Public Works – Water Resources Division
Other Comments	

2022-20. Automated Metering Infrastructure (AMI) Program

Priority: High	
Mitigation Strategy Description	The City currently manually reads its 27,000 meters monthly. In the event of a private property leak, a month might pass before the meter is read and the leak is noticed because of the high use registered by the meter.
Relevant Objective	AMI would provide the infrastructure to enable leak notification 24 hours within the leak incident, thus eliminating high amounts of water loss. AMI would be a significant tool for helping conserve water Citywide.
Applicable Hazards	Earthquake, Wildfire, Drought
Estimated Timeline for Completion	2023

Priority: High	
Estimated Cost/Funding Source	This project is partially funded through the City's Capital Program. In addition, the City has received a grant for $1,500,000 from the Federal Bureau of Reclamation for Phase II implementation.- $6,802,000
Responsible Agency/Department	Public Works – Water Resources Division
Other Comments	The City is nearing the completion of the installation of compatible meters. Pilot testing of a limited number of meters is complete. The City is starting Phase II which is the AMI Implementation Phase in which smart meter communication equipment will be installed, data storage created and, a customer interface set up. Once Phase II is complete, the project will be complete

2022-21. El Estero WRC – Chlorine Contact Chamber Bypass

Priority: High	
Mitigation Strategy Description	Many of the structural components are past their useful life, such as baffle walls, flow control gates, and monitoring devices. Upgrading the structure and equipment will reduce the risk of failure due to natural disasters, such as floods, earthquakes, fires, and associated power disruptions.
Relevant Objective	
Applicable Hazards	Earthquake, Flooding, Wildfire, Sea Level Rise
Estimated Timeline for Completion	2023
Estimated Cost/Funding Source	Wastewater Capital Funds - $1,500,000
Responsible Agency/Department	Public Works – Water Resources Division
Other Comments	

2022-22. El Estero WRC – New DAFT and GT

Priority: High	
Mitigation Strategy Description	Many of the structural components and equipment are past their useful life, such as weirs, rotating equipment, walkways, and stairs. Upgrading the structure and equipment will reduce the risk of failure due to natural disasters, such as floods, earthquakes, fires, and associated power disruptions.
Relevant Objective	Maintain human health and safety and preserve the environment
Applicable Hazards	Earthquake, Flooding, Wildfire, Sea Level Rise
Estimated Timeline for Completion	2026
Estimated Cost/Funding Source	Wastewater Capital Funds - $6,400,000
Responsible Agency/Department	Public Works – Water Resources Division
Other Comments	

2022-23. El Estero WRC – Digester Upgrades

Priority: High	
Mitigation Strategy Description	This project will result in a third digester being constructed. This third digester will reduce the risk of failure due to natural disasters that may subject the older digesters to failure.
Relevant Objective	A new digester will allow this critical wastewater treatment process to continue to operate during floods, earthquakes, and power failures due to wildfires. This new digester will also allow for El Estero to operate independently from Southern California Edison and the power grid during a natural disaster.
Applicable Hazards	Earthquake, Flooding, Wildfire, Sea Level Rise
Estimated Timeline for Completion	2042
Estimated Cost/Funding Source	Wastewater Capital Funds - $14,600,000
Responsible Agency/Department	Public Works – Water Resources Division
Other Comments	

2022-24. El Estero WRC – Electrical Distribution Upgrade Project

Priority: High	
Mitigation Strategy Description	The Electrical Distribution System Upgrade project will replace the substations and electrical equipment that is outdated and past useful life.
Relevant Objective	The new electrical substations and equipment will be designed with redundancy and features that will allow the important wastewater treatment facilities to run independently on internally generated power. This redundancy and power independence will allow the wastewater treatment process to be maintained during earthquakes, floods, and wildfires. The project is in the final design stage.
Applicable Hazards	Earthquake, Flooding, Wildfire, Sea Level Rise
Estimated Timeline for Completion	2026
Estimated Cost/Funding Source	SRF – $30,200,000
Responsible Agency/Department	Public Works – Water Resources Division
Other Comments	

2022-25. Community Resilience Plans and Hubs

Priority: High	
Mitigation Strategy Description	Develop community resilience plans including a comprehensive database of relief resources in the event of a disaster and neighborhood-level Community Resilience Hubs to improve initial emergency response, subsequent recovery, and ongoing self-sufficiency. Resilience hubs are community-serving facilities augmented to support residents, coordinate communication, distribute resources, and reduce carbon pollution while enhancing the quality of life. The plans will define, identify, and analyze the logistical and economic feasibility of Community Resilience Hubs and develop a comprehensive implementation and operations plan for several Community Resilience Hubs in the City. Execute elements needed for the resilience hubs,

Priority: High	
	including but not limited to installing energy generation and storage, building upgrades, and improvements necessary for services.
Relevant Objective	
Applicable Hazards	Earthquake, Flooding, Wildfire, Sea Level Rise, Drought, Agricultural Pests/Disease, Epidemic/Pandemic, HazMat Release, Oil Spills, Landslide/Coastal Erosion, Tsunami, Dam Failure, Commercial Aircraft, Terrorism, Cyber Threat
Estimated Timeline for Completion	2025
Estimated Cost/Funding Source	$250,000-$1,500,000 depending on scope and implementation
Responsible Agency/Department	Community Development and Sustainability and Resilience
Other Comments	

2022-26. Water System Reservoirs Seismic Evaluation and Other Upgrades

Priority: High	
Mitigation Strategy Description	The City's 13 potable water reservoirs would be evaluated for seismic code deficiencies and other needed upgrades as necessary. The reservoirs all range in capacity from 1 to 10 million gallons.
Relevant Objective	Seismically retrofitting and upgrading aging equipment in each reservoir is important for protecting the City's water supply from an earthquake event and also for protecting surrounding structures from a flood event resulting from a failed reservoir.
Applicable Hazards	Earthquake, Flooding
Estimated Timeline for Completion	2022
Estimated Cost/Funding Source	Capital Program funding - $173,000
Responsible Agency/Department	Public Works – Water Resources Division
Other Comments	

2022-27. Transfer of Development Rights (TDR) Program

Priority: Low	
Mitigation Strategy Description	Develop a TDR Program that allows the transfer of residential density from the City's High Fire Hazard Areas to High-Density residential land use designations.
Relevant Objective	Reduce residential density in High Fire Hazard Areas
Applicable Hazards	Wildfire
Estimated Timeline for Completion	2030
Estimated Cost/Funding Source	$100,000/Grant or General Fund
Responsible Agency/Department	Community Development Dept. – Long Range Planning Division
Other Comments	Residential growth within the City is encouraged in the existing urban areas, rather than the front-country areas most subject to wildfire risk. The City's General Plan Update of 2011 did not change land use designations or increase development potential within High Fire Hazard Areas; however, this project would implement a policy that proposes to limit new development in High Fire Hazard Areas by

Priority: Low	
	offering incentives and/or an option to transfer development rights to urban areas. The policy direction for this project is found in the 2011 Land Use Element and 2012 Climate Action Plan.

2022-28. El Estero WRC – Solids Handling

Priority: High	
Mitigation Strategy Description	The Solids Handling project includes Sludge Holding Tank replacement, Dewatering Building structural upgrades, conveyance/truck loading, and polymer system upgrades.
Relevant Objective	The construction of the new structures will bring these facilities up to earthquake standards reducing the risk of failure to structures and important wastewater processes within these structures during earthquakes. Also, the new facilities will allow the important wastewater process of dewatering to continue during floods or power failures due to wildfire
Applicable Hazards	Earthquake, Flooding, Wildfire, Sea Level Rise
Estimated Timeline for Completion	2030
Estimated Cost/Funding Source	SRF – $23,270,000
Responsible Agency/Department	Public Works – Water Resources Division
Other Comments	

2022-29. Desal Intake Pump Platforms Hardening Project

Priority: High	
Mitigation Strategy Description	With the recent start-up of the City's Desalination Facility, it was found that the Intake Pump Platforms are not fully supported by the ocean floor.
Relevant Objective	The platforms were originally pinned to the sandy, ocean bottom with vertical pilings in the 1990s. The pilings lack adequate scour protection. Currently, one of the platforms was found to be without any sand support to a depth of 18" below the bottom of the slab. Only the friction with the pilings is holding the slabs from dropping. Failure of the platforms would result in the interruption of raw water supplies to the Desalination Plant.
Applicable Hazards	Earthquake, Landslide/Coastal Erosion, Tsunami
Estimated Timeline for Completion	2023
Estimated Cost/Funding Source	Hazard Mitigation Grant Program and Water Capital funds as the grant match – $4,200,000
Responsible Agency/Department	Public Works – Water Resources Division
Other Comments	

2022-30. Castillo Street Capacity Improvement Project

Priority: High	
Mitigation Strategy Description	This project would divert flow from the existing trunk sewer on the west side of Highway 101.

Priority: High	
Relevant Objective	The new pipeline would follow Castillo Street from Pedregosa Street to Haley Street, where it would reconnect to the existing system. The existing trunk sewer cannot convey wet weather peak flows.
Applicable Hazards	Earthquake, Flooding,
Estimated Timeline for Completion	2025
Estimated Cost/Funding Source	Wastewater Collection Capital Funds - $3,201,000
Responsible Agency/Department	Public Works – Water Resource Division
Other Comments	

2022-31. Milpas Street Capacity Improvement Project

Priority: High	
Mitigation Strategy Description	This project would provide relief for an undersized existing 6-inch pipe between Alphonse Street and Ortega Street.
Relevant Objective	Model results indicate the pipe currently has limited capacity during storm events and cannot convey the peak wet weather flow without surcharging the system.
Applicable Hazards	Earthquake, Flooding
Estimated Timeline for Completion	2025
Estimated Cost/Funding Source	Wastewater Collection Capital Funds - $82,000
Responsible Agency/Department	Public Works – Water Resources Division
Other Comments	

2022-32. Nopal Street Capacity Improvement Project

Priority: High	
Mitigation Strategy Description	At Nopal Street and De La Guerra Street, a short reach of 6-inch pipe is a hydraulic bottleneck, which has difficulties conveying wet weather peak flows.
Relevant Objective	This project would provide a parallel pipe to support the bottleneck and prevent a surcharge in the system.
Applicable Hazards	Earthquake, Flooding
Estimated Timeline for Completion	2025
Estimated Cost/Funding Source	Wastewater Collection Capital Funds - $35,000
Responsible Agency/Department	Public Works – Water Resources Division
Other Comments	

2022-33. Olive Street Capacity Improvement Project

Priority: High	
Mitigation Strategy Description	This project would provide relief for an existing 8-inch pipe in Olive Street from Cota Street to Haley Street.
Relevant Objective	The existing pipe is a hydraulic bottleneck that does not convey the peak wet weather flow for preventing a system surcharge.

Priority: High	
Applicable Hazards	Earthquake, Flooding
Estimated Timeline for Completion	2030
Estimated Cost/Funding Source	Wastewater Collection Capital Funds – $174,000
Responsible Agency/Department	Public Works – Water Resources Division
Other Comments	

2022-34. Ortega Street Capacity Improvement Project

Priority: High	
Mitigation Strategy Description	Between Laguna Street and Garden Street, an existing 6-inch pipe is a hydraulic bottleneck that does not convey wet weather flow capacity.
Relevant Objective	This project would provide a parallel pipe to support the bottleneck and prevent a surcharge in the system.
Applicable Hazards	Earthquake, Flooding
Estimated Timeline for Completion	2030
Estimated Cost/Funding Source	Wastewater Collection Capital Funds - $107,000
Responsible Agency/Department	Public Works – Water Resources Division
Other Comments	

2022-35. Quarantina Street Capacity Improvement Project

Priority: High	
Mitigation Strategy Description	This project would start near the intersection of Ortega Street and the extension of Nopal Street. It would provide wet weather capacity to carry flows southwest in Ortega Street and then southeast in Quarantina Street.
Relevant Objective	
Applicable Hazards	Earthquake, Flooding
Estimated Timeline for Completion	2025
Estimated Cost/Funding Source	Wastewater Collection Capital Funds - $650,000
Responsible Agency/Department	Public Works – Water Resources Division
Other Comments	

2022-36. State Street Capacity Improvement Project

Priority: High	
Mitigation Strategy Description	This project would provide additional wet weather capacity in State Street in front of La Cumbre Plaza and would address the restriction in the current siphon under Arroyo Burro.
Relevant Objective	Maintains human health and safety and preserves the environment
Applicable Hazards	Earthquake, Flooding
Estimated Timeline for Completion	2025

Priority: High	
Estimated Cost/Funding Source	Wastewater Collection Capital Funds - $541,000
Responsible Agency/Department	Public Works – Water Resources Division
Other Comments	

2022-37. Various Collection System Pipe Segments Capacity Improvement Project

Priority: High	
Mitigation Strategy Description	This project would address wet weather capacity constraints throughout the collection system. These pipes are currently unable to convey peak wet weather flows without surcharging the system.
Relevant Objective	Maintains human health and safety and preserves the environment
Applicable Hazards	Earthquake, Flooding
Estimated Timeline for Completion	2030
Estimated Cost/Funding Source	Wastewater Collection Capital Funds - $13,000,000
Responsible Agency/Department	Public Works – Water Resources Division
Other Comments	

2022-38. Rattlesnake Sewer Crossing Project

Priority: High	
Mitigation Strategy Description	A sewer main supported on a pipe bridge conveys sewage across Rattlesnake Creek where it joins the remainder of the sewage conveyance system to the wastewater treatment plant.
Relevant Objective	This project would replace the pipe bridge that carries the sewer main across the creek with a directionally drilled pipe under the creek and a lift station. The pipe bridge is exposed and vulnerable and its length makes it cost-prohibitive to strength. In addition, strengthening would require extensive environmental review and mobilization in a creek. Failure of the pipe would spill sewage into the creek.
Applicable Hazards	Earthquake, Flooding
Estimated Timeline for Completion	2028
Estimated Cost/Funding Source	Currently, there is funding for this project - $1,000,000
Responsible Agency/Department	Public Works – Water Resources Division
Other Comments	

2022-39. El Camino de la Luz Sewer Crossing Project

Priority: High	
Mitigation Strategy Description	A sewer main supported on a pipe bridge conveys sewage across a ravine where it joins the remainder of the sewage conveyance system to the wastewater treatment plant.
Relevant Objective	This project would replace the pipe bridge that carries the sewer main across the ravine by rerouting it through city streets. The pipe bridge is exposed and vulnerable and its length makes it cost-prohibitive to

Priority: High	
	strengthen. In addition, strengthening would require extensive environmental review and mobilization in a creek. Failure of the pipe would spill sewage into the ravine and potentially carry sewage to the ocean.
Applicable Hazards	Earthquake, Flooding, Landslide/Coastal Erosion
Estimated Timeline for Completion	2025
Estimated Cost/Funding Source	Currently, there is no funding for this project - $1,000,000
Responsible Agency/Department	Public Works – Water Resources Division
Other Comments	

2022-40. Wastewater Generator Containment Project

Priority: High	
Mitigation Strategy Description	This project would install containment around the generators throughout the wastewater treatment plant and collection system to prevent the spill of oil in the event of an earthquake.
Relevant Objective	Maintains human health and safety and preserves the environment
Applicable Hazards	Earthquake
Estimated Timeline for Completion	2025
Estimated Cost/Funding Source	Currently, there is no funding for the project - $700,000
Responsible Agency/Department	Public Works – Water Resources Division
Other Comments	

2022-41. Braemar Flood Wall Project

Priority: High	
Mitigation Strategy Description	This project would install a floodwall around the Braemar Lift Station to prevent inundation during flooding or dam failure and as prevention against sea level rise.
Relevant Objective	Braemar Lift Station is the largest lift station belonging to the City pumping approximately 1041 gal/min of sewage. The pump station sits next to the Arroyo Burro Creek and is vulnerable to flooding, dam failure, and sea level rise.
Applicable Hazards	Flooding, Sea Level Rise, Dam Failure
Estimated Timeline for Completion	2023
Estimated Cost/Funding Source	SRF – 100,000
Responsible Agency/Department	Public Works – Water Resources Division
Other Comments	Final design in progress. City preparing SRF funding application

2022-42. Creek Crossing Projection Project

Priority: High	
Mitigation Strategy Description	This project would move sewer pipelines that are exposed on the sides of bridges to a place underneath the bridge for better protection during a high flow event or in the event of a landslide.

Priority: High	
Relevant Objective	Maintains human health and safety and preserves the environment
Applicable Hazards	Flooding, Landslide/Coastal Erosion
Estimated Timeline for Completion	2029
Estimated Cost/Funding Source	Currently, there is no funding for this project - $7,000,000
Responsible Agency/Department	Public Works – Water Resources Division
Other Comments	

2022-43. Central Library Backup Power

Priority: High	
Mitigation Strategy Description	The Santa Barbara Public Library (SBPL) does not currently have any form of backup power. SBPL is a safe place during times of disaster and emergency, providing trusted information and serving as a place of refuge to the most vulnerable populations. Battery energy storage systems are the preferred source of backup power.
Relevant Objective	SBPL is also considered a cooling center during times of extreme heat. Additionally, with the advent of the Public Safety Power Shutdown, the Library must have an alternate source of power. On a typical day, SBPL welcomes over 1500 visitors and this number is often doubled during outages and/or emergencies. This project proposes the installation of a portable backup generator and associated infrastructure costs to serve the Library.
Applicable Hazards	Power Outages
Estimated Timeline for Completion	2023
Estimated Cost/Funding Source	Purchase the portable generator and trailer to include the necessary retrofitting of the Library. The estimated cost is $300,000; there is currently no funding for this project
Responsible Agency/Department	Resilience & Sustainability Public Works – Facilities Library - Administration
Other Comments	

2022-44. Collection System Freeway Crossing Project

Priority: High	
Mitigation Strategy Description	This project will assess collection system pipes that run under the 101 freeway and recommend repairs, realignment, and/or abandonment.
Relevant Objective	This project will harden the current infrastructure and make this part of the collection system easier to operate and maintain. It will provide reliability during earthquake events.
Applicable Hazards	Earthquake
Estimated Timeline for Completion	2023
Estimated Cost/Funding Source	Wastewater Capital Funds – $5,800,000
Responsible Agency/Department	Public Works, Water Resources Division - Wastewater Systems

Priority: High	
Other Comments	The alternative analysis phase is in progress. Once a preferred alternative for consolidation and repair is determined, the final design of the project will begin.

2022-45. Lower Elevation Sewer Collection System

Priority: High	
Mitigation Strategy Description	The sewer collection system located south of the 101 freeway sits at a lower elevation that is at risk of becoming inundated with any rain or flooding event, which may lead to failure of the system.
Relevant Objective	Reinforcement of the underground collection system and the sealing of the manhole covers will be required to protect the system from infiltration and potential damage
Applicable Hazards	Flooding, Sea Level Rise, Tsunami
Estimated Timeline for Completion	2035
Estimated Cost/Funding Source	Wastewater Collections Capital Improvement Program - $20,000,000
Responsible Agency/Department	Public Works – Water Resources Division – Wastewater Collections
Other Comments	

2022-46. Cater Clearwell Seismic Upgrade

Priority: High	
Mitigation Strategy Description	The clearwell is a 5-million gallon finished water reservoir at the Cater Water Treatment Plant that was constructed in 1965. It has not had significant structural improvements since that time. It is believed that the buried clearwell, which is topped with two feet of soil, is overloaded and does not meet current seismic standards. In addition, it is a single point of failure having no bypass for distribution of water produced by the Cater Water Treatment Plant.
Relevant Objective	Maintains safe drinking water for human health and safety
Applicable Hazards	Earthquake, Wildfire, Drought
Estimated Timeline for Completion	2025
Estimated Cost/Funding Source	Water Capital Fund, Joint Powers Agreement – $1,500,000
Responsible Agency/Department	Public Works, Water Resources Division – Water Systems
Other Comments	In the planning stages

2022-47. Water Conveyance Main

Priority: High	
Mitigation Strategy Description	This project would install a pipeline in the downtown area of the City to convey water from the desalination plant to the Cater Water Treatment Plant where it can be distributed to the entire City.
Relevant Objective	Currently, water from the desalination plant is used in the downtown area of the City only. In the case of a natural disaster where the flow

Priority: High	
	from Lake Cachuma or Gibraltar Reservoir is interrupted, the entire City would be able to receive water.
Applicable Hazards	Earthquake, Wildfire, Drought
Estimated Timeline for Completion	2023
Estimated Cost/Funding Source	Water Capital Funds, IRWM grant, Water Sales Agreement with Montecito Water District - $20,500,000
Responsible Agency/Department	Public Works, Water Resources Division - Water Systems
Other Comments	The final design is complete. The final execution of the Water Sales Agreement is needed to begin construction

2022-48. Desalination Project Water Pump Station

Priority: High	
Mitigation Strategy Description	This project would install a pump station at the desalination plant to convey water from the desalination plant to the Cater Water Treatment Plant where it can be distributed to the entire City. Currently, water from the desalination plant is used in the downtown area of the City only. In the case of a natural disaster where the flow from Lake Cachuma or Gibraltar Reservoir is interrupted, the entire City would be able to receive water.
Relevant Objective	Maintains safe drinking water for human health and safety
Applicable Hazards	Earthquake, Wildlife, Drought
Estimated Timeline for Completion	2023
Estimated Cost/Funding Source	Water Capital Funds, Water Sales Agreement with Montecito Water District - $4,000,000
Responsible Agency/Department	Public Works – Water Resources Division – Water Systems
Other Comments	Final Design is beginning

2022-49. Water Transmission Main Renewal

Priority: High	
Mitigation Strategy Description	This four-part project will perform maintenance on and add resilience to the main pipelines that convey water throughout the City. A portion of this project will harden piping along the route needed to convey water from the desalination plant to the Cater Water Treatment Plant where it can be distributed to the entire City. This project will be in two phases, also renew the main transmission pipeline from the Cater Water Treatment Plant to Vic Trace reservoir. The final phase will install a system to cathodically protect the metal pipeline thereby extending pipeline life.
Relevant Objective	Maintains safe drinking water for human health and safety
Applicable Hazards	Earthquake, Wildfire, Drought
Estimated Timeline for Completion	2025
Estimated Cost/Funding Source	Water Capital Funds, Water Sales Agreement with Montecito Water District (only Phase One) - $3,500,000
Responsible Agency/Department	Public Works – Water Resources Division – Water Systems

Priority: High	
Other Comments	Design is in progress

2022-50. Cater Yard Piping Project

Priority: High	
Mitigation Strategy Description	This project would install a pipeline at the Cater Water Treatment Plant to allow water from the desalination plant to be piped into the Cater Water Treatment Plant Clearwell where it can be distributed to the entire City. Currently, water from the desalination plant is used in the downtown area of the City only. In the case of a natural disaster where the flow from Lake Cachuma or Gibraltar Reservoir is interrupted, the entire City would be able to receive water.
Relevant Objective	Maintains safe drinking water and human safety
Applicable Hazards	Earthquake, Wildfire, Drought
Estimated Timeline for Completion	2023
Estimated Cost/Funding Source	Water Capital Funds, Water Sales Agreement with Montecito Water District - $1,200,000
Responsible Agency/Department	Public Works, Water Resources Division – Water Systems
Other Comments	In the planning stages

2022-51. Sheffield Pump Station Rehabilitation

Priority: High	
Mitigation Strategy Description	This pump station was constructed in 1982 and is nearing the end of its useful life. It is the City's largest pump station and is critical for supplying water to the upper reaches of the City's water distribution system by pumping water from the Cater Water Treatment Plant to Hoover and McLaughlin Reservoirs. Rehabilitation of this pump station will ensure the City's ability to supply water to several high fire danger areas in case of an emergency.
Relevant Objective	Maintain safe drinking water and human safety
Applicable Hazards	Earthquake, Wildfire
Estimated Timeline for Completion	2025
Estimated Cost/Funding Source	Water Capital Fund – $166,000
Responsible Agency/Department	Public Works – Water Resources Division – Water Systems
Other Comments	

2022-52. Vic Trace Reservoir Replacement

Priority: High	
Mitigation Strategy Description	This reservoir was constructed in 1956 and has a capacity of ten million gallons. It is one of the City's larger reservoirs and is critical for supplying water to the lower portion of the City's water distribution system. Work has been recommended to improve the operations and maintenance of this reservoir and to increase the flexibility of supplying the water distribution system.

Priority: High	
Relevant Objective	This reservoir is critical for supplying water in fire emergencies to the coastal and coastal interior high fire hazard areas.
Applicable Hazards	Earthquake, Wildfire
Estimated Timeline for Completion	2025
Estimated Cost/Funding Source	SRF – $40,000,000
Responsible Agency/Department	Public Works – Water Resources Division – Water Systems
Other Comments	

2022-53. Via Lucero Lift Station and Force Main

Priority: High	
Mitigation Strategy Description	The project will rehabilitate the Via Lucero Lift Station and reroute the force main to provide redundancy to the existing system that has limited capacity during storm events and cannot convey the peak wet weather flow.
Relevant Objective	Objective 2.A: Mitigate vulnerability structures and public infrastructure including facilities, roadways, and utilities
Applicable Hazards	Flooding
Estimated Timeline for Completion	2025
Estimated Cost/Funding Source	$1,000,000
Responsible Agency/Department	Water Resources/Public Works
Other Comments	

2022-54. Alameda Well Pipeline to Ortega Groundwater Treatment Plan

Priority: High	
Mitigation Strategy Description	The Alameda Well accesses one of the City's primary groundwater basins, Storage Unit 1 (in the general vicinity of downtown); however, water quality is relatively poor. The purpose of the proposed project is to install approximately 3,300 feet of new raw water main from the existing Alameda Well in Alameda Park to a tie-in point in the intersection of Olive Street and Anapamu Street, to the existing raw water main. Once tied in, the raw water main system will convey the raw water from Alameda Well to the Ortega Groundwater Treatment Plant to treat it for potable use, further adding to the City's available water supply and resiliency to drought.
Relevant Objective	Objective 2.A: Mitigate vulnerability structures and public infrastructure including facilities, roadways, and utilities
Applicable Hazards	Drought
Estimated Timeline for Completion	2023
Estimated Cost/Funding Source	$1,500,000
Responsible Agency/Department	City of Santa Barbara/Public Works/Water Resources
Other Comments	

2022-55. Bilingual Outreach and Education campaign for Energy Assurance, Hazard Adaptation, and Climate Measures

Priority: Medium	
Mitigation Strategy Description	Develop and implement bilingual outreach and education campaigns around energy and climate initiatives, including but not limited to energy resilience, climate adaptation, climate mitigation strategies.
Relevant Objective	Disaster planning, recovery, and relief. Energy resilience. Climate change. Sea-level rise. Public Outreach.
Applicable Hazards	Climate change; sea-level rise; energy outages; disaster relief.
Estimated Timeline for Completion	2023
Estimated Cost/Funding Source	$100,000
Responsible Agency/Department	Sustainability and Resilience
Other Comments	

2022-56. Community Energy Assurance

Priority: High	
Mitigation Strategy Description	Conduct site assessments, feasibility studies, and implementation plans for community-wide energy assurance projects. Projects may include community-scale energy generation and storage, microgrid deployment, vehicle to grid technologies, and demand response programs.
Relevant Objective	Disaster planning, recovery, and relief. Energy resilience. Climate change.
Applicable Hazards	Energy outages; disaster relief; climate change
Estimated Timeline for Completion	2023
Estimated Cost/Funding Source	$300,000-$700,000 depending on scope
Responsible Agency/Department	Sustainability and Resilience
Other Comments	

2022-57. Clean Energy Assurance for City Facilities, Emergency Operations, and City Fleet

Priority: High	
Mitigation Strategy Description	Scope and implement clean energy generation and storage for critical municipal facilities, City emergency operations, and the City's fleet. Ensure functionality during energy outages.
Relevant Objective	Disaster planning, recovery, and relief. Energy resilience. Climate change.
Applicable Hazards	Disaster planning, recovery, and relief. Energy resilience. Climate change.
Estimated Timeline for Completion	2023
Estimated Cost/Funding Source	$200,000-$2,000,000 depending on scope
Responsible Agency/Department	Sustainability and Resilience
Other Comments	

2022-58. Disaster Debris Management Plan Implementation

Priority: High	
Mitigation Strategy Description	Build upon the Santa Barbara County Debris Management Plan by assessing, securing, and permitting appropriate temporary debris storage, disposal, and discharge sites and developing processes for the City of Santa Barbara to support regional debris management during and following a disaster. Debris-generating events include windstorms, flooding, debris flows, mudslides, earthquake, wildland fires, and other incidents. Appropriate sediment sources could also potentially be used for beach nourishment and other erosion mitigation efforts.
Relevant Objective	Disaster planning and recovery.
Applicable Hazards	Windstorm, flooding, debris flows, mudslides, earthquake, wildland fire, and other incidents
Estimated Timeline for Completion	2024
Estimated Cost/Funding Source	$250,000
Responsible Agency/Department	Sustainability and Resilience and Public Works
Other Comments	

2022-59. Airport Sea-Level Rise Adaptation Plan

Priority: High	
Mitigation Strategy Description	Building upon the previously completed Goleta Slough Sea-Level Rise Assessment, study adaptation actions for the Airport, including adaptations options for the impacted stormwater system.
Relevant Objective	Would prepare airport for sea level rise.
Applicable Hazards	Sea-level rise; flooding
Estimated Timeline for Completion	2023
Estimated Cost/Funding Source	$250,000
Responsible Agency/Department	Airport; Sustainability and Resilience
Other Comments	

2022-60. Changes to Development Floodplain Regulations and Creek Setbacks

Priority: High	
Mitigation Strategy Description	Modify the City's floodplain regulations and creek setbacks south of Highway 101 for new and substantially redeveloped structures to address increased flood risks associated with sea level rise and extreme rainfall events. Develop incentives for floodproofing and raising existing structures (permit streamlining or relief from design, zoning, or height requirements) south of Highway 101 and other areas of the City with projected increases in flooding from sea-level rise and extreme rainfall events.
Relevant Objective	Would prevent damages to structures during flooding
Applicable Hazards	Sea level rise; flooding; climate change
Estimated Timeline for Completion	2025
Estimated Cost/Funding Source	$100,000

Priority: High	
Responsible Agency/Department	Sustainability and Resilience
Other Comments	

2022-61. Sea-Level Rise Groundwater Impacts and Adaptation Options Study

Priority: High	
Mitigation Strategy Description	Study existing groundwater elevations, freeboard from typical levels up to flood threshold, and potential impacts of sea-level rise. Study the potential of raised groundwater levels to spread contamination. Study feasibility of groundwater pumping to lower the water table.
Relevant Objective	Would prevent damage to infrastructure and buildings from corrosion and other groundwater impacts
Applicable Hazards	Sea-level rise; flooding
Estimated Timeline for Completion	2025
Estimated Cost/Funding Source	$150,000
Responsible Agency/Department	Sustainability and Resilience;
Other Comments	

2022-62. Harbor Breakwater and Groins

Priority: High	
Mitigation Strategy Description	The City's recently completed Sea-Level Rise Adaptation Plan identified critical facilities that are vulnerable to sea level rise and prioritized actions to adapt. Conduct a feasibility study and concept design for raising or modifying Harbor breakwater, rock groin, sand spit, and walkway and wall spanning from the breakwater to the Harbor commercial area to reduce impacts from existing storm surges and address the impacts of sea-level rise. This will protect not just the Harbor, but also continue to protect the West Beach neighborhood.
Relevant Objective	Objective 2.A: Mitigate vulnerability structures and public infrastructure including facilities, roadways, and utilities
Applicable Hazards	Sea-level rise; flooding; storm surge and waves; tsunami
Estimated Timeline for Completion	2024
Estimated Cost/Funding Source	$200,000
Responsible Agency/Department	Waterfront and Sustainability and Resilience
Other Comments	Upon completion of the feasibility and alternatives analysis, a capital project will be programmed in future years.

2022-63. Laguna Creek, Tide Gate, and Pump Station Redesign

Priority: High	
Mitigation Strategy Description	The City's recently completed Sea-Level Rise Adaptation Plan identified critical facilities that are vulnerable to sea level rise and prioritized actions to adapt. Redesign the Laguna Creek tide gate, pump station, and channel to accommodate sea level rise and increased creek discharge flooding from changes in rainfall runoff. The

Priority: High	
	project includes the creation of a Laguna Creek conceptual plan, infrastructure relocation alternatives analysis, beach berm analysis, and updated hydrologic and biological studies. The tide gate already overtops during some high tide events and storm surges.
Relevant Objective	Objective 2.A: Mitigate vulnerability structures and public infrastructure including facilities, roadways, and utilities
Applicable Hazards	Sea-level rise; flooding; tsunami
Estimated Timeline for Completion	2025
Estimated Cost/Funding Source	$350,000
Responsible Agency/Department	Sustainability and Resilience and Public Works
Other Comments	Upon completion of the feasibility and alternatives analysis, a capital project will be programmed in future years.

2022-64. Prepare Marina Facilities and City Pier for Sea-Level Rise

Priority: High	
Mitigation Strategy Description	Renovate marina facilities and the City Pier to accommodate increased tide heights and storm surges related to sea-level rise. City Pier supports the marinas fuel dock, icehouse, and coast guard facilities.
Relevant Objective	Would prevent damage to marinas and pier during storms and high tide events
Applicable Hazards	Sea-level rise; storm surge
Estimated Timeline for Completion	2030
Estimated Cost/Funding Source	$500,000
Responsible Agency/Department	Waterfront; Sustainability and Resilience
Other Comments	

2022-65. Master Drainage Plan and Increased Rainfall Intensities

Priority: High	
Mitigation Strategy Description	This project consists of new hydrologic and flood modeling factoring in sea-level rise and changes in rainfall intensities from climate change. Results from this study are necessary for other projects including changes to floodplain regulations, creek setbacks, design of the Laguna Creek tide gate, and adaptation options for the stormwater system.
Relevant Objective	Would facilitate planning for increased flooding and impacts to stormwater system
Applicable Hazards	Sea-level rise; flooding
Estimated Timeline for Completion	2025
Estimated Cost/Funding Source	$150,000
Responsible Agency/Department	Sustainability and Resilience
Other Comments	

2022-66. Regional Shoreline Monitoring Program

Priority: High	
Mitigation Strategy Description	Develop and implement a Shoreline Monitoring Program in coordination with other regional, state, and federal agencies to monitor sea-level rise-related hazards; identify action thresholds, and regularly reassess the need for hazard mitigation actions. Use program to assess the success of implemented mitigation actions.
Relevant Objective	Key element in decisionmaking for adaption
Applicable Hazards	Sea-level rise; flooding; shoreline erosion
Estimated Timeline for Completion	2025
Estimated Cost/Funding Source	$300,000
Responsible Agency/Department	Sustainability and Resilience; BEACON
Other Comments	

2022-67. Stormwater System Vulnerability Assessment and Adaptation Plan

Priority: High	
Mitigation Strategy Description	Assess vulnerabilities and adaptation options for those portions of the stormwater system potentially affected by sea-level rise and extreme rainfall-related hazards.
Relevant Objective	Would ensure continued operation of stormwater system during flooding and erosion events
Applicable Hazards	Sea-level rise; flooding; climate change; erosion
Estimated Timeline for Completion	2025
Estimated Cost/Funding Source	$300,000
Responsible Agency/Department	Sustainability and Resilience; Public Works
Other Comments	

2022-68. Wastewater and Water System Vulnerabilities and Adaptation Options

Priority: High	
Mitigation Strategy Description	The City's recently completed Sea-Level Rise Adaptation Plan identified critical facilities that are vulnerable to sea level rise and prioritized actions to adapt. One of the highest priority actions identified for the next few years is a comprehensive study of adaptation options for threatened portions of the wastewater and water systems, including the redesign of portions of the system, adaptation options for El Estero Water Resource Center, and possible service point improvements. Portions of the wastewater system, in particular, are already at risk from flooding during major storms. One of the most vulnerable facilities identified is the existing sewer trunk line on Cabrillo Boulevard that carries sewage to the El Estero Water Resources Center to be treated. The existing pipeline and manholes are vulnerable to flooding from storm surges during major storms and will be at risk from storm surge and erosion due to sea-level rise, which would result in sanitary sewer overflows. The analysis

Priority: High	
	should study the feasibility and alternatives for relocating the existing trunk line.
Relevant Objective	Objective 2.A: Mitigate vulnerability structures and public infrastructure including facilities, roadways, and utilities
Applicable Hazards	Sea-level rise; flooding; shoreline erosion; tsunami
Estimated Timeline for Completion	2023
Estimated Cost/Funding Source	$500,000
Responsible Agency/Department	Sustainability and Resilience and Public Works
Other Comments	Upon completion of the feasibility and alternatives analysis, a capital project will be programmed in future years.

2022-69. Waterfront and Harbor 30-Year Plan

Priority: High	
Mitigation Strategy Description	This is a detailed study of the assets along the Waterfront and Harbor to: Analyze adaptation options and establish 30-year design storm and sea level rise amounts for Harbor Commercial area, parking areas, and other assets along the Waterfront. Identify options to relocate to the extent feasible and where not feasible protect in place sewer main and collocated gas pipelines, water lines, and major utilities south of Cabrillo Boulevard; Assess the feasibility of additional beach berm construction, dune creation, and sediment management to address 30-year vulnerabilities along Waterfront; Assess options for increased Harbor dredging and other sand supplies.
Relevant Objective	Objective 2.A: Mitigate vulnerability structures and public infrastructure including facilities, roadways, and utilities
Applicable Hazards	Sea-level rise; flooding; shoreline erosion; tsunami
Estimated Timeline for Completion	2025
Estimated Cost/Funding Source	$250,000
Responsible Agency/Department	Sustainability and Resilience; Waterfront; Parks and Recreation
Other Comments	

2022-70. Airport Sewer Master Plan – Phase III

Priority: High	
Mitigation Strategy Description	The 2004 Sewer Master Plan was prepared to provide a modern solution to the airport sewer system originally constructed in the 1940s. This project would implement a second phase of the Sewer Master Plan. The second phase consists of the removal of lift station 3 and the re-routing of the northwest quadrant of the airfield to flow to the new Goleta Sanitary District lift station on Norman Firestone Road. This will avoid the need to pump sewage in an 80-year-old force main under the main air carrier runway and through the Goleta Slough State Ecological Reserve.

Priority: High	
Relevant Objective	Maintain Infrastructure, Modernize City Facilities, Support the City's Plans
Applicable Hazards	Earthquake, flood, infrastructure failure
Estimated Timeline for Completion	This is an unscheduled project in the City's CIP. Completion would take nine months.
Estimated Cost/Funding Source	$2.3 million – Airport Capital Fund
Responsible Agency/Department	Airport Department
Other Comments	The first phase of the Sewer Master Plan, the removal of lift stations 1 and 2 and their replacement with a new Goleta Sanitary District lift station, was completed in 2009.

2022-71. Central Library ADA Elevator

Priority: High	
Mitigation Strategy Description	Installation of an ADA compliant elevator would ease mobility challenges and allow for greater access to all areas of the Library. The Santa Barbara Library (SBPL) serves as a cooling center during extreme weather conditions and serves as a place of refuge for all ages during times of disaster such as local fire. While the Library does have a small elevator, its size presents challenges for mobility devices, which in turn limits ease of access to spaces in the facility.
Relevant Objective	Installation of an ADA compliant elevator to allow for full access to all spaces in the Library, particularly while serving as a cooling shelter or refuge during disaster and emergency.
Applicable Hazards	Lack of compliance with current ADA standards and challenges for mobility devices.
Estimated Timeline for Completion	Tentatively Fall/Winter 2022
Estimated Cost/Funding Source	$2,267,535/ Partially Measure C
Responsible Agency/Department	City of Santa Barbara Library Department
Other Comments	This project is in progress. The design and plan review is complete. The permit has been issued and bidding should take place in January 2022 with construction to tentatively begin March 2022.

2022-72. Las Positas Landfill Capping Project

Priority: High	
Mitigation Strategy Description	The Closed Las Positas Landfill is located within the boundaries of Eling's Park includes a methane recovery system that burns off methane produced. The methane recovery system requires an onsite propane tank that poses an explosives hazard and produces hazardous and non-hazardous waste products that are stored onsite pending disposal. There is also a section of soil that has tested above the action limits for lead contamination. The land is currently held in a longer-term lease agreement with a private operator that operates sports fields and recreational amenities onsite.

Priority: High	
Relevant Objective	This project includes the installation of a clay liner over the closed landfill footprint at the baseball and soccer fields. The cap would decrease the potential for infiltration of water into the buried waste which may decrease the generation of methane and decrease the potential for leaching of contaminants to groundwater.
Applicable Hazards	Hazardous Materials release
Estimated Timeline for Completion	2025? (prefer to occur when field turf replacement occurs in 2-3 years)
Estimated Cost/Funding Source	$720,000 for clay layer to cap sports fields (does not include design, permitting, etc.), the cost would be more do line the entire landfill area.
Responsible Agency/Department	City of Santa Barbara, Sustainability and Resilience Department
Other Comments	The project could be expanded to install the cap across the entire closed landfill footprint, but that would cost more. The above cost does not include design, technical studies, permitting, maintenance, and monitoring. Before moving forward with designing the cap the metrics for ending the monitoring and reporting program and methane mitigation should be defined with the Central Coast Regional Water Quality Control Board and the Santa Barbara County Public Health Department.

2022-73. Las Positas Creek Restoration Project

Priority: Medium	
Mitigation Strategy Description	This creek restoration/water quality improvement project includes the removal of concrete, invasive plants, and other debris from Las Positas Creek, which will facilitate flood flow conveyance through the creek channel. The project scope also includes biotechnical bank and toe stabilization, which will reduce erosion and bank failure near adjacent homes and Las Positas Road.
Relevant Objective	Reduce flooding, erosion, and creek bank failure along Las Positas Road and nearby private properties.
Applicable Hazards	Flooding, creek bank erosion.
Estimated Timeline for Completion	Estimated completion in 2027.
Estimated Cost/Funding Source	The estimated cost is $950,000. The funding source is Measure B (Creeks Fund) and unidentified grant funding.
Responsible Agency/Department	Parks and Recreation/Creeks Division
Other Comments	

2022-74. Arroyo Burro Restoration at Palermo Drive

Priority: High	
Mitigation Strategy Description	This creek restoration/water quality improvement project includes the removal of concrete, invasive plants, and other debris from Arroyo Burro, which will facilitate flood flow conveyance through the creek channel. The project scope also includes biotechnical bank and toe stabilization, which will reduce erosion and bank failure near the adjacent park, homes, and commercial properties.
Relevant Objective	Reduce flooding, erosion, and creek bank failure along City park and nearby private properties.

Priority: High	
Applicable Hazards	Flooding, creek bank erosion
Estimated Timeline for Completion	Estimated completion in 2026.
Estimated Cost/Funding Source	Estimated cost is $2,000,000. The funding source is Measure B (Creeks Fund) and unidentified grant funding.
Responsible Agency/Department	Parks and Recreation/Creeks Division
Other Comments	

2022-75. San Roque Creek Restoration Project

Priority: Medium	
Mitigation Strategy Description	This creek restoration/water quality improvement project includes the removal of concrete, invasive plants, and other debris from San Roque Creek, which will facilitate flood flow conveyance through the creek channel. The project scope also includes biotechnical bank and toe stabilization, which will reduce erosion and bank failure near adjacent roads, homes, and commercial areas of the City.
Relevant Objective	Reduce flooding, erosion, and creek bank failure along San Roque Creek.
Applicable Hazards	Flooding, creek bank erosion
Estimated Timeline for Completion	Estimated completion in 2027.
Estimated Cost/Funding Source	Estimated cost is $1,300,000. The funding source is Measure B (Creeks Fund) and unidentified grant funding.
Responsible Agency/Department	Parks and Recreation/Creeks Division
Other Comments	

2022-76. Mid-Arroyo Burro Restoration Project

Priority: Medium	
Mitigation Strategy Description	This creek restoration/water quality improvement project includes the removal of concrete, invasive plants, and other debris from Arroyo Burro, which will facilitate flood flow conveyance through the creek channel. The project scope also includes biotechnical bank and toe stabilization, which will reduce erosion and bank failure along Arroyo Burro in the upper State Street area of the City.
Relevant Objective	Reduce flooding, erosion, and creek bank failure along Arroyo Burro, upper State Street, and the surrounding neighborhood and business district.
Applicable Hazards	Flooding, creek bank erosion
Estimated Timeline for Completion	Estimated completion in 2027.
Estimated Cost/Funding Source	Estimated cost is $1,350,000. The funding source is Measure B (Creeks Fund) and unidentified grant funding.
Responsible Agency/Department	Parks and Recreation/Creeks Division
Other Comments	

2022-77. Upper Mission Creek Restoration Project

Priority: Medium	
Mitigation Strategy Description	This creek restoration/water quality improvement project includes the removal of concrete, invasive plants, and other debris from upper Mission Creek, which will facilitate flood flow conveyance through the creek channel. The project scope also includes biotechnical bank and toe stabilization, which will reduce erosion and bank failure near adjacent parks, homes, and Mission Canyon Road.
Relevant Objective	Reduce flooding, erosion, and creek bank failure along Mission Canyon Road and nearby private properties.
Applicable Hazards	Flooding, creek bank erosion
Estimated Timeline for Completion	Estimated completion in 2028.
Estimated Cost/Funding Source	Estimated cost is $1,600,000. The funding source is Measure B (Creeks Fund) and unidentified grant funding.
Responsible Agency/Department	Parks and Recreation/Creeks Division
Other Comments	

2022-78. Mission Creek Restoration at Oak Park

Priority: High	
Mitigation Strategy Description	This creek restoration/water quality improvement project includes the removal of concrete, invasive plants, and other debris from Mission Creek, which will facilitate flood flow conveyance through the creek channel. The project scope also includes biotechnical bank and toe stabilization, which will reduce erosion and bank failure near adjacent homes and Oak Park.
Relevant Objective	Reduce flooding, erosion, and creek bank failure along Mission Creek at Oak Park and nearby private properties.
Applicable Hazards	Flooding, creek bank erosion
Estimated Timeline for Completion	Estimated completion in 2024.
Estimated Cost/Funding Source	Estimated cost is $1,250,000. The funding source is Measure B (Creeks Fund) and unidentified grant funding.
Responsible Agency/Department	Parks and Recreation/Creeks Division
Other Comments	

2022-79. Lower Mission Creek Restoration Project

Priority: High	
Mitigation Strategy Description	This creek restoration/water quality improvement project includes the removal of concrete, invasive plants, and other debris from lower Mission Creek, which will facilitate flood flow conveyance through the creek channel. The project scope also includes biotechnical bank and toe stabilization, which will reduce erosion and bank failure near adjacent homes, businesses, and downtown Santa Barbara streets.
Relevant Objective	Reduce flooding, erosion, and creek bank failure along lower Mission Creek, downtown roads, and nearby private properties.
Applicable Hazards	Flooding, creek bank erosion
Estimated Timeline for Completion	Estimated completion in 2025.

Priority: High	
Estimated Cost/Funding Source	Estimated cost is $2,300,000. The funding source is Measure B (Creeks Fund) and unidentified grant funding.
Responsible Agency/Department	Parks and Recreation/Creeks Division
Other Comments	

2022-80. Old Mission Creek Restoration at Figueroa Street

Priority: Medium	
Mitigation Strategy Description	This creek restoration/water quality improvement project includes the removal of concrete, invasive plants, and other debris from Old Mission Creek, which will facilitate flood flow conveyance and improve floodplain access through the creek channel. The project scope also includes biotechnical bank and toe stabilization, which will reduce erosion and bank failure near adjacent homes and Figueroa Street.
Relevant Objective	Reduce flooding, erosion, and creek bank failure along Old Mission Creek, Figueroa Street, and nearby private properties.
Applicable Hazards	Flooding, creek bank erosion
Estimated Timeline for Completion	Estimated completion in 2028.
Estimated Cost/Funding Source	Estimated cost is $1,000,000. The funding source is Measure B (Creeks Fund) and unidentified grant funding.
Responsible Agency/Department	Parks and Recreation/Creeks Division
Other Comments	

2022-81. Rattlesnake Creek Restoration Project

Priority: Medium	
Mitigation Strategy Description	This creek restoration/water quality improvement project includes the removal of concrete, invasive plants, and other debris from Rattlesnake Creek, which will facilitate flood flow conveyance through the creek channel. The project scope also includes biotechnical bank and toe stabilization, which will reduce erosion and bank failure near adjacent homes and Las Canoas Road.
Relevant Objective	Reduce flooding, erosion, and creek bank failure along Rattlesnake Creek, Las Canoas Road, and nearby private properties.
Applicable Hazards	Flooding, creek bank erosion
Estimated Timeline for Completion	Estimated completion in 2027.
Estimated Cost/Funding Source	Estimated cost is $1,250,000. The funding source is Measure B (Creeks Fund) and unidentified grant funding.
Responsible Agency/Department	Parks and Recreation/Creeks Division
Other Comments	

2022-82. Sycamore Creek Restoration Project

Priority: High	
Mitigation Strategy Description	This creek restoration/water quality improvement project includes the removal of concrete, invasive plants, and other debris from Sycamore

Priority: High	
	Creek, which will facilitate flood flow conveyance through the creek channel. The project scope also includes biotechnical bank and toe stabilization, which will reduce erosion and bank failure near adjacent streets, parks, homes, and businesses.
Relevant Objective	Reduce flooding, erosion, and creek bank failure along Sycamore Creek and nearby private properties.
Applicable Hazards	Flooding, creek bank erosion
Estimated Timeline for Completion	Estimated completion in 2028.
Estimated Cost/Funding Source	Estimated cost is $80,000,000. The funding source is Measure B (Creeks Fund) and unidentified grant funding.
Responsible Agency/Department	Parks and Recreation/Creeks Division
Other Comments	

2022-83. Andree Clark Bird Refuge Restoration Project

Priority: High	
Mitigation Strategy Description	This wetland restoration/water quality improvement project includes removal and replacement of a failing weir and weir gates at the Andree Clark Bird Refuge, which will facilitate flood flow conveyance out of the Bird Refuge and under Cabrillo Boulevard. The project scope also includes managing the sand berm between the Bird Refuge and the Pacific Ocean during storms to allow water to flow through the culverts and prevent flooding of Cabrillo Boulevard.
Relevant Objective	Reduce flooding on Cabrillo Boulevard.
Applicable Hazards	Flooding.
Estimated Timeline for Completion	Estimated completion in 2023.
Estimated Cost/Funding Source	Estimated cost is $2,500,000. The funding source is Measure B (Creeks Fund) and unidentified grant funding.
Responsible Agency/Department	Parks and Recreation/Creeks Division
Other Comments	

2022-84. Defensible Space/Home Hardening Survey

Priority: High	
Mitigation Strategy Description	Assess vulnerabilities and needs regarding home hardening and defensible space within the City's designated High Fire Hazard Areas. Encourage home hardening retrofits Complete Defensible Space Survey Increase grant funding opportunities Develop programs to incentivize improved defensible space around homes
Relevant Objective	Improve Defensible Space regarding home hardening within communities vulnerable to wildfire.
Applicable Hazards	Wildfire
Estimated Timeline for Completion	FY 2023-24
Estimated Cost/Funding Source	$20,000 from grants and/or Wildland General Fund

Priority: High	
Responsible Agency/Department	Fire Department/Prevention - Wildfire
Other Comments	This task is based on recommendations made in the 2021 Community Wildfire Protection Plan (CWPP)

2022-85. Expand Wildland Fire Suppression Assessment District

Priority: High	
Mitigation Strategy Description	The Community Wildfire Protection Plan (CWPP) expanded all four of the City's designated High Fire Hazard Areas. As part of the CWPP implementation, a study and survey should be completed to determine areas to potentially be included in the Wildland Fire Suppression Assessment District. This would be determined by ballot measure to residents in the newly proposed area.
Relevant Objective	Create a new Assessment District in the Coastal and Coastal Interior High Fire Hazard areas and expand the existing Wildfire Suppression Assessment District within the Foothill High Fire Hazard area to include parcels added in the CWPP.
Applicable Hazards	Wildfire
Estimated Timeline for Completion	FY2024-25
Estimated Cost/Funding Source	$40,000 Wildland General Fund
Responsible Agency/Department	Fire Department/Prevention - Wildfire
Other Comments	This project is expected to take 2+ years and implementation will be determined by ballot measures issued to all residents within the proposed areas.

2022-86. Increase Evacuation Safety

Priority: High	
Mitigation Strategy Description	Combine CWPP and 2014 Evacuations Procedure Analysis. Publicly identify evacuation routes in High Fire Hazard Areas with signage Identify Roads that do not meet SBFD Access Standards Conduct detailed evacuation study
Relevant Objective	Improve evacuation safety in communities vulnerable to wildfire.
Applicable Hazards	Wildfire, Flooding, Debris Flow
Estimated Timeline for Completion	FY2023-24
Estimated Cost/Funding Source	$20,000 from grants and/or Wildland General Fund
Responsible Agency/Department	Fire Department/Prevention - Wildfire
Other Comments	A consultant may be needed for portions of the Evacuation Procedure Analysis.

2022-87. Fuels Reduction Within Identified Vegetation Management Units

Priority: High	
Mitigation Strategy Description	Complete fuels reduction projects within all 50 of the identified Vegetation Management Units within the City. This also includes areas within the Community Fuels Treatment Network.
Relevant Objective	Reduce wildfire danger within our communities by expanding defensible space in targeted locations beyond the homeowner's required clearance.
Applicable Hazards	Wildfire
Estimated Timeline for Completion	FY2035
Estimated Cost/Funding Source	$500,000-$1,000,000 from Grants/Wildland General Fund/Wildland Fire Suppression Assessment District Fund
Responsible Agency/Department	Fire Department/Prevention - Wildfire
Other Comments	Reduce wildfire danger within our communities by expanding defensible space in targeted locations beyond the homeowner's required clearance.

2022-88. Community Wildfire Protection Plan Implementations

Priority: High	
Mitigation Strategy Description	Continue to evaluate and implement actions recommended within the Community Wildfire Protection Plan (CWPP).
Relevant Objective	Complete all recommended actions, projects, and goals as outlined and identified within the Community Wildfire Protection Plan.
Applicable Hazards	Wildfire
Estimated Timeline for Completion	FY2030
Estimated Cost/Funding Source	$300,000 from Grants/Wildland General Fund/Wildland Fire Suppression Assessment District Fund
Responsible Agency/Department	Fire Department/Prevention - Wildland
Other Comments	Multiple projects and recommendations identified within the Community Wildfire Protection Plan are critical in improving the Fire Department's ability to mitigate wildfire danger within vulnerable communities. This includes educational outreach, improved enforcement, updating mapping, and increased training opportunities for both agency personnel and the public.

2022-89. Upgrade City Emergency Operations Center (EOC)

Priority: High	
Mitigation Strategy Description	Upgrade the City EOC's electronic technology for better communications and interoperability. The upgrading of the EOC would replace projectors and screens with smart TVs, including teleconferencing capabilities, wireless network, and cameras to feed information to the Policy Room, Bullpen, and Administrative Conference Room.
Relevant Objective	The City's EOC is a critical facility during times of disaster. The facility has not been upgraded since 2009 and there are challenges with interoperability.

Priority: High	
Applicable Hazards	All Hazards
Estimated Timeline for Completion	2026
Estimated Cost/Funding Source	$75,000
Responsible Agency/Department	Fire Department/Office of Emergency Services
Other Comments	

2022-90. Relocation of Fire Station 7 Building

Priority: High	
Mitigation Strategy Description	Fire Station 7, located at 2411 Stanwood Drive, was built in 1951 and the station is essentially the same as when it was built. The station was built to accommodate an all-male crew with one dorm room, one locker room, and one shower/restroom. The shower/restroom was divided in the early 1980s. During the remodeling review process, it was noted that Station 7 was built above an earthquake fault. With that discovery, it was determined that Station 7 needs to be relocated for the safety of the staff housed in that station.
Relevant Objective	For the relocation and construction of the Station, the project will include hiring a design professional to evaluate the long-term needs (Needs Assessment) of the Fire Department at Fire Station 7 that contains separate dorm rooms with lockers, separate restrooms, a separate captain's office, and more apparatus floor space to accommodate today's larger fire engines.
Applicable Hazards	Earthquake, Wildfire
Estimated Timeline for Completion	2030
Estimated Cost/Funding Source	$6,000,000
Responsible Agency/Department	Fire Department/Public Works
Other Comments	

8.0 PLAN MAINTENANCE

8.1 MONITORING, EVALUATING, AND UPDATING THE PLAN

Since the last LHMP in 2017, the LPT has monitored, evaluated, and updated the plan on a continuing and as-needed basis. The City was very successful in implementing the 2017 mitigation actions as noted in Table 7-1. The remaining mitigation actions outlined in the 2017 LHMP are ongoing at the time of this 2022 update.

The City of Santa Barbara Office of Emergency Services (OES) will be responsible for ensuring that this plan is monitored on an ongoing basis. City OES will call the Local Hazard Mitigation Planning (LHMP) team together on an annual basis to review the mitigation actions outlined in this plan and discuss progress. During this meeting, the LHMP team will develop a list of items to be updated, added, or removed in future revisions of this plan.

City OES will report the outcomes of the annual meeting to the County Office of Emergency Management (OEM) and the City's Disaster Council.

The Plan will be a discussion/work item on the City's Emergency Managers Task Team (EMTT) agenda each year. Department heads and other emergency preparedness staff who serve in the City's Emergency Operations Center (EOC) will focus on evaluating the Plan in light of technological, budgetary, political changes, or other significant events that may occur during the year.

The Plan's existence will be addressed in the City's Emergency Management Plan, as well as discussed at Community Disaster Education presentations in both English and Spanish.

The City will continue to participate in the countywide MAC and attend the annual meeting organized by the County Office of Emergency Management to discuss items to be updated/added in future revisions of this plan. The MJHMP is evaluated by the MAC annually to determine the effectiveness of programs, and to reflect changes in land development or programs that may affect mitigation priorities. This includes re-evaluation of goals, objectives, and mitigation actions for each jurisdiction by the MAC. The MAC also reviews the goals and mitigation actions to determine their relevance to changing situations in the county, as well as changes in State or Federal regulations and policy. The MAC reviews the risk assessment portion of the MJHMP and its annexes to determine if this information should be updated or modified, given any new available data. The responsible parties for the mitigation actions report on the status of their projects, the success of various implementation processes, difficulties encountered, success of coordination efforts, and which strategies should be revised. Any updates or changes necessary for the City's LHMP will be forwarded to the County Office of Emergency Management for inclusion in further updates to the MJHMP.

Major disasters affecting the City, legal changes, and/or other events may trigger a meeting of the LHMP team. This group will be responsible for determining if the plan needs to be updated before the five-year mark.

The City of Santa Barbara is committed to reviewing and updating this plan at least once every five years, as required by the Disaster Mitigation Act of 2000.

8.2 IMPLEMENTATION THROUGH EXISTING PLANS AND PROGRAMS

The City implements the LHMP through existing plans, programs, and procedures, as detailed in Section 4.0, *Capability Assessment*. This LHMP provides a baseline of information on the hazards impacting the City and the existing institutions, plans, policies and ordinances that help to implement the LHMP (e.g., General Plan, building codes, floodplain management ordinance). The General Plan and the LHMP annex are complementary documents that work together to achieve the goal of reducing risk exposure to the City's citizens. An update to a general plan may trigger an update to the hazard mitigation plan. Implementation responsibilities of mitigation actions is integrated into the operational functions of the responsibility parties identified, including responsibility for seeking funding needed for implementation.

The City incorporates the LHMP by reference into its General Plan Safety Element. Under AB 2140, the City may adopt its current, FEMA-approved LHMP into the Safety Element of the General Plan. This adoption makes the City eligible to be considered for part or all of its local-share costs on

eligible Public Assistance funding to be provided by the state through the California Disaster Assistance Act (CDAA) (see Section 2.0, *Plan Purpose and Authority* for the adopting resolutions). The LHMP has also been prepared to support the City's CWPP to reduce wildfire risks and Sea Level Rise Adaption Plan to address changing coastal hazards over time. The Floodplain Management Ordinance applies in concert with the City's zoning ordinance and building codes to reduce flooding hazards from land use. The LHMP includes several mitigations addressing flood control infrastructure to support the City's efforts to reduce flooding hazards.

The information contained within this LHMP, including results from the Vulnerability Assessment and the Mitigation Strategy, is used by the City to help inform updates and the development of local plans, programs, and policies. The City may utilize the hazard information when developing and implementing the City's capital improvement programs and the Planning and Building Divisions may utilize the hazard information when reviewing a site plan or other type of development applications. The City's budget process and CIP are updated to include hazard mitigation actions.

8.3 ONGOING PUBLIC OUTREACH AND ENGAGEMENT

The public will continue to be involved whenever the plan is updated and, as appropriate, during the monitoring and evaluation process. Before the adoption of updates, the City will provide multiple opportunities for the public to comment on the revisions. A public notice will be published before the meetings to announce the comment period and meeting locations. Moreover, the City will engage stakeholders in community emergency planning. As described in Section 3.4, *Public Outreach and Engagement*, the public outreach strategy used during development of the current update will provide a framework for public engagement through the plan maintenance process. It can be adapted for ongoing public outreach as determined to be feasible by the MAC and the LPT.

8.4 POINT OF CONTACT

Comments or suggestions regarding this plan may be submitted at any time to the City using the following information:

Liliana Encinas, Fire Public Outreach Coordinator
City of Santa Barbara
Fire Department
Office of Emergency Services
925 Chapala Street
Santa Barbara, CA 93101

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Attachment 4- Water Rates

WATER RATES AND FEES

Volumetric Water Rates

All rates are in $/HCF. 1 HCF (Hundred Cubic Feet) = 748 gallons.

				Adopted		
Customer Class	**Tiers**	**FY24**	**FY25**	**FY26**	**FY27**	**FY28**
Single Family Residential	First 4 HCF	$5.10	$5.49	$6.06	$6.67	$7.34
	Next 12 HCF	$15.19	$15.31	$16.92	$18.61	$20.47
	All other HCF	$28.54	$34.90	$38.56	$42.42	$46.66
Multi-Family Residential	First 4 HCF (per dwelling unit)	$5.10	$5.49	$6.06	$6.67	$7.34
	Next 4 HCF (per dwelling unit)	$15.19	$15.31	$16.92	$18.61	$20.47
	All other HCF	$28.54	$34.90	$38.56	$42.42	$46.66
Commercial/Industrial	100% of base allotment	$7.77	$8.19	$9.05	$9.96	$10.96
	All other HCF	$28.45	$37.82	$41.80	$45.98	$50.58
Irrigation – Residential & Commercial	100% of monthly water budget*	$15.19	$15.31	$16.92	$18.61	$20.47
	All other HCF	$28.54	$34.90	$38.56	$42.42	$46.66
Irrigation – Recreation/Parks/Schools	100% of monthly water budget*	$5.98	$7.26	$8.02	$8.82	$9.70
	All other HCF	$28.54	$34.90	$38.56	$42.42	$46.66
Irrigation – Agriculture	100% of monthly water budget*	$3.98	$5.13	$5.67	$6.24	$6.86
	All other HCF	$28.54	$34.90	$38.56	$42.42	$46.66
Recycled Water	All HCF	$4.99	$6.10	$6.74	$7.41	$8.15

**The Monthly Water Budget* for irrigation accounts is a calculation of Tier 1 allotment based on the property's irrigated landscape area and the monthly watering needs of plants.

Maximum Fixed Monthly Service Charges

Charges based on meter size.

		5/8”	3/4”	1”	1 ½”	2”	3”	4”	6”	8”	10”
FY24		$32.60	$47.73	$77.97	$153.59	$244.33	$531.67	$955.12	$1,968.37	$3,631.93	$5,749.18
	FY25	$36.21	$52.50	$85.09	$166.55	$264.30	$573.86	$1,030.06	$2,121.66	$3,913.84	$6,194.80
Adopted	**FY26**	$40.01	$58.01	$94.02	$184.04	$292.05	$634.12	$1,138.22	$2,344.43	$4,324.79	$6,845.25
	FY27	$44.01	$63.81	$103.42	$202.44	$321.26	$697.53	$1,252.04	$2,578.87	$4,757.27	$7,529.78
	FY28	$48.41	$70.19	$113.76	$222.68	$353.39	$767.28	$1,377.24	$2,836.76	$5,233.00	$8,282.76

Attachment 5- Notifications

City of Santa Barbara
Department of Water Resources
SantaBarbaraCA.gov/Water

Main Office
630 Garden Street
PO Box 1990
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Tel: (805) 564-5571

Wastewater System
Tel: (805) 568-1010

Water Supply & Services
Tel: (805) 564-5460

Water System
Tel: (805) 564-5419

January 15, 2026

Ray Stokes
Executive Director
Central Coast Water Authority
RAS@ccwa.com

Delivered Via Email

Subject: Notice of Preparation of the 2025 Urban Water Management Plan and Shortage Contingency Plan

Dear Ray Stokes:

The City of Santa Barbara (City) is in the process of preparing its 2025 Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP) in compliance with the Urban Water Management Planning Act. An update of the City's UWMP is required every five (5) years. In addition, the City is preparing an Appendix to the 2025 UWMP to demonstrate consistency with Delta Plan Policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (California Code Reg., tit.23, §5003).

Water Code section 10621(b) requires an urban water supplier updating its UWMP and WSCP to notify cities and counties within its service area of the update at least sixty (60) days prior to holding a public hearing thereby encouraging public involvement and agency coordination. This letter serves as the City's notice that it is preparing and updating its 2025 UWMP and WSCP.

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The City invites you to submit comments and consult with the City regarding its UWMP and WSCP. If you have any questions, comments, or input, please contact Jasmine Showers, Water Resources Analyst, via email at JShowers@SantaBarbaraCA.gov or by phone at (805) 897-2646.

Sincerely,

Dakota Corey.
Water Supply and Services Manager

DC:js

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January 15, 2026

David Beard
Deputy Director of Operations and Engineering
Central Coast Water Authority
DRB@ccwa.com

Delivered Via Email

Subject: Notice of Preparation of the 2025 Urban Water Management Plan and Shortage Contingency Plan

Dear David Beard:

The City of Santa Barbara (City) is in the process of preparing its 2025 Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP) in compliance with the Urban Water Management Planning Act. An update of the City's UWMP is required every five (5) years. In addition, the City is preparing an Appendix to the 2025 UWMP to demonstrate consistency with Delta Plan Policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (California Code Reg., tit.23, §5003).

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January 15, 2026

Janet Gingras
General Manager
Cachuma Operation and Maintenance Board
jgingras@cachuma-board.org

Delivered Via Email

Subject: Notice of Preparation of the 2025 Urban Water Management Plan and Shortage Contingency Plan

Dear Janet Gingras:

The City of Santa Barbara (City) is in the process of preparing its 2025 Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP) in compliance with the Urban Water Management Planning Act. An update of the City's UWMP is required every five (5) years. In addition, the City is preparing an Appendix to the 2025 UWMP to demonstrate consistency with Delta Plan Policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (California Code Reg., tit.23, §5003).

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Sincerely,

Dakota Corey.
Water Supply and Services Manager

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January 15, 2026

Matt Young
Water Agency Manager
Santa Barbara County Water Agency
mcyoung@countyofsb.org

Delivered Via Email

Subject: Notice of Preparation of the 2025 Urban Water Management Plan and Shortage Contingency Plan

Dear Matt Young:

The City of Santa Barbara (City) is in the process of preparing its 2025 Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP) in compliance with the Urban Water Management Planning Act. An update of the City's UWMP is required every five (5) years. In addition, the City is preparing an Appendix to the 2025 UWMP to demonstrate consistency with Delta Plan Policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (California Code Reg., tit.23, §5003).

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Sincerely,

Dakota Corey.
Water Supply and Services Manager

DC:js

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January 15, 2026

Rain Emmerson
Acting Area Manager
United States Bureau of Reclamation
remerson@usbr.gov

Delivered Via Email

Subject: Notice of Preparation of the 2025 Urban Water Management Plan and Shortage Contingency Plan

Dear Rain Emmerson:

The City of Santa Barbara (City) is in the process of preparing its 2025 Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP) in compliance with the Urban Water Management Planning Act. An update of the City's UWMP is required every five (5) years. In addition, the City is preparing an Appendix to the 2025 UWMP to demonstrate consistency with Delta Plan Policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (California Code Reg., tit.23, §5003).

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Sincerely,

Dakota Corey.
Water Supply and Services Manager

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January 15, 2026

Nicholas Turner
General Manager
Montecito Water District
nturner@montecitowater.com

Delivered Via Email

Subject: Notice of Preparation of the 2025 Urban Water Management Plan and Shortage Contingency Plan

Dear Nicholas Turner:

The City of Santa Barbara (City) is in the process of preparing its 2025 Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP) in compliance with the Urban Water Management Planning Act. An update of the City's UWMP is required every five (5) years. In addition, the City is preparing an Appendix to the 2025 UWMP to demonstrate consistency with Delta Plan Policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (California Code Reg., tit.23, §5003).

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Sincerely,

Dakota Corey.
Water Supply and Services Manager

DC:js

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January 15, 2026

Robert T. McDonald
General Manager
Carpinteria Valley Water District
bob@cvwd.net

Delivered Via Email

Subject: Notice of Preparation of the 2025 Urban Water Management Plan and Shortage Contingency Plan

Dear Robert T. McDonald:

The City of Santa Barbara (City) is in the process of preparing its 2025 Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP) in compliance with the Urban Water Management Planning Act. An update of the City's UWMP is required every five (5) years. In addition, the City is preparing an Appendix to the 2025 UWMP to demonstrate consistency with Delta Plan Policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (California Code Reg., tit.23, §5003).

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Sincerely,

Dakota Corey.
Water Supply and Services Manager

DC:js

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Tel: (805) 564-5419

January 15, 2026

Kelley Dyer
General Manager
Carpinteria Valley Water District
Kelley@cvwd.net

Delivered Via Email

Subject: Notice of Preparation of the 2025 Urban Water Management Plan and Shortage Contingency Plan

Dear Kelley Dyer:

The City of Santa Barbara (City) is in the process of preparing its 2025 Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP) in compliance with the Urban Water Management Planning Act. An update of the City's UWMP is required every five (5) years. In addition, the City is preparing an Appendix to the 2025 UWMP to demonstrate consistency with Delta Plan Policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (California Code Reg., tit.23, §5003).

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Sincerely,

Dakota Corey.
Water Supply and Services Manager

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January 15, 2026

Paeter Garcia
General Manager
Santa Ynez River Water Conservation District, Improvement District No. 1
pgarcia@syrwd.org

Delivered Via Email

Subject: Notice of Preparation of the 2025 Urban Water Management Plan and Shortage Contingency Plan

Dear Paeter Garcia:

The City of Santa Barbara (City) is in the process of preparing its 2025 Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP) in compliance with the Urban Water Management Planning Act. An update of the City's UWMP is required every five (5) years. In addition, the City is preparing an Appendix to the 2025 UWMP to demonstrate consistency with Delta Plan Policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (California Code Reg., tit.23, §5003).

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Sincerely,

Dakota Corey.
Water Supply and Services Manager

DC:js

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January 15, 2026

David Matson
General Manager
Goleta Water District
dmatson@goletawater.com

Delivered Via Email

Subject: Notice of Preparation of the 2025 Urban Water Management Plan and Shortage Contingency Plan

Dear David Matson:

The City of Santa Barbara (City) is in the process of preparing its 2025 Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP) in compliance with the Urban Water Management Planning Act. An update of the City's UWMP is required every five (5) years. In addition, the City is preparing an Appendix to the 2025 UWMP to demonstrate consistency with Delta Plan Policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (California Code Reg., tit.23, §5003).

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Sincerely,

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Water Supply and Services Manager

DC:js

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January 15, 2026

Ryan Drake
Water Supply and Conservation Manager
Goleta Water District
rdrake@goletawater.com

Delivered Via Email

Subject: Notice of Preparation of the 2025 Urban Water Management Plan and Shortage Contingency Plan

Dear Ryan Drake:

The City of Santa Barbara (City) is in the process of preparing its 2025 Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP) in compliance with the Urban Water Management Planning Act. An update of the City's UWMP is required every five (5) years. In addition, the City is preparing an Appendix to the 2025 UWMP to demonstrate consistency with Delta Plan Policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (California Code Reg., tit.23, §5003).

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Dakota Corey.
Water Supply and Services Manager

DC:js

City of Santa Barbara

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March 27, 2026

Peter Cantle
Executive Director
Cachuma Conservation Release Board
PCantle@ccrb-board.org

Delivered Via Email

Subject: Notice of Preparation of the 2025 Urban Water Management Plan and Shortage Contingency Plan

Dear Peter Cantle:

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Sincerely,

Dakota Corey.
Water Supply and Services Manager

DC:js

City of Santa Barbara
City Clerk's Office
SantaBarbaraCA.gov

Tel: (805) 564-5309
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93101

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Santa Barbara, CA
93102-1990

PUBLIC NOTICE
City of Santa Barbara

NOTICE IS HEREBY GIVEN that the City Council of the City of Santa Barbara will conduct a Public Hearing on Tuesday, June 16, 2026 during the afternoon session of the meeting which begins at 2:00 p.m. in the Council Chamber, City Hall, 735 Anacapa Street, Santa Barbara. You are invited to attend this hearing and address your verbal comments to the City Council. Written comments are also welcome up to the time of the hearing, and should be addressed to the City Council via the City Clerk's Office via email at Clerk@SantaBarbaraCA.gov, or by mail at P.O. Box 1990, Santa Barbara, CA 93102-1990.

Public comment may be given in person at the meeting or remotely via Zoom. Members of the public who wish to give public comment remotely may do so by completing the Zoom registration at the URL provided on the front page of the agenda.

On Thursday, June 11, 2026 an Agenda with all items to be heard on Tuesday, June 16, 2026, will be available at City Hall, 735 Anacapa Street, and at the Central Library. Agendas and Staff Reports are also accessible online at http://www.santabarbaraca.gov/CAP. The Agenda includes instructions for participation in the meeting. If you wish to participate in the public hearing, please follow the instructions on the posted Agenda.

The hearing is to consider the adoption of the City of Santa Barbara 2025 Urban Water Management Plan and 2025 Water Shortage Contingency Plan, according to the requirements of California Water Code Division 6, Part 2.6, Chapter 3, commencing with § 10620. A copy of the proposed Urban Water Management Plan and Water Shortage Contingency Plan is available for public review online at www.SantaBarbaraCA.gov/WaterVision. The preparation and adoption of the Urban Water Management Plan is exempt from the California Environmental Quality Act under California Water Code § 10652.

In compliance with the Americans with Disabilities Act, if you need auxiliary aids or services or staff assistance to attend or participate in this meeting, please contact the City Administrator's Office at 564-5305. If possible, notification at least 48 hours prior to the meeting will usually enable the City to make reasonable arrangements. Specialized services, such as sign language interpretation or documents in Braille, may require additional lead time to arrange.

(SEAL)

Sarah Gorman, MMC
City Clerk Services Manager
[Date of Posting]

Attachment 6- Resolution Approving the WSCP

Resolution to be included following adoption.

Appendix G Water Conservation Strategic Plan

G

CITY OF SANTA BARBARA WATER RESOURCES DEPARTMENT

Water Commission Staff Report

Date: May 21, 2026

To: Water Commission

Via: Joshua Haggmark, P.E., Water Resources Director

From: Madeline Wood, Water Conservation Analyst

Subject: Draft Water Conservation Strategic Plan

Recommendation

That Water Commission receive a presentation on the draft Water Conservation Strategic Plan, the updated analyses, and recommended program.

Discussion

The Water Conservation Strategic Plan (Plan) was prepared by City staff in coordination with Maddaus Water Management, Inc. (MWM). This Plan builds on the City's long-standing commitment to water efficiency and outlines a comprehensive strategy for meeting future water use objectives, complying with new statewide regulations, and integrating equity into Conservation Program design.

Overview of Analyses

The Plan evaluates current and projected water demands, the effectiveness of existing conservation programs, and new opportunities for water savings. Key components of the Plan include:

- Updated demand forecasts using 2021–2024 data, incorporating recent population, housing, and employment trends.
- Analysis of more than 100 potential conservation measures, with 18 measures selected for detailed modeling through the Decision Support System Model (DSS Model) which estimates costs, savings, and interactions between measures.
- Integration of statewide regulatory requirements from the *"Making Water Conservation a California Way of Life"* regulation.
- Incorporation of equity considerations, informed by the 2024 Alliance for Water Efficiency report, *"An Assessment of Water Affordability and Conservation Potential in Santa Barbara, CA,"* (Affordability Report).
- Evaluation of AMI data, now available Citywide, to enhance leak detection, customer engagement, and conservation targeting.

MWM conducted an economic evaluation of each selected water conservation measure using the DSS Model including how much water each measure will save through 2050, how much each measure will cost (including utility and staff

time cost estimates), and the cost of saved water per unit volume if the measure were to be implemented on a stand-alone basis. Cost savings from reduced water demand was quantified annually and based on the avoided costs of the City investing in additional water supplies to meet demands.

The measures were then grouped into three programs: the City's existing conservation program was evaluated, as well as two additional, increasingly aggressive programs. MWM and the City created a list of potential program concepts that were appropriate for the City's service area and that could meet the City's goals of continued statewide regulation compliance and implementation of equity recommendations from the Affordability Report. As the City is currently in compliance with all aspects of the Regulation, the program concepts centered on implementing equity recommendations and maintaining current conservation efforts.

- **Program A: Current Measures.** Current conservation program with no changes; includes 14 measures.
- **Program B: Recommended Measures.** In addition to existing efforts, this Program includes more measures that incorporate equity recommendations from the Affordability Report through two additional measures (plumber-initiated high efficiency toilet retrofit program measure and the leak repair rebate measure) and is comprised of 16 measures. This is the recommended program.
- **Program C: All Modeled Measures.** In addition to the measures in the Programs described above, this Program includes an additional outdoor measure and commercial rebate. This Program represents all modeled measures that include water savings in this effort (a total of 18 measures).

Recommended Program

To achieve continued water conservation savings, comply with new state regulations and reporting requirements, incorporate equity into program design, and maintain water use reductions, the City has elected to implement Program B. Program B includes 16 measures that:

- Support continued compliance with all state water use objectives.
- Expand equity-focused program offerings, including plumber-initiated toilet replacements and leak repair assistance.
- Build on successful existing programs such as landscape rebates, irrigation efficiency upgrades, and public education.
- Leverage AMI data to proactively identify leaks, improve outreach, and support customer engagement.

Next Steps

Staff requests Water Commission review and comment on the draft Water Conservation Strategic Plan. Feedback will be incorporated into the final Water Conservation Strategic Plan, which will serve as a supporting document to the 2025 Urban Water Management Plan and future water supply planning efforts.

Attachment

Water Conservation Strategic Plan

City of Santa Barbara

Water Conservation Strategic Plan

Making Conservation a Santa Barbara Way of Life

MADDAUS WATER MANAGEMENT
Making a Difference in the World of Water™

APRIL 2026

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Abbreviations and Acronyms

AB	Assembly Bill
acct	account
ADU	accessory dwelling unit
AF	acre-feet
AFY	acre-feet per year
AMI	Advanced Metering Infrastructure
AWE	Alliance for Water Efficiency
AWWA	American Water Works Association
AWWARF	American Water Works Association Research Foundation
BMP	Best Management Practice
CalWEP	California Water Efficiency Partnership
CEC	California Energy Commission
CII	Commercial, Industrial, and Institutional
DEI	diversity, equity, and inclusion
DIM	Dedicated irrigation meter
DSS Model	Least Cost Planning Decision Support System Model
FY	fiscal year
GPCD	gallons per capita per day
gpd	gallons per day
gpf	gallons per flush
gpm	gallons per minute
gpscd	gallons per service connection per day
HECW	high efficiency clothes washer
HET	high efficiency toilet
LEF	Landscape Efficiency Factor
LIHWAP	Low-Income Household Water Assistance Program
MFR	Multifamily residential
MUM	Mixed-use meter
MWM	Maddaus Water Management
N/A	not applicable
NO-DES	Neutral Output Discharge Elimination System
Plan	Water Conservation Strategic Plan
PPI	Poverty Prevalence Indicator
psi	pounds per square inch
Regulation	Making Conservation a California Way of Life regulation
REUWS	Residential End Uses of Water Study
RWEP	Regional Water Efficiency Program
SB	Senate Bill
SBMC	Santa Barbara Municipal Code
SB X7-7	Water Conservation Act of 2009
SFR	Single Family Residential
State Board	State Water Resources Control Board
ULFT	ultra-low flush toilet
UWMP	Urban Water Management Plan
UWUO	Urban Water Use Objective

1. Executive Summary

The City of Santa Barbara updated its Water Conservation Strategic Plan (Plan) to guide long-term water use efficiency, support compliance with new state regulations, and ensure that conservation remains a reliable, cost-effective part of the City's water supply portfolio. This update evaluates how the community uses water today, identifies opportunities to save more, and recommends a set of programs that balance water savings, equity, cost, and feasibility. The recommended program is projected to save 984 acre-feet per year (AFY) by 2050—an amount comparable to approximately nine percent of the City's current annual water demand. The updated Plan includes a cost-effective suite of water conservation measures that will help the City meet future water needs and comply with statewide water efficiency requirements amidst changing water demand conditions and conservation program priorities.

1.1 Purpose of the Plan

The Plan serves several key purposes:

1. **Forecast long-term water demands** using updated population, land use, and water use trends.
2. **Evaluate existing and potential conservation measures** to determine which are most effective for Santa Barbara's climate, customer base, and infrastructure.
3. **Integrate equity considerations** so that conservation programs are accessible and beneficial to all customers, including renters, multifamily residents, and lower-income households.
4. **Support compliance with the State's *"Making Conservation a California Way of Life"* regulation,** which requires suppliers to meet annual water use objectives and implement new commercial, industrial, and institutional (CII) performance measures.
5. **Guide future investments** in water efficiency programs, staffing, and partnerships.

1.2 Overview of Analyses Performed

The Plan is built on a comprehensive set of technical and policy analyses, including:

1. Water Use and Demand Forecasting.

The City and Maddaus Water Management, Inc. (MWM) analyzed:

- 1998–2024 billing data for all customer classes
- Indoor and outdoor water use patterns
- Impacts of drought, economic cycles, and the COVID-19 pandemic
- Population, housing, and employment trends

This analysis shows that total water use has fallen to levels last seen in the 1950s, despite a much larger population.

2. Conservation Program Review.

The City's long-standing conservation program—rebates, education, landscape standards, water loss control, and more—was evaluated for effectiveness and alignment with new priorities.

3. Equity and Affordability Assessment.

The Plan incorporates findings from the 2024 Alliance for Water Efficiency report, "*An Assessment of Water Affordability and Conservation Potential in Santa Barbara, CA*," (Affordability Report) including recommendations for more accessible program design. These insights shaped the selection of new measures, such as leak repair assistance and direct-install toilet replacements.

4. Advanced Metering Infrastructure (AMI) Integration.

With AMI fully deployed in 2024, the City now has hourly water use data for all customers. The Plan evaluates how AMI can improve leak detection, support targeted customer outreach, and enhance program evaluation.

5. Regulatory Compliance Analysis.

A detailed "gap analysis" assessed the City's readiness for statewide Urban Water Use Objective (UWUO) regulatory requirements including CII performance measures and water loss standards. The City is currently in full compliance with all components of the UWUO but continued conservation is necessary to maintain compliance.

6. Conservation Measure Screening and Modeling.

More than 100 potential measures were screened using criteria such as:

- Water savings potential
- Equity impacts
- Service area fit
- Co-benefits (e.g., stormwater, energy savings)

A resulting 18 measures were modeled using the Decision Support System Model, developed by MWM, which estimates costs, savings, and interactions between measures.

7. Program Scenario Evaluation.

Three program packages were modeled:

- **Program A** – Current measures
- **Program B** – Expanded program with additional equity-focused measures
- **Program C** – Most aggressive, additional measures, highest cost

Program B was selected as the Recommended Program. Of all the measures evaluated, those in Program B were chosen for the following reasons:

- Alignment with the One Water Santa Barbara[1] guiding principle to improve local water supply reliability by diversifying the supply portfolio and using water efficiently.
- Addresses recommendations from the Affordability Report that incorporate equity considerations for the conservation program.
- Expansion of existing efforts to meet state-mandated targets and aggregate water use objectives.
- Result in a long-term plan that models a cost-effective means to manage water supplies.

The following projected outcomes are associated with the Recommended Program:

- 984 AFY saved by 2050
- 9% reduction in projected 2050 demand (including plumbing code savings)
- Average annual utility cost: ~$446,000
- Staffing need: 6 full- time equivalent employees by 2030

1 More information can be found at: City of Santa Barbara - One Water

1.3 Key Findings and Takeaways

1. Conservation Remains One of the City's Most Cost-Effective Water Sources

The Fiscal Year 2024 variable avoided cost of water is $1,078 per AF, while the recommended program saves water at $719 per AF.

2. The City is Already Meeting All State Water Use Requirements

The City's current water use is below its current and future Urban Water Use Objectives and the City also meets all CII and water loss standards currently. Continued conservation is necessary to maintain compliance.

3. Residential Water Use Offers the Greatest Savings Potential

About 72% of the City's water use is residential, so indoor and outdoor residential programs provide the largest long-term benefit.

4. Equity Improvements are Needed and Achievable

Lower-income census tracts traditionally have lower participation in conservation programs, higher prevalence of multifamily housing, and more renters who do not directly receive water bills. The recommended program includes measures designed to reach these customers more effectively.

5. AMI Creates New Opportunities

Hourly AMI water consumption data can enable faster leak detection, more precise targeting of high-use accounts, and better evaluation of program effectiveness.

Figure ES-1. *City of Santa Barbara Recommended Measures*

Commercial

- Customized CII Incentive
- CII Water Survey

Community Education

- School Education
- General Public Education

Residential

- Residential Washer Rebate
- Plumber Initiated High Efficiency Toilet Retrofit Program

Leak Assistance

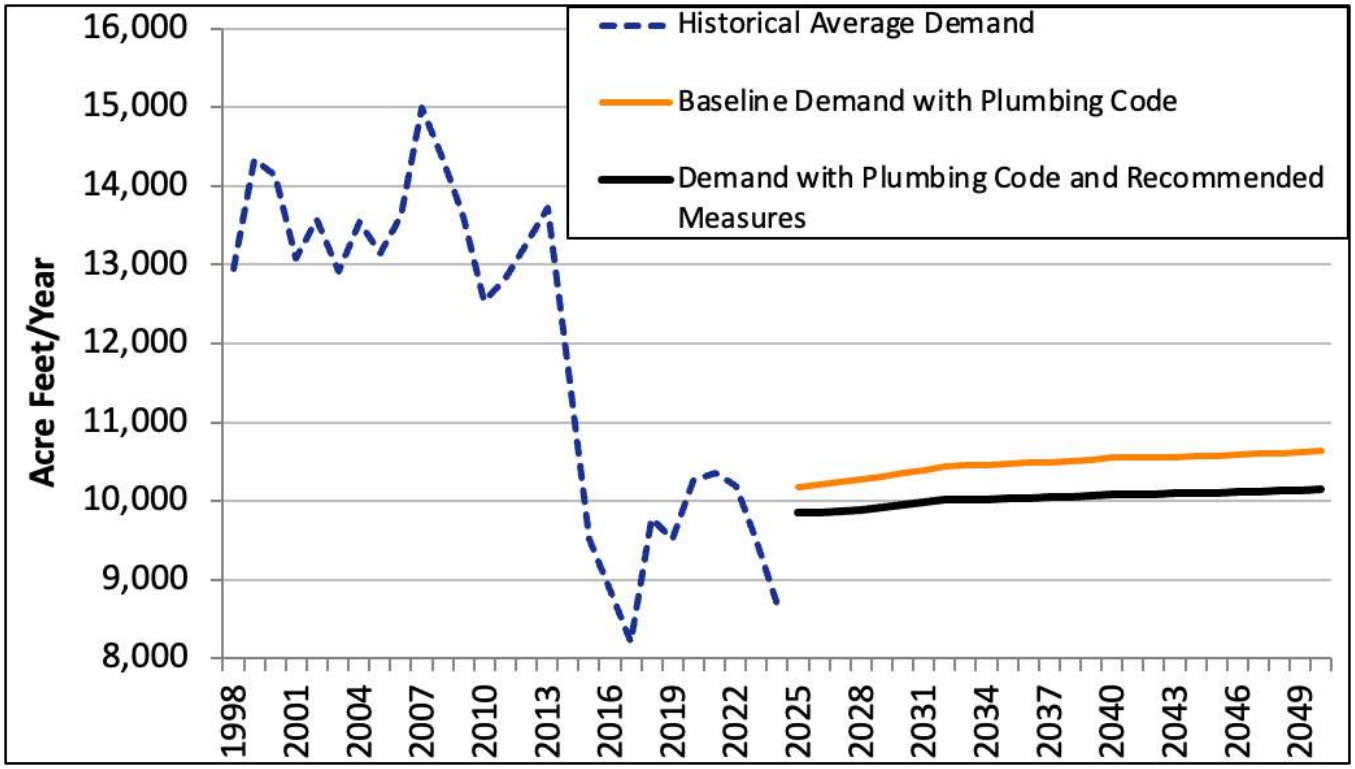
- AMI Customer Portal and Leak Alerts
- Leak Detection Device Rebate
- Leak Repair Rebate

Irrigation

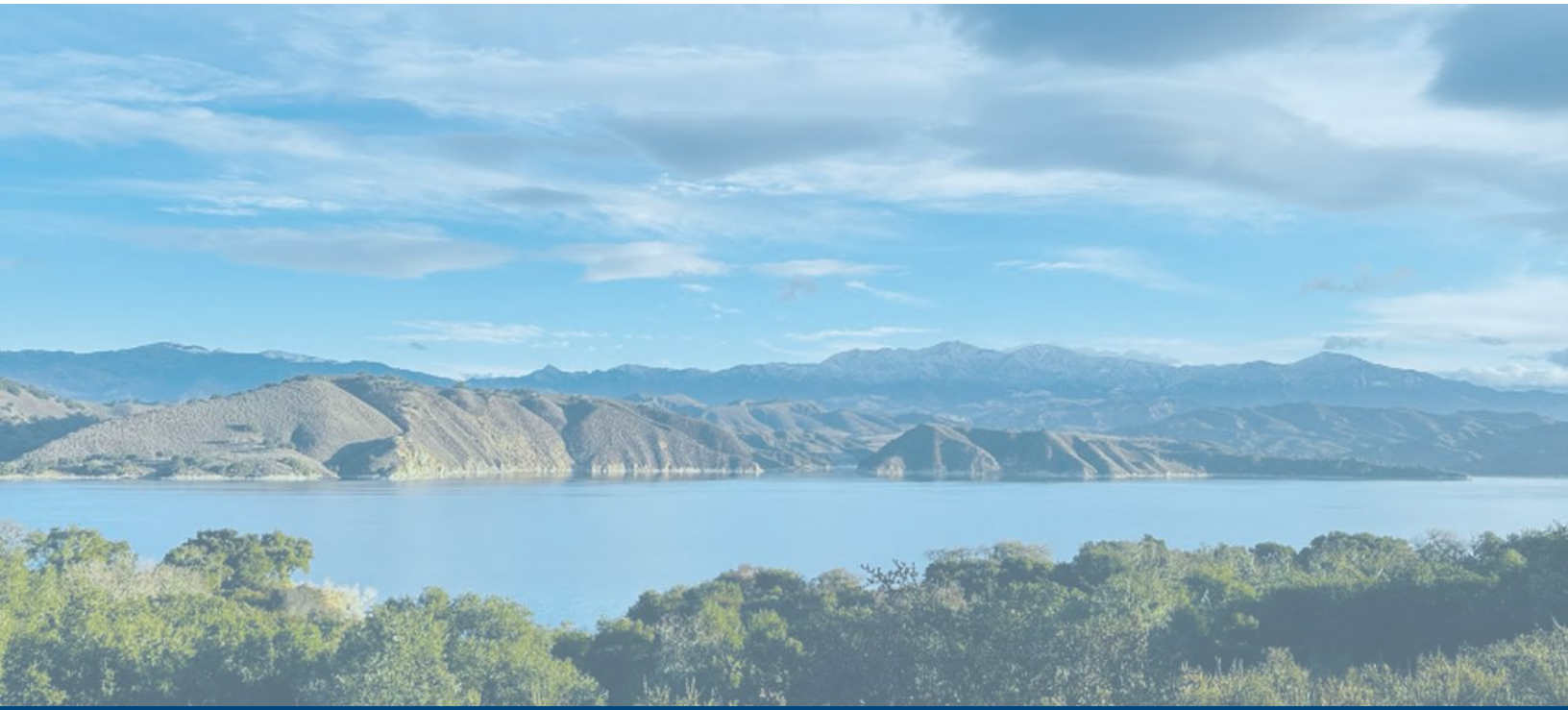
- Green Gardener Program
- Water Efficient Landscape Standards
- Smart Sprinkler Timer Rebate
- Mulch Delivery Rebate
- Spray Sprinklers to Low-Precipitation Sprinklers Retrofit
- Sprinkler to Drip Irrigation Retrofit
- Sustainable Lawn Retrofit

The following figure presents historical and projected water use for the City in AFY. Plumbing code elements include current local, state, and federal standards for retrofits of items such as toilets, showerheads, faucets, and clothes washers.

Figure ES-2. *City of Santa Barbara Historical and Projected Baseline Demand with Plumbing Code and Recommended Measures*



Note that the 2025 demand projections start from 2021-2024 average water use. The years 2014-2019 were declared drought for the City which lowered overall water consumption.



2. Introduction

This section presents an introduction to this effort with an overview of the City's supply, climate, and demographics, as well as the project's background, development, and purpose.

2.1 Overview of the City of Santa Barbara Water System

Santa Barbara has a semi-arid climate, so providing an adequate water supply requires careful management of water resources. The City has a diverse water supply including local reservoirs (Lake Cachuma and Gibraltar Reservoir), groundwater, State Water Project water, desalinated water, infiltration water from a conveyance tunnel, and recycled water, as illustrated in the following figures.

Conservation has been a long-term priority for the City and is considered a water source. A supply assessment is conducted twice a year by the City in which the water saved through conservation is regarded as equal to other water supply options. When the City conducts supply and demand forecasting analyses, the estimated water made available through conservation is a part of the supply portfolio.

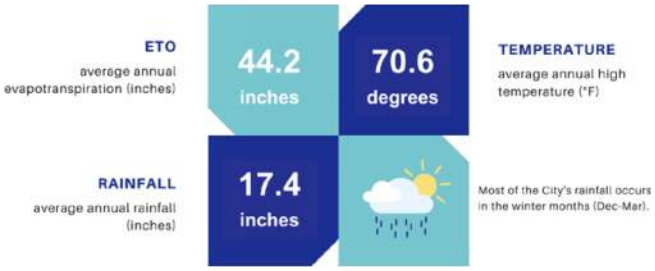
The City has recorded measurements of all water sources and production since 1920 and has metered all service connections since 1973 (Santa Barbara Municipal Code [SBMC] §14.08.010);[2] as of fiscal year 2025, there are 27,722 service connections.

The City uses a tiered water rate structure that provides incentive for customers to reduce water use. The City bills customers monthly based on metered use, with the units of consumption clearly indicated.

2.1.1 Climate

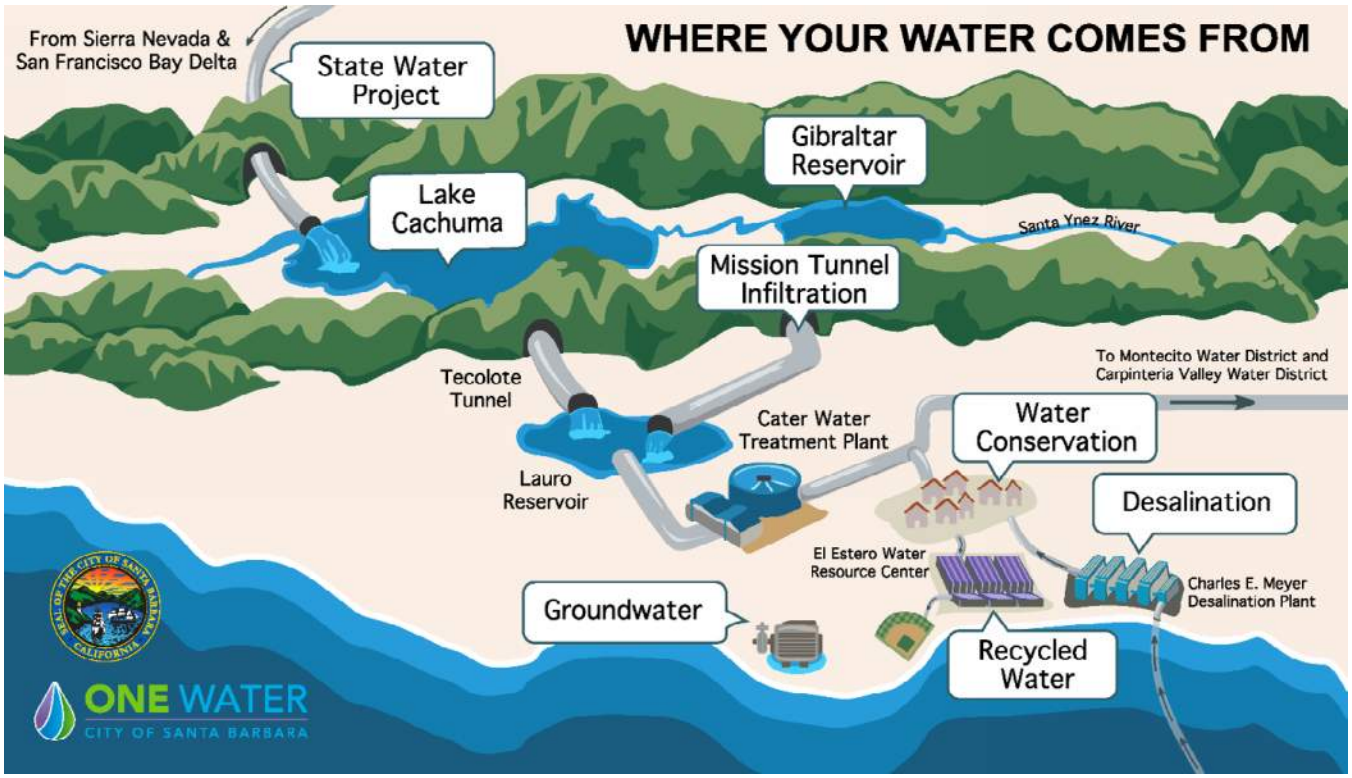
The City is located on the central coast of California between the Santa Ynez Mountains and the Pacific Ocean. It offers year-round sunshine with a temperate Mediterranean-style climate of cool, wet winters and mild, dry summers. Temperatures only rarely fall below freezing in winter. During the late summer and early fall, hot, dry sundowner winds can create high water demands.

Figure 2-2. *Santa Barbara Climate*



The numbers presented are based on data from 1994-2025 from Santa Barbara CIMIS Station No. 107.

Figure 2-1. *City of Santa Barbara Water Sources*



2 City of Santa Barbara. Municipal Code, SBMC §14.08.010

2.1.2 Demographics

Santa Barbara is the second-most populous city in the county with an estimated population of 93,340 at the time of writing this Plan.[3]

The City has a mix of housing types, including single family residences and multi-unit residences. The City is largely built-out, though it should be assumed that infill and redevelopment will continue at roughly the same rate as in the recent past, resulting in a minor increase in population.

Santa Barbara is a popular vacation destination, and tourism is an important part of the local economy. In addition, many people commute from locations throughout the county or adjacent counties to work in Santa Barbara. It is estimated that there are more than 48,000 jobs in the service area.[4] Population from tourism and commuters is not factored into the estimated population numbers. However, water use from tourism and commuters is accounted for under the non-residential customer categories in the DSS Model.

2.2 Project Background

The City of Santa Barbara has been a long-term leader in water conservation. The City's Water Conservation Program has been successful in reducing the use of potable water supplies, achieving compliance with state and federal conservation requirements, and creating a water efficiency ethic in the Santa Barbara community. The City's commitment to water conservation has been evidenced by reductions in water demands achieved over the past 30 years. As of the writing of this Water Conservation Strategic Plan, community water use has decreased to the same level it was in the late 1950s, despite population having nearly doubled since that time.

Water use efficiency in the City is supported by coordinating initiatives to achieve a holistic approach to providing the water system and each customer within the service area with the tools needed to conserve water. Recently, a shift in the challenges and drivers for urban water conservation in the City has occurred due to the recent drought, statewide water supply conditions, new state water urban water use objectives, the implementation of Advanced Metering Infrastructure, and changing program priorities (such as the integration of equity considerations in program design). The Plan considers best management practices consistent with current regulations and best practices in the industry and has been guided by the American Water Works Association Manual of Practice *M52 – AWWA Water Conservation Programs – A Planning Manual* (AWWA, 2017).

In 2010, the City hired Maddaus Water Management to forecast and plan for long-term demand management reductions and meet the Water Conservation Act of 2009 (SB X7-7) per capita water use reduction requirements. MWM analyzed the existing conservation program and used its proprietary DSS Model to evaluate current and potential water conservation measures. The DSS Model quantified the demand reduction effects of these measures along with the effects of plumbing codes and appliance standards. Over the past decade, the City has built on the analytical foundation of the DSS Model and related forecasts through consistent program implementation and performance tracking, including additional modeling efforts in 2014, 2018, and 2020. Results of these modeling efforts were used in water supply planning documents and informed water supply policies still in use by the City today.

The City uses benchmarks to assess ongoing program implementation and effectiveness as part of its performance measures. The measures must be measurable and reflect current workload, practices, and policies. Implementation of the conservation measures from the previous DSS Model analyses have been assessed through various performance measures over the past 15 years. These include metrics on meeting the SB X7-7 20% by 2020 gallons per capita per day (GPCD) target annually, participation in the City's Water Education Program for youth, attendees at landscaping workshops for homeowners and professionals, landscape rebate participation, water checkup appointments for homes and businesses, the percentage of e-newsletters read by customers, and more. An example of the City's performance measures report can be found in Appendix A.

Building on the strong foundation of program implementation, participation tracking, and analytical rigor of previous forecasting efforts, this Water Conservation Strategic Plan aims to present an overview of the conservation evaluation process that was completed for the City of Santa Barbara. The goal is to develop a plan that will optimize program costs and water savings and lay a foundation for continued compliance with state mandates. The City has a current Water Conservation Program, which includes the measures that comprise Conservation Program A (described in Chapter 5) and additional qualitative measures. This Plan evaluates whether expanding existing efforts is a feasible and cost-effective way to meet future water needs in comparison to using and/or developing other water sources, while meeting other program objectives such as compliance with state conservation requirements and the incorporation of equity components.

3 This is an estimate of 2025 population based on 2020 Census data and includes a population estimate for the Mission Canyon Community Plan. Population estimate for 2025 is escalated from the 2020 Census estimate using Santa Barbara County Regional Growth Forecasts

4 Based on December 2025 employment reported in Mission Canyon and City of Santa Barbara per the Employment Development Department (EDD) web page, accessed March 2026.

2.3 Plan Development

The City worked closely with MWM to compile extensive historical data on the region, agency, conservation measures, production, consumption, weather, and various census data points. Together, these formed the foundation for MWM's DSS Model, which prepares long-range water demand and conservation water savings projections.[5] More detailed information about the DSS Model can be found in the appendices of this Plan, including a description of the assumptions, analysis, and methodology used.

Based on the analysis of current water use patterns, and taking into account characteristics of the service area, a list of more than 100 potential conservation measures was compiled and evaluated. In previous efforts conducted by the City, significant stakeholder input was gathered through work groups established to evaluate needs and rank measures per pre-defined and stakeholder-defined criteria. The measure screening in this current effort was an update to the previous endeavors. During this measure screening, 18 measures were selected for further detailed economic analysis. Assumptions and results for each of the 18 individual measures and three programs (Programs A, B, and C) are described in detail in this Plan.

Following the DSS Model completion and selection of Program B as the Recommended Program for implementation, the Water Conservation Strategic Plan was prepared. This Plan is aligned with a compliance strategy for the new state requirements and with the equity recommendations from the Alliance for Water Efficiency's "*An Assessment of Water Affordability and Conservation Potential in Santa Barbara, CA*" study.

2.4 Purpose and Scope of Strategic Plan

Through the identification and prioritization of conservation measures, the Plan enables the City to project long-range demands, identify attainable conservation goals, develop strategies, and attempt to raise public awareness. By combining new initiatives with existing programs, this comprehensive strategy and slate of conservation activities will contribute to a more sustainable management of water supplies for the Santa Barbara community.

This Plan incorporates the City objectives as follows:

- Provide assessment, analysis, and measurement of completed and existing water conservation programs.
- Identify cost-effective water conservation opportunities.
- Support the development of updated water demand forecasts used in the City's Urban Water Management Plan (UWMP) and other long-term water supply planning efforts.
- Integrate equity considerations into the screening and prioritization of conservation measures.
- Lay a foundation for continued compliance with state mandates.

In addition, the Plan is intended to serve as a guide for the City regarding future water use efficiency and conservation investments and activities. It includes a functional implementation plan to establish and administer cost-effective conservation measures. Based on a preliminary analysis of the 18 individual measures, three programs (Programs A, B, and C) were designed by the City. Each of the three programs were evaluated to determine the net effect of running multiple measures together over the 26-year period of analysis (2025–2050).

5 The DSS Model is an "end-use" model that breaks down total water production (water demand in the service area) to specific water end uses, such as plumbing fixtures and appliance uses. It uses a bottom-up approach that allows for multiple criteria to be considered when estimating future demands, such as the effects of fixture replacements, plumbing codes, and conservation efforts.

3. Historical and Current Water Use

This section presents historical and current water use data and data collection methodologies.

3.1 Information Review and Data Collection Methods

Monthly water use and account data from 2021–2024 was used to derive typical non-drought average water use per account per day. These years were selected because they represent more recent water consumption trends, are after the 2014-2019 drought, and are after the COVID-19 Pandemic. Based on the City's water billing system, residential water use was broken down into single family, single family with an accessory dwelling unit (ADU), and multifamily categories. Historical data was segregated into indoor and outdoor water use by customer type using the monthly billing data. Irrigation-only water use was also analyzed (from consumption data for irrigation-only accounts). Non-residential categories of use were analyzed for average daily commercial and industrial water use on a gallons-per-account basis.

3.2 Consumption

Figure 3-2 illustrates historical monthly total consumption from the last 27 years. Consumption data is measured at the customer meters. The City's water use decreased with the 2008-2011 recession and the multi-year drought which affected the City from 2014-2019.[6] Water use was further impacted by the COVID-19 Pandemic.[7]

The City serves several types of water users through approximately 27,597 potable connections (excluding fire lines), all of which are metered. For the purpose of this analysis, current and projected potable water user categories are classified as follows:

- Single Family
- Single Family with Accessory Dwelling Unit (ADU)
- Multifamily
- Commercial
- Industrial
- Irrigation

Figure 3-1.
Data Used in the DSS Model

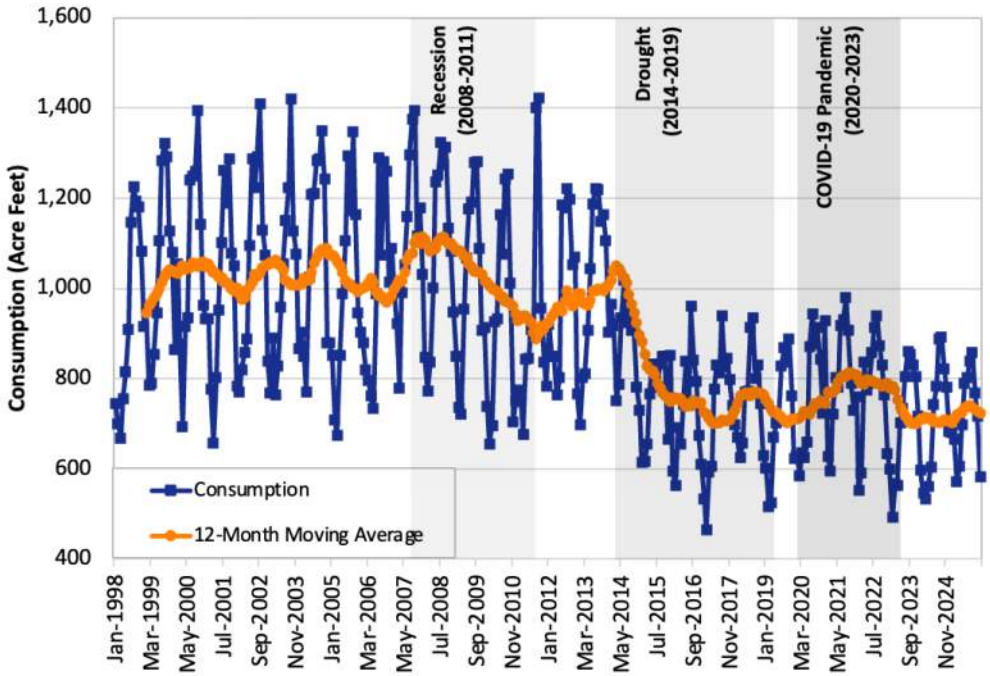
General Information
- Agency Info
- Planning Documents
- Abnormal Years

Historical Data
- Customer Categories
- Production
- Consumption
- Maximum Day Demand
- Weather
- Avoided Cost of Additional Water Supplies

Demographic Data
- Population
- Jobs

Conservation
- Conservation Targets
- Historical Conservation
- Water Loss Program
- Landscape Area Measurements
- CII Classifications

Figure 3-2.
City of Santa Barbara Historical Consumption



6 See Resolution No. 17-017
7 California Health and Human Services. 2023. End of California's COVID-19 State of Emergency and the Federal Public Health Emergency for COVID-19.

Figure 3-3. *Average Consumption by User Category*

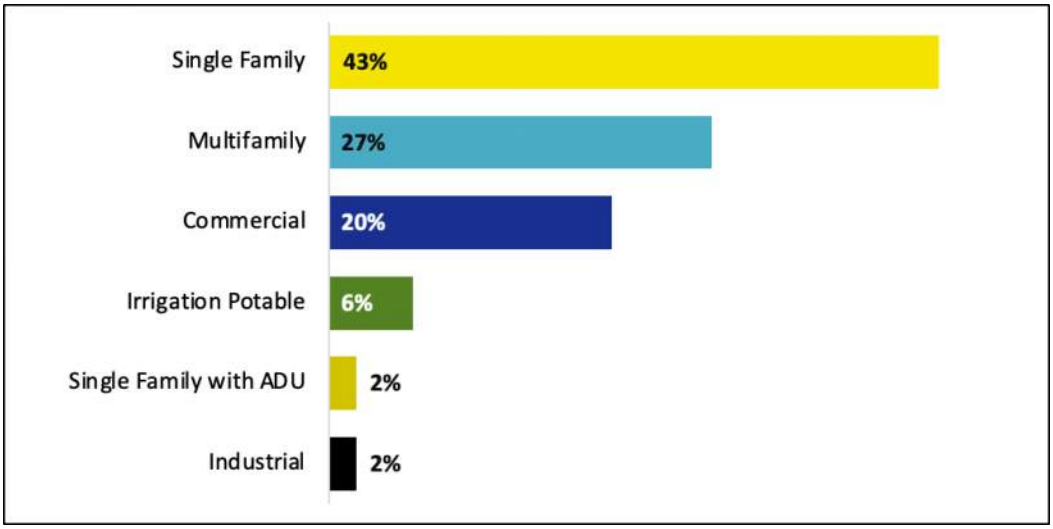


Figure 3-3 is based on 2021–2024 historical water use per account by customer category, representing conditions after the 2014-2019 drought and the COVID-19 Pandemic.

Single Family with ADU accounts represent single-family residences with an accessory dwelling unit (an independent living unit usually comprised of living quarters with a kitchen and bathroom). This category was included in modeling as it is expected that water use on single family properties with an ADU varies from water use by single family residences without an ADU. As vacant lots are scarce in the City, ADUs are in high demand as a key way to build new housing. The City offers preapproved ADU building plans to streamline the building process. Modeling this customer category separately will allow for the City to more accurately track their water use, potential water savings and potential conservation measure costs. Figure 3-3 presents the water use profile of the average annual billed metered consumption of the various user categories based on monthly water use and account data from years 2021–2024.

3.3 Historical and Current Conservation Program

The City's Water Conservation Program began as a response to drought in the late 1970s. In 1988, the Water Conservation Program was enhanced as a result of recommendations from the City's Five-Year Water Policy Action Plan. As a result of the 1987-1991 drought, the City accelerated implementation of the Water Conservation Program.

In December 1990, the Santa Barbara County Regional Water Efficiency Program (RWEP) was established as a collaboration among the many local water purveyors and the County of Santa Barbara Water Agency. RWEP promotes the efficient use of water countywide and provides information and assistance to the 16 local water purveyors within the county, including the City of Santa Barbara. RWEP members coordinate cooperative water conservation efforts among purveyors, co-fund projects and programs, function as a clearinghouse for information on water efficiency, manage specific projects and programs, and monitor local, state, and national legislation related to efficient water use. RWEP provides an annual report with information on accomplishments; the FY2023-24 report can be found in Appendix G.

In January 1992, the City joined the California Urban Water Conservation Council, now the California Water Efficiency Partnership (CalWEP), by signing the Memorandum of Understanding Regarding Urban Water Conservation. Since that time, the City has been actively implementing the Best Management Practices (BMPs) and other water conservation measures. Additionally, implementing the BMPs satisfies contractual requirements with the Bureau of Reclamation for the Cachuma Reservoir Project.

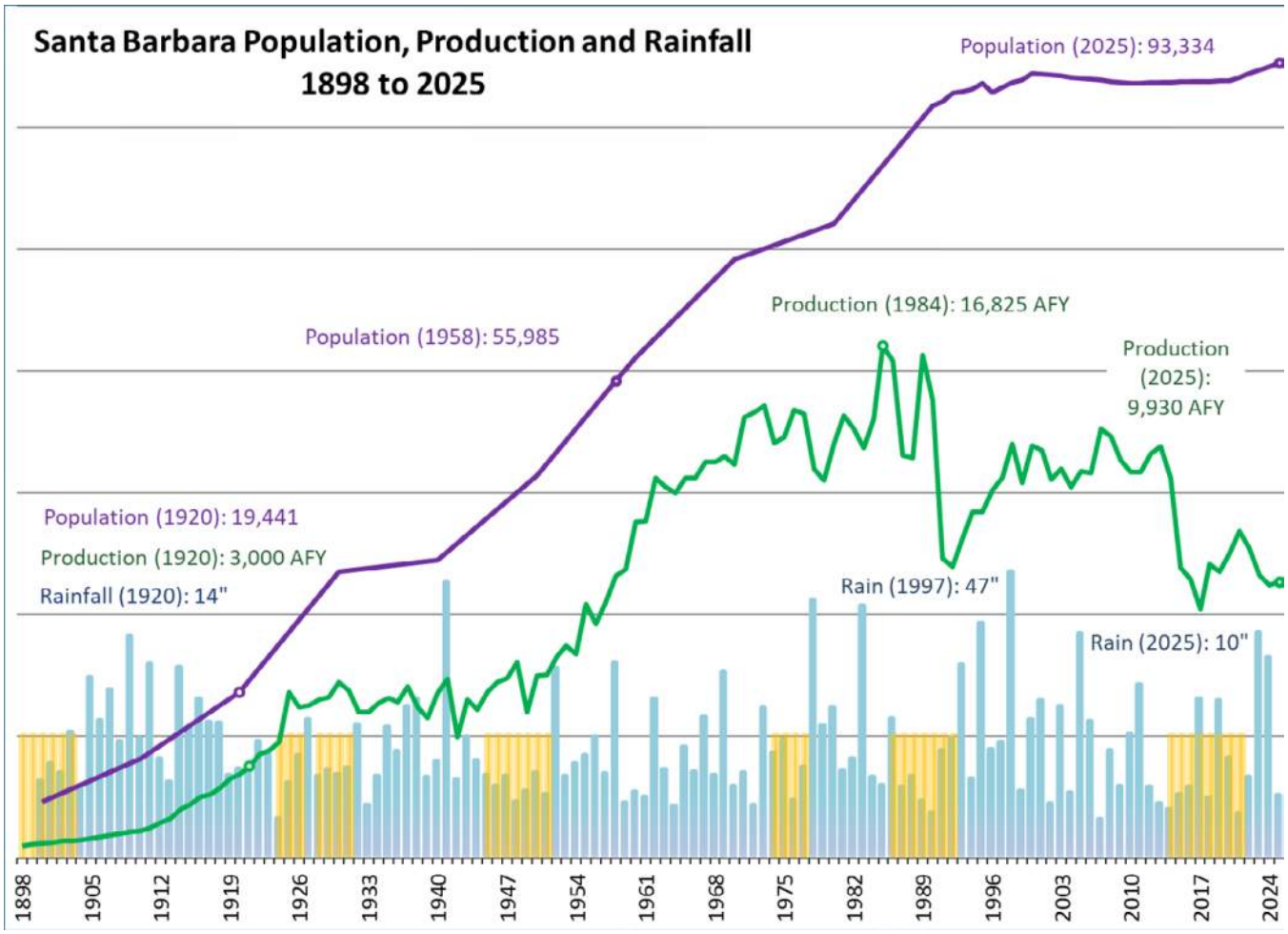
The City's Water Conservation Program aims to minimize the use of potable water supplies, meet BMP requirements, and achieve compliance with state efficiency standards by making water conservation a Santa Barbara way of life. Water conservation measures are evaluated for cost-effectiveness based on the avoided cost of additional water supplies.

The City's long-term commitment to water conservation is evident in reductions in water demand achieved over the past 35 years. Total system production has dropped from a peak near 16,800 AFY in the mid-1980s to about 14,600 AFY before the most recent drought and is averaging approximately 9,700 AFY[8] as of the writing of this Plan (based on 2021–2024 data). This water use trend (including the recycled water system production that started in 1989), along with historical annual population and rainfall in the City, is illustrated in Figure 3-4 along with notable historical drought periods.

Water use efficiency in the City is supported by a coordinated effort of the City and RWEP initiatives to create a holistic approach for providing the needed water conservation tools to both the water system and each customer within the service area. Additionally, the City requires water efficiency in building codes and standards as a result of state-guided mandates and local ordinances.

8 Rounded to the nearest hundred acre-feet.

Figure 3-4. *City of Santa Barbara Population, Water Production, and Rainfall, 1898–2025*



Note: *The total water production in the above graph includes the recycled water system production that came online in 1989. Yellow bars indicate periods of drought.*

3.3.1 Utility Operations Measures

Utility operations measures encompass preventing water waste, reducing water loss, and addressing water efficiency in development projects.

Water Waste Prevention

City Ordinance No. 4558, adopted in February 1989, prohibits the waste of water, which is defined as any excessive, unnecessary or unwarranted use of water, including, but not limited to: 1) any use which causes significant runoff beyond the boundaries of property served by a meter; 2) failure to repair any leak or rupture in any water pipes, faucets, valves, plumbing fixtures or other water service appliances within 72 hours after notice by the City; and 3) irrigation during and for a period of 48 hours after a measurable rainfall event. The City makes educating the community on water waste practices a high priority. The City's water waste ordinance can be found in the City's municipal code SBMC §14.20.007 Prohibition Against Waste of Water.[9] Enforcement of the City's water waste ordinance is found in SBMC §14.20.226 Penalties and Charges.[10]

Water Loss Control

The City has been conducting annual water audits of the water distribution system since 2010 using the approach described in the AWWA Manual M36 – Water Audits and Loss Control Programs (AWWA, 2016). The purpose of the audit is to quantify the City's real losses (water physically lost from the system through leaks, breaks, theft, and other means), as well as apparent losses (water lost through meter under registration and data handling errors). In addition to conducting annual water loss audits, beginning in 2017, the City has worked with a third-party validator to complete a level 1 validation of each water audit, as required by Senate Bill (SB) 555. This ensures the data used to compile the audits are as accurate as possible and helps to identify areas where data collection and quality could be improved.

In response to increased water main breaks in the late 1980s, the City Council created an annual Water Main Improvement Program and established a goal of annually replacing 1%, or approximately 3 miles, of the City's water mains. This goal was an integral part of the Water Capital Improvement Program for over 30 years. In June 2018, the City Council approved increasing the annual replacement goal to

9 City of Santa Barbara. Municipal Code, SBMC §14.20.007, accessed March 2026.
10 Ibid. Municipal Code, SBMC §14.20.0226 accessed March 2026.

2%, or approximately 6 miles, of water mains. This more aggressive replacement goal targets the distribution system's cast iron mains, which were installed between 1900 and 1950, make up 44% of the City's distribution system, and have an average life span of 77 years. Proactively replacing water mains reduces main breaks, which helps to reduce the City's real water losses.

To address water loss during annual maintenance activities, the City invested in a Neutral Output Discharge Elimination System (NO-DES) truck to flush water distribution pipelines. Before the NO-DES truck was in use, the City would have to perform this annual distribution system maintenance work by flushing water from fire hydrants to storm drains. With NO-DES technology, the City can now flush distribution lines by connecting two fire hydrants to a filtration truck that flushes, recirculates, and filters the water before returning it back to the distribution system.

The City launched a comprehensive Meter Replacement Program in 2014 with goals to replace the City's aging meter population with new meters that more accurately register lower flows and that were compatible with advanced metering infrastructure (AMI). The AMI system was deployed to all City water customers in March 2024. The detailed consumption data provided by AMI offers potential to improve the identification of meter inaccuracies and distribution system leaks, ultimately supporting more effective management of both apparent and real water losses. As the City's AMI data analytics capabilities are further developed, the City will continue to explore these and other potential applications to strengthen system efficiency and water loss management.

Table 3-1 shows the City's total water losses (real and apparent loss) range from 35.3 to 14.0 gallons per service connection per day (gpscd) between FY2021 and FY2025. The City's FY2025 Water Loss Audit shows the City's total water losses were 14 gpscd, and real water losses were 10.1 gpscd, which is below the City's real water loss standard of 28.8 gpscd.

As of the writing of this Plan, the City is currently creating a Water Loss Control Strategic Plan to increase the City's confidence in its water loss calculations, ensure legislative targets are met, and direct strategic and cost-effective water loss control efforts. The City anticipates the Water Loss Control Strategic Plan will be completed by the end of Fiscal Year 2026.

Water Efficient Landscape Standards

For development projects, the City has adopted Water Efficient Landscape Standards that are more stringent than California's Model Water Efficient Landscape Ordinance. The City reviews plans and conducts inspections to ensure compliance with design standards, including a water wise plant palette, efficient irrigation, proper pressure regulation, smart irrigation controllers, mulch, and more. The landscape design standards were originally adopted by the City in 1989 and last updated in 2023. The City has submitted an annual report to the state since December 2015 that includes the total number of approved projects and square feet of new/revised landscape.

3.3.2 Public Information and Outreach

The City strives to raise awareness among all customer types of the importance of efficient and responsible water use. The City works to foster a culture of conservation within the community and affect impactful behavioral changes. Components of the City's existing public education program include the following:

- **Communicating the value of water** – The City regularly provides the public with images and status updates of water sources. The City regularly provides presentations to community groups and informational tables at events to communicate information on local water sources, the history of water in Santa Barbara, water efficiency, and more.
- **Providing information on methods and opportunities for reducing consumption** – The City engages customers in water efficiency through the City's website, the WaterSmart customer portal, newsletters, informational videos, social media, printed materials, public presentations, workshops, and more. The City promotes the use and maintenance of water efficient WaterSense products, practices, and services.
- **Delivering consistent, persistent messages and media campaigns** – This is done through radio messages, television commercials, print advertising, social media messaging, digital advertising, and more, including messaging for both indoor and outdoor water use efficiency. Messages are tailored to the season (i.e., "turn it down" in the fall and "sprinkler spruce up" in the spring).

Figure 3-5. *City of Santa Barbara Drought Advertising Example*

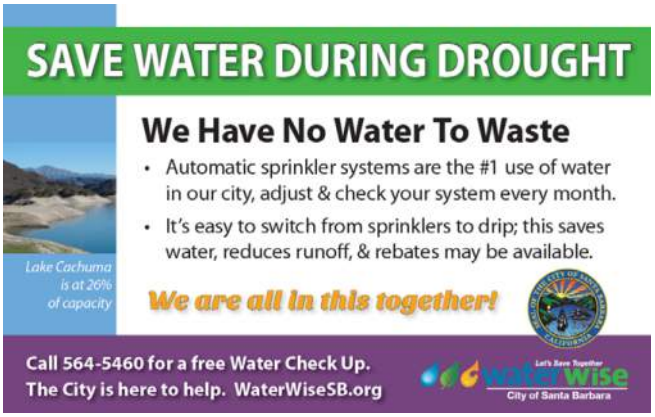


Table 3-1. *Annual Water Losses (Real and Apparent Loss)*

	FY2021	FY2022	FY2023	FY2024	FY2025
Total Water Loss, AFY	1,148	747	796	1,041	411
Total Water Loss, gpscd	35.5	23.0	26.9	35.3	14.0

Note: *Reported losses for years FY2021-FY2025 based on water loss audits.*

3.3.3 Current Public Information Programs

- **Water Conservation Phone Line** – The Conservation Phone Line assists customers with identifying and resolving high water use by providing guidance on leak detection, water use analysis, and efficiency improvements. Staff help customers understand their water use patterns, explain the rate structure, and connect them with available rebates, resources, and tools, including registration for the WaterSmart portal.
- **WaterSmart Customer Portal and Automated Leak Alerts** – As part of the AMI project, the City has a customer-facing water use and billing portal called WaterSmart. Through WaterSmart, customers can monitor water use by the hour, day, and month; receive automated leak alerts; pinpoint reasons behind a high bill; customize alerts for unusual water use; and sign up for autopay and paperless billing.
- **Website** – The City's Water Conservation Program website is SantaBarbaraCA.org/WaterWise. Additionally, the City contributes to and promotes the website for the Regional Water Efficiency Program of Santa Barbara County: WaterWiseSB.org.
- **Conservation Videos** – DIY and informational videos on sustainable landscaping, leak detection, efficient irrigation, water supply, and more are on the City's Water Conservation YouTube Channel: YouTube.com/SaveWaterSB.
- **Media Campaign** – Spring, summer, and fall media campaigns are implemented by the City, often in conjunction with RWEP to expand reach. Advertisements are placed online, on TV, in movie theatres, in print publications, and on the radio.
- **Water Bill Messages/Bill Insert/e-Newsletter** – Monthly water conservation messages are printed directly on water bills and are customized by customer classification. A monthly water bill insert is mailed with all water bills and available electronically for online bill pay customers. A Water Resources e-newsletter is sent out quarterly and a citywide "City News in Brief" e-newsletter is sent out weekly, with a water efficiency section included every week.
- **Social Media** – Outreach on water conservation actions and events are posted on the Nextdoor website, as well as the City's Facebook and X accounts.
- **Demonstration Gardens** – The Water Conservation Program has many beautiful water wise demonstration gardens to showcase sustainable landscaping: Alice Keck Park Memorial Garden in conjunction with the Parks Department, the Firescape Garden in conjunction with the Fire Department, Spencer Adams Park in conjunction with the Parks Department and via a Surfrider Foundation Whale Tail Grant, the El Estero Recycled Water Garden, the Water Wise Home Garden in conjunction with the Santa Barbara Botanic Garden, and the Santa Barbara Association of Realtors Rainwater Garden in conjunction with the Association of Realtors.
- **Public Events** – City staff set up tables and displays and engage the public in water efficiency information at local events such as Earth Day, Santa Barbara Botanic Garden events, various school science nights, and neighborhood association meetings.
- **Garden Wise TV Show** – Garden Wise is a 30-minute quarterly television show about designing and maintaining sustainable landscapes. Featured segments include: Plant Rant, What Tree is That?, Crimes Against Horticulture, and Design a Water Wise Garden featuring local designers. This program is coordinated and co-funded through RWEP.
- **Water Wise Gardening for Santa Barbara County Website** – This robust gardening information website is tailored to the Santa Barbara climate with an extensive plant database of over 1,000 water wise plants, more than 300 photos of local gardens, and guidance on gardening design and practices: WaterWiseGardeningSB.org. This program is coordinated and co-funded through RWEP.

Figure 3-6. *"Sprinkler Spruce Up" Media Campaign*

Figure 3-7. *City of Santa Barbara's Television Program* Garden Wise

3.3.4 Current School Education Programs

- **Classroom Presentations** – This involves fun and engaging K-6 presentations about Santa Barbara's water supply, the water cycle, water conservation, and wastewater treatment. Songs, photos, and videos are used, based on the age group. Sixth grade presentations include the Living Wise kit and curriculum – a take home kit with water and energy fixtures and activities to conduct at home. Presentations are tailored to grade or class objectives and are aligned to California content standards and the Education and the Environment Initiative Curriculum.
- **Field Trips** – Water facilities such as the El Estero Water Resource Center, Cater Water Treatment Plant, Charles E. Meyer Desalination Plant, Sheffield Reservoir, and the Firescape Garden are available for school and community group tours with City personnel to lead and educate attendees.
- **Musical Assemblies** – This program includes musical-comedy education shows about water supplies, the value of water, groundwater, and water efficiency. It is coordinated and co-funded through RWEP.
- **WaterWise High School Video Contest** – This annual countywide contest encourages high schools to create and submit a 30-second public service announcement for water efficiency in English or Spanish. Winning videos are used for television and movie theater advertising. This program is coordinated and co-funded through RWEP.
- **WaterWise Science Fair Award** – This special award is part of the larger Santa Barbara County Science Fair for junior and senior science fair projects that address water efficiency, water supplies, or water treatment. This program is coordinated and co-funded through RWEP.

Figure 3-8. *Rebate Participant: Before and After*

3.3.5 Outdoor Water Use Efficiency

The City's outdoor water use efficiency programs are intended to promote the "new normal" of water wise landscaping through proper design, installation, and maintenance of new and existing landscapes and irrigation systems.

- **Sustainable Lawn Replacement Program** – Rebates are available to help offset the cost of replacing water-thirsty lawns and irrigation with water-wise plants and efficient irrigation. Rebate amount is based upon square footage of lawn removed and can be stacked with the rain garden rebate from the Creeks Division for a higher dollar-per-square foot and higher rebate maximum.
- **Irrigation Efficiency Rebates** - Rebates are available for smart irrigation controllers, spray to drip system conversions, spray to low-precipitation nozzle conversions, and laundry-to-landscape graywater systems.
- **Irrigation Budgets for Dedicated Irrigation Meters** – The City has budget-based rates for accounts with dedicated irrigation meters to incentivize water efficiency. For the City's 900 irrigation meters, the monthly water budget is determined by the property's irrigated landscaped area, the water requirements of plants, and the current weather conditions. The purpose of providing a monthly water budget is to bill based on the water needs of the landscaping; water use that exceeds the budget is billed at a higher rate. Customers can track their water use compared to their budget in the WaterSmart portal.
- **Green Gardener Program** – Taught through Santa Barbara City College School of Extended Learning, gardeners are trained in resource efficiency and pollution prevention landscape maintenance practices. Gardeners attend a 15-week course taught in both English and Spanish covering topics such as irrigation design and maintenance, fertilizing, soil health, integrated pest management, pruning, and reduction of green waste. This program is coordinated and co-funded through RWEP.
- **Mulch Delivery Rebate** – The City will rebate a portion of the cost of up to two dump truck loads per year of county mulch deliveries to reduce evaporation and increase water retention in the soil.
- **Graywater Information** – The City provides education on the use of graywater with handouts, fact sheets, sample plan sheet, videos, and information on the City's website. The City promotes the use of graywater in accordance with the California Plumbing Code Chapter 15.[11]
- **WaterWise Garden Recognition Contest** – Residential front gardens are evaluated for water efficiency, design elements, and sustainability. The winning garden is submitted to the countywide contest for the top prize. Winning properties receive an engraved sandstone boulder and are highlighted in public outreach to encourage water-wise practices. This program is coordinated and co-funded through RWEP.

11 California Building Standards Commission, CA Plumbing Code. (2025). Chapter 15 Alternate Water Sources for Nonpotable Applications.

3.3.6 Residential Programs

In addition to the programs previously listed, the following programs are geared toward residential customers:

- **Flume Smart Home Water Monitor Rebate** – The City offers a direct distribution rebate on the Flume smart home water monitoring system. Flume easily attaches to the meter and allows users to monitor water use down to the minute and catch water leaks quickly using a smartphone app.
- **Washing Machine Rebate Program** – The Smart Rebates Program is coordinated by CalWEP for participating water suppliers throughout California. The City participates with high efficiency clothes washer rebates for residential customers who replace an existing high water use washing machine with a qualifying high efficiency model.

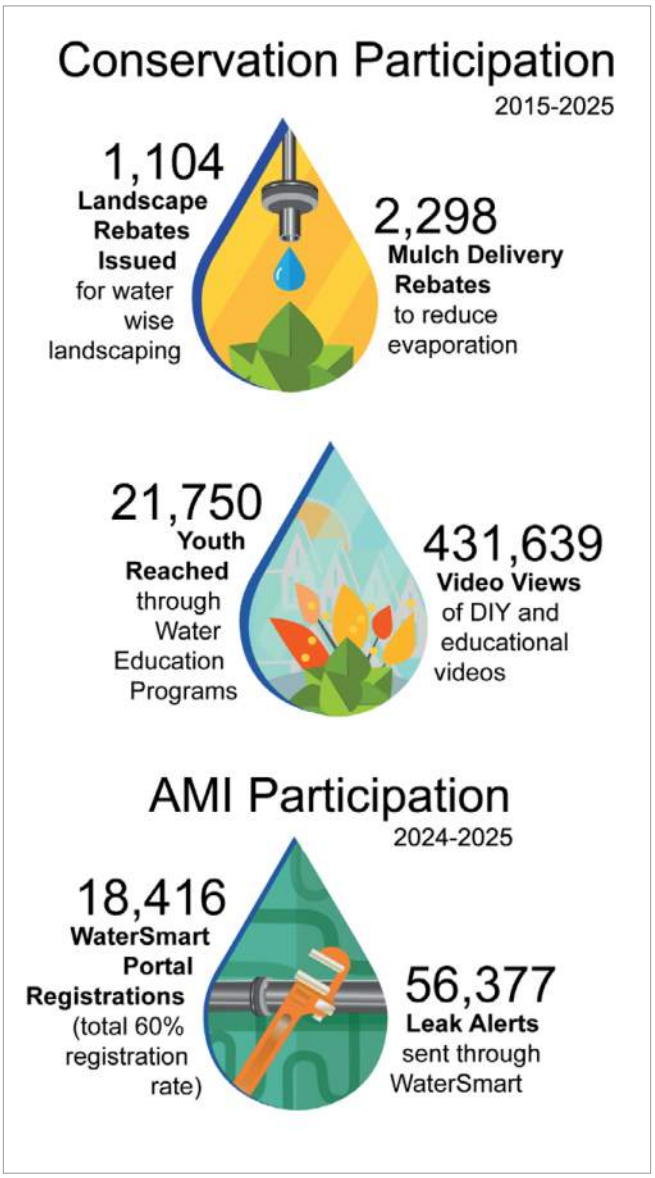
3.3.7 Commercial, Industrial, and Institutional Programs

In addition to the programs previously listed, the following programs are geared toward CII customers:

- **CII WaterWise Survey and Incentive Program** – This tailored program for high water use CII customers includes a comprehensive water survey and incentives for making recommended upgrades. The survey includes identifying high water use appliances, searching for hidden leaks, cataloging use and flow rates of fixtures, and identifying areas for improvement. A summary report is generated which includes an analysis of the facility's water use, water and cost-saving recommendations eligible for monetary incentives from the City, and estimated return on investment.
- **Lodging Industry Towel and Linen Cards** – Free linen cards and towel rack hangers are available to encourage patrons to conserve water during their stay by reusing towels and linens.
- **Restaurant Table Cards** – Free table tents are available to inform restaurant customers that water will be served upon request.
- **Green Business Program of Santa Barbara County** – Businesses are certified through onsite evaluations from City staff. New and existing certified Green Businesses receive workshops, trainings, resources, and recognition. Organized by the California Green Business Network, Santa Barbara County.

Figure 3-9. *Restaurant Table Card Example*

Figure 3-10. *Conservation Participation, 2015-2025*



3.4 AMI Data

The City has recently completed implementation of an AMI system, representing a significant achievement and advancement in system operation and water use monitoring. AMI consists of digital water meter registers, wireless communication equipment, and data management software that automatically collects water use data from customer meters. Unlike traditional meter reading systems that collect a single read per billing cycle, AMI provides hourly water consumption data. This allows both the City and its customers to better understand water use patterns and respond more quickly to abnormal consumption events.

3.4.1 AMI Implementation and Milestones

The City began preparing for AMI implementation in 2014 by replacing existing meters with AMI-compatible meters. Installation of the Aclara radio-frequency network and software began in 2021 and marked a major step in the project. Approximately 28,000 meters were equipped with meter transmission units and 22 data collection units were installed throughout the City to collect and transmit meter data. The AMI network installation was completed ahead of schedule and within budget in July 2023, after which the City began collecting hourly water use data from all customers and integrated the data into the City's billing and customer service systems.

In March 2024, the City launched the WaterSmart customer portal, which provides customers with direct access to their water use data, leak notifications, and conservation recommendations. Customer adoption has been strong and registration rates have exceeded initial expectations.

3.4.2 AMI in Water Management

The implementation of AMI has significantly improved the City's ability to monitor water use and respond to operational issues. The system allows all customer meter reads to be collected within approximately one hour, compared to several days previously required for manual meter reading. This automated data collection has improved operational efficiency and enabled staff to focus more on proactive system management and customer service.

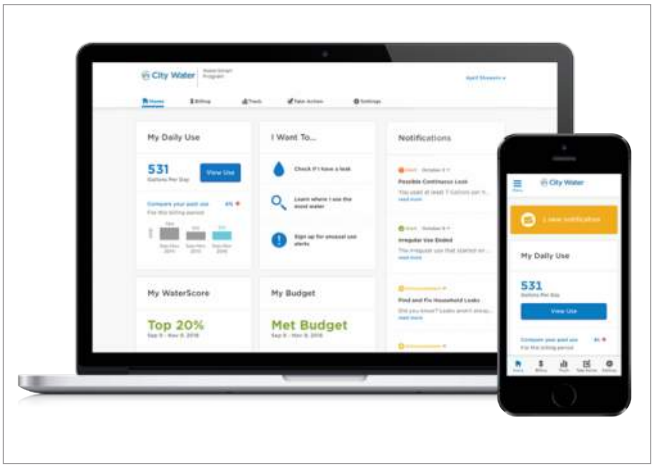
AMI data also supports improved leak detection. Automated monitoring of hourly water use allows the City to quickly identify unusual consumption patterns that may indicate leaks or other issues. Customers who enroll in the WaterSmart portal can receive automated notifications of high or continuous water use, allowing them to address potential leaks before they result in significant water loss or unexpected bill impacts. In addition, City staff routinely review system alerts and proactively contact customers when abnormal water use patterns are detected.

3.4.3 AMI Data Considerations

AMI data can enhance the City's ability to refine conservation program targeting and evaluate potential new measures. A substantial analysis of historical program participation was completed as part of the Alliance for Water Efficiency report, "*An Assessment of Water Affordability and Conservation Potential in Santa Barbara, CA.*" Building on this analysis, AMI data provides an additional layer of insight by enabling the City to identify accounts exhibiting specific water use patterns, such as high seasonal irrigation demand, persistent high usage, or other indicators of conservation potential that may align with current or future conservation measures. When combined with the GIS-based analyses conducted for the water affordability report (discussed below in section 3.5.4), AMI data can help estimate potential water savings and support more strategic targeting of program participation to maximize achievable savings.

AMI data availability was reviewed as part of MWM's modeling efforts, and it is recommended that the City explore options to retain AMI data for longer than the vendor currently stores it. This ensures the data remains available for future program evaluation and planning analyses. At present, AMI data represents an opportunity to strengthen conservation planning and program effectiveness over time.

Figure 3-11. *WaterSmart Customer Portal*



3.5 Water Affordability and Conservation

As part of this Plan, equity considerations were embedded into the measure selection and design process to incorporate this important driver in planning for the next phase of water conservation in the City.

3.5.1 Background

With the cost of water and wastewater rising across the country, the Water Resources Department initiated an effort in spring 2023 with the Alliance for Water Efficiency (AWE) to study the affordability of City water and wastewater service. The results of the study were documented in a final written report "*An Assessment of Water Affordability and Conservation Potential in Santa Barbara, CA*" (Affordability Report). Measuring water affordability is a relatively new concept in the water industry and affordability metrics are just beginning to be established. In the Affordability Report, affordability was assessed using a combination of various metrics, including the Household Burden Indicator and Poverty Prevalence Indicator (PPI), which focus on water and wastewater bill impacts to households in the lowest 20th percentile of income within each census tract. Unlike previous studies conducted by AWE, the City's assessment also included the financial impact of water and wastewater services on multifamily residential (MFR) households, rather than focusing solely on single family residential (SFR) households.

The study found that the City's water customers, when viewed as a whole, have little to no water affordability concerns. However, when analyzed at the census tract level, certain tracts are more burdened by water affordability. Several tracts qualify as disadvantaged communities (median annual household income less than 80% of the statewide annual median household income), and the combination of high cost of living and low wages results in City utility bill costs that are a "moderately high" burden.

Overall, the study found that the City is already conducting a number of best practices related to rate structures, affordability, and water conservation. Some the best practices include the price of tier one water consumption being relatively low compared to the highest tier, providing an online bill calculator, having a dedicated water conservation program, and translating outreach materials into Spanish. The Affordability Report provided additional recommendations ranging from low-impact to high-impact, and from simple implementation to complex and long-range implementation.

3.5.2 Prioritization of Recommendations

The following table presents the highest priority recommendations identified by the City's Water Commission in the Affordability Report, listed in anticipated order of implementation. Priorities were determined based on several factors, including cost/benefit analysis, ease of implementation, items already being implemented, items that will take more time to develop or are more complex, and items that may require policy action and/or should be addressed as part of future rate studies.

Table 3-2. *Priority Equity Recommendations*

Status	Recommendation
Completed	Leverage AMI hourly data and WaterSmart portal communication platform to help target water conservation tips, programs, and customer assistance programs to those who are using water inefficiently and if done proactively, can help avoid high bills. (Affordability Report recommendation number 10).
Completed	Assess historical participation in water conservation programs by census tract. (Affordability Report recommendation number 5).
In Progress	Explore strategies to expand and improve the accessibility of current water conservation programs. (Affordability Report recommendation number 6.)
In Progress	Ensure communications and marketing strategies for AMI data and the WaterSmart portal are specifically designed to reach account holders in low-income and multifamily settings. (Affordability Report recommendation number 9.)
In Development	Explore partnerships with existing efforts addressing a broader range of affordability challenges. (Affordability Report recommendation number 12.)
In Development	Explore customer assistance programs to improve and/or expand support to low-income households. This effort should also assess the process for customer participation and aim to make it as easy and accessible as possible. (Affordability Report recommendation number 13.)

3.5.3 Leverage AMI Data to Target Water Conservation

The Affordability Report was released prior to the Citywide launch of WaterSmart in March 2024. WaterSmart is the City's customer-facing portal in which account holders can access hourly, daily, weekly, and monthly water use, pay bills online, receive automated water leak alerts, set custom notifications, see a breakdown of their bill, explore water efficiency recommendations, and more.

Staff will continue to target outreach and programs to customers who meet certain water use thresholds such as continuous leaks or over-irrigation. Staff conducts individual outreach to customers via phone and email that WaterSmart has identified as experiencing continuous use or large leaks to ensure the customer is aware of the issue and to provide support as needed.

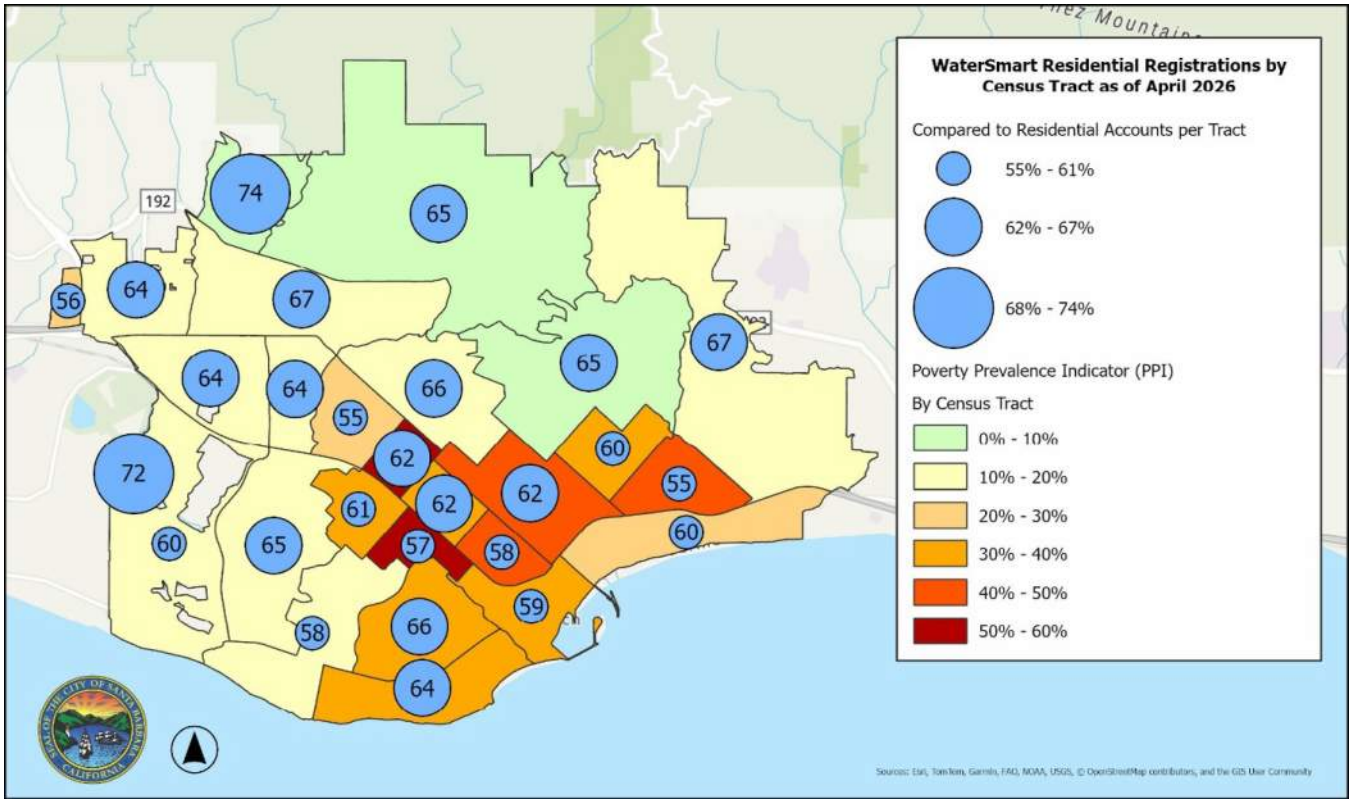
3.5.4 Assess Historical Participation in Water Resources Program

Per the recommendations in the Affordability Report, an assessment was conducted by the City using GIS to analyze the locations of historical program participation by account number and customer type (single-family, multifamily). Data from the past 20 years was analyzed by census tract. The measures analyzed include bill assistance, WaterSmart registrations, and water conservation measures like toilet rebates, showerhead giveaways, etc. This information serves as the roadmap for where more targeted and equitable outreach and communication can occur and provides staff with the baseline knowledge needed to more effectively implement the remaining top priority recommendations in the future.

The following measures were included in the mapping analysis:

- **WaterSmart Registrations** – WaterSmart can be a helpful tool for account holders of high burdened households because it provides customers with detailed water use information and tailored recommendations for water efficiency. WaterSmart is currently only available to individually metered customers that receive a water bill (not master-metered MFR or renters who do not pay their water bills). WaterSmart also has an interactive utility bill breakdown chart that shows the components of their utility bills so customers can see where the bulk of their charges are stemming from. One of the most impactful components of WaterSmart for high burdened households is the ability to recognize and automatically alert customers of continuous water use, usually indicating a leak. Early detection and alerting can prompt the customer to make leak repairs quickly, thus reducing the higher bill charges associated with the increased water use.
- *The mapping analysis (illustrated in Figure 3-12) showed a positive customer reception of this new tool for water efficiency and customer assistance. The number of residential registrations was compared to total residential water accounts per census tract and overlayed on the Poverty Prevalence Indicator (PPI) from the Affordability Report. In general, higher registration rates were seen in the census tracts that have a lower PPI (less financially burdened). The most recent map analysis (Figure 3-12) shows an improvement in registrations throughout the service area, especially in the high PPI tracts, bringing those tracts more inline with registration rates across the community. Initially, the lowest uptake was seen in the five census tracts with the highest PPI, the tracts that are more financially burdened and have a higher density of multifamily accounts. Those five census tracts have a higher percentage of Spanish as the primary language spoken in the household, so City staff have worked with the WaterSmart developers to send outreach that is available in both English and Spanish languages to improve access.*

Figure 3-12. *WaterSmart Residential Registrations by Census Tract*



- **Bill Assistance** – The City participated in two major federal and state financial assistance programs in the past four years, the Low-Income Household Water Assistance Program (LIHWAP), and the California Water and Wastewater Arrearages Program. LIHWAP was a federally funded program that offered assistance to low-income households to pay past due residential water and wastewater bills. The program ended in March 2024; there were 156 City customers who received a total of $410,923 in LIHWAP assistance. City staff applied for and received funding from the California Water and Wastewater Arrearages Payment Program in 2022 and 2024. A total of $1,999,324 was dispersed to 4,181 qualifying residential and commercial water accounts.
- *The mapping analysis found that, overall, participation in both programs was seen throughout the City with higher clusters in lower income census tracts.*
- **Water Conservation Measures** – Measures analyzed as part of this mapping exercise include residential Water Checkups; indoor programs (including showerhead distributions, toilet rebates, and clothes washer rebates); and outdoor programs (irrigation evaluations, mulch rebates, free rain sensors and soil probes, water broom rebates, irrigation rebates, and lawn removal rebates).
- *In general, census tracts with higher PPI scores, meaning lower incomes, tended to have lower rates of water conservation program participation. However, it should be noted that the Affordability Report found that "in lower income Census tracts, average water use per dwelling unit tends to be lower." Although rates of water conservation program participation are generally less in census tracts with higher PPIs, this may be a function of water use. For example, census tracts with high PPIs (lower incomes) are generally composed of higher density areas with properties with typically smaller landscaped areas, so the ability to save water outdoors and participate in outdoor conservation programs is low.*

3.5.5 Conservation Measure Evaluation Criteria

One of the priorities of this Plan is to evaluate conservation measures not solely on water savings, but on a broader set of evaluation criteria that includes equity. In conducting this Plan update, staff expanded the analysis of potential water conservation measures. As expanded on in Chapter 4, each measure was scored using evaluation criteria designed to ensure equitable, practical, and effective outcomes for the City's diverse customer base. Measures were scored based on the four criteria below; each were given equal weight:

1. **Water Savings Potential (Per Account)** – Refers to the water savings potential a measure has on an account-by-account basis and the expected adoption rate. This is a qualitative assessment of expected water savings potential; actual savings were quantitatively measured using the DSS Model.
2. **Diversity, Equity, and Inclusion** – Considers how the measure benefits different customer groups, income levels, and housing types, and how accessible it is to non-English-speaking or underrepresented communities.
3. **Service Area Match** – Evaluates whether the measure is appropriate for Santa Barbara's climate, building stock, and lifestyle characteristics.
4. **Additional Service Area Benefits** – Identifies co-benefits such as stormwater management, habitat creation, energy savings, community aesthetics, or educational opportunities.

These criteria ensure that recommended measures not only save water but also provide broader community and environmental value. This involves designing programs that provide equitable access to water-saving technologies and support for underserved populations, thereby helping to maximize access across all types of customers.

The City is currently participating in an AWE study titled "Characterizing Water Use in Low-Income Households Seeking Bill Pay Assistance" that will analyze household water use patterns related to water affordability challenges and recommend complementary bill payment assistance and leak repair programs. AWE will analyze City utility billing and water use data to quantify the prevalence of leaks, persistently high consumption, and inefficient fixtures among low-income households seeking assistance. Participation in the study will provide a deeper understanding of water use trends among low-income customers, helping the City evaluate whether plumbing repair or efficiency retrofit programs could complement bill assistance efforts.

3.5.6 Next Steps for Achieving Equity

As the City explores assistance programs and continues to implement the Affordability Report recommendations, ensuring that the program benefits those in need is a complex issue. The data shows that the lowest income census tracts have the highest density of multifamily residences. Currently, only 17% of multifamily dwelling units are individually metered. In addition, customers who rent their homes, both multifamily and single family residential, may not directly see or pay their water bills because they are included in their rent. This leads to potential landlord transparency issues and challenges related to ensuring the assistance program is actually passed along to the customers experiencing affordability challenges. During the Affordability Report it was difficult to obtain survey responses and workshop participation from low-income customers, leading to the conclusion that water affordability may not be top of mind for these customers, as it is only one part of a much larger affordability issue in the community. Other affordability concerns such as housing and food costs may be more top of mind.

The City continues to focus on strategies to improve accessibility of water conservation programs, including WaterSmart. The City is working to improve language-access by ensuring information and resources are also available in Spanish, since that is the main additional language spoken in the community. The City could also train others in the community who work with or are trusted by low-income or otherwise vulnerable households to help account holders get registered in WaterSmart, assist residents with water conservation education and strategies, or volunteers with plumbing skills.

The City has potential to reduce indoor water use through reliable strategies like high-flush volume toilet replacements. However, traditional rebate programs are a challenge for customers who may not be able to make the upfront purchase and wait for reimbursement or may not be able to pay for plumbing services. Common alternative program models include a direct install model (with or without a customer cost-share), or a free or subsidized leak detection and plumbing repair service program. These measure considerations were modeled and are included in the Program recommended in this Plan.

As the City continues to explore these opportunities, staffing capacity is a key factor in the City's ability to expand water affordability assistance and build partnerships with community-based organizations. Implementing the remaining recommendations from the Affordability Report will require significant coordination, outreach, and program administration. In addition, engaging these households often requires trusted community partners, language-accessible outreach, and hands-on support for programs such as WaterSmart enrollment, conservation education, or direct-install efficiency upgrades. Developing and maintaining these partnerships, while also administering potential programs such as leak repair services or direct-install fixture replacements, would require dedicated staff capacity. It is estimated that approximately one additional full-time equivalent position would be needed to effectively implement the remaining Affordability Report recommendations and support long-term community engagement in those programs.

Photo: Benoit Debaix • Unsplash

4. Urban Water Use Objectives

This section presents background information about the requirements put forth in the *Making Water Conservation a California Way of Life* regulation (Regulation) which was one of the primary drivers for developing this Plan. As stated in the introduction, one of the purposes of this Plan is to assess if the City is on track to meet requirements in future compliance years with its current estimated demand, growth projections, and conservation program.

4.1 Regulation Background

In 2018, the California Legislature passed Assembly Bill (AB) 1668 and Senate Bill (SB) 606. This legislation directed the State Board to adopt water efficiency standards for residential and landscape use and performance measures for CII water use. In 2024 the State Board adopted the Regulation, which established a unique Urban Water Use Objective (UWUO) or water budget for each urban retail water supplier and performance measures for CII customers. Annual reporting on the Regulation was required beginning January 1, 2025. Compliance is required beginning January 1, 2027, and is measured based on the various standards and CII performance measures that are in effect for the reporting period. The standards and performance measures have various effective dates over the course of the next fifteen years and are based on which compliance options water suppliers choose.

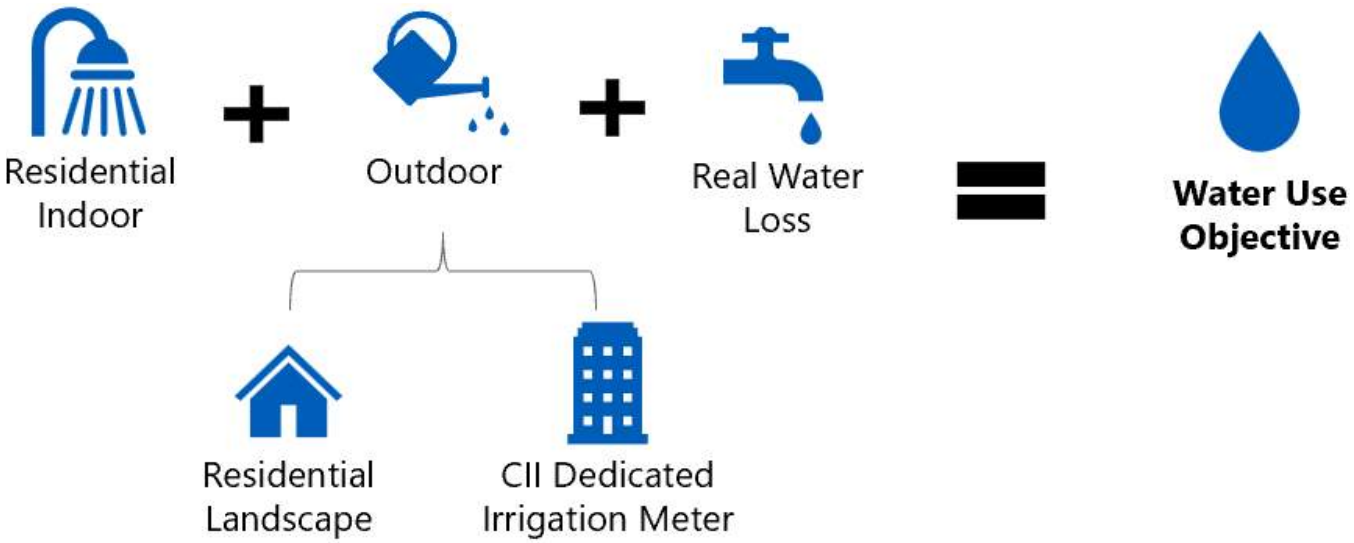
4.2 Urban Water Use Objective

The Regulation requires urban water suppliers to comply with an UWUO that is calculated annually. The calculation is based on local characteristics and standards for residential indoor and outdoor use, outdoor use from dedicated irrigation meters (DIMs), water loss, a bonus incentive for potable reuse, and variances. The standards for indoor and outdoor use decrease over the implementation period between 2025 and 2040, requiring urban water suppliers to meet stricter water use budgets as time progresses.

4.2.1 Residential Indoor Water Use Standard

The residential indoor water budget component of the UWUO is calculated by multiplying the applicable gallons per capita per day (GPCD) consumption standard by the supplier's service area population and by the number of days in the year. The GPCD standards applied to calculate the residential indoor water budget decrease over time, starting at 47 GPCD in years 2025 through 2029 and decrease to 42 GPCD in 2030 and beyond.

Figure 4-1. *Breakdown of Urban Water Use Objective Components*



4.2.2 Residential Outdoor Water Use Standard

The residential outdoor water use standard is calculated based on the square footage of the City's residential irrigated landscape area, local weather data, and a landscape efficiency factor (LEF). The LEF is 0.8 starting in fiscal year (FY) 2025 to FY 2035, 0.63 from FY 2035 to FY 2040, and is 0.55 beginning in FY 2040. As the LEF lowers, the residential outdoor water use standard is reduced. The total residential irrigated landscape area and the weather data used in the calculation is provided by the State.

4.2.3 Commercial Outdoor Water Use Standard

Like the residential outdoor water use standard described above, the commercial outdoor water use standard is also calculated by multiplying landscape area measurements by a LEF. The standard for dedicated irrigation meters (DIM) serving commercial customers (CII-DIM) is calculated in the same way as the residential outdoor standard. However, the LEF for CII-DIMs is 0.8 from FY 2025 to FY 2035, 0.63 from FY 2035 to FY 2040, and drops to 0.45 beginning in FY 2040.

The CII-DIM water budget will go into effect beginning July 1, 2028 to allow water suppliers time to identify and measure DIM accounts and/or install DIMs on CII large landscapes. Prior to June 30, 2028, the CII-DIM budget will be equal to actual deliveries associated with landscape irrigation reported to the State Board in the electronic annual report.

4.2.4 CII Mixed-Use Meter Large Landscape Compliance

In addition to the commercial outdoor water use standard, which establishes a water use budget for commercial landscapes, the Regulation includes a requirement for conversion of large landscapes with mixed-use meters (MUMs). The CII MUMs portion of the Regulation requires suppliers to measure and report all large CII landscapes (greater than half an acre in size) with MUMs by July 1st, 2027. By June 30, 2039, suppliers will have to implement one of the following compliance options and maintain the process for compliance at a rate of 95% of all CII MUM large landscapes starting in June 30, 2040.

- **Compliance Option 1** – Conversion to DIMs: Suppliers must install DIMs in large CII landscapes. For suppliers using the first compliance option, all CII large landscapes with MUMs must be measured and reported by July 1st, 2027.
- **Compliance Option 2** – Use In-Lieu Technologies: Instead of installing DIMs, suppliers must implement at least one of the following methods: water budget-based management programs without a rate structure, water budget-based rate structure, installation of technologies that enable the supplier to identify, estimate, and analyze outdoor water use (such as AMI or remote sensing), and offer, at a minimum, one BMP from the Outreach, Technical Assistance, and Education category and at least two BMPs identified in the Landscape category.

The options above have different data requirements that will be due on June 30, 2039, when full compliance is required.

4.2.5 Water Loss Standard

In 2022, a separate State Board regulation established system-specific standards for water losses.[12] A supplier will calculate its annual water loss budget by multiplying its system-specific standard by the number of days in the year, and, depending on the units associated with the standard, by either the number of total service connections or the length of the distribution system, in miles. Suppliers must meet their Water Loss Standard starting January 1, 2028 (for data submitted for 2025-2027). After the initial compliance period, suppliers will be evaluated every three years based on their average system losses across those three years.

The water loss standard is unique in that it was originally regulated under prior and independent 2015 legislation – Senate Bill 555. Therefore, compliance can be enforced individually for water loss, unlike other standards within the long-term framework legislation.

12 Cal. Code Regs., tit. 23, §§ 980-986

4.3 CII Performance Measures

In addition to compliance with the calculated UWUO, the City must also implement CII Performance Measures. The Performance Measures were developed by the State Board to address water use associated with the business community but are not a quantifiable standard since CII water use efficiency consists of many diverse industries, production rates, equipment, and other unique factors. CII water use efficiency is also difficult to assess and quantify due to the prevalence of shared or multiple meters supplying multiple businesses and the frequent turnover of business types.

The performance measures primarily focus on identification of the types of CII customers and implementation of BMPs which consist of offering various types of resources and programs to the CII customer sector. The four performance measures are:

1. **Identify Disclosable Buildings** – The owners of disclosable buildings are required to submit monthly energy use data annually to the California Energy Commission (CEC) via the ENERGY STAR Portfolio Manager web portal. This performance measure requires all urban water suppliers to identify the number of disclosable buildings in their service area and to provide monthly water use data for at least the previous 12 months when requested by owners or owner's agents of the buildings. They are also required to annually report the number of customers for which water use data has been provided annually.
2. **CII Account Classification** – Water suppliers are required to classify their CII customers according to the broad classification categories used by the US Environmental Protection Agency's ENERGY STAR Portfolio Manager tool. All CII customers must be classified into the 22 designated categories by July 1, 2027.
3. **Identify High Volume Users** – The regulation requires identification of high-volume CII water users implementing one of three compliance options, each with an associated deadline. Option 1 requires identifying existing CII users who fall at or above the 97.5th percentile for CII water use, as well as those at or above the 80th percentile for CII water use, with a compliance deadline of June 30, 2025. Option 2 expands this analysis by requiring classification of CII customers and identifying those at or above the 97.5th percentile and the 80th percentile within each classification category (from the CII Classification measure described above). This option allows for a later compliance date of June 30, 2027. Option 3 extends the deadline further to June 30, 2029, and requires the development and application of Key Business Activity Indicators to assess inefficiency within CII classification categories.
4. **Implement Best Management Practices for High Volume Users** – This task requires water suppliers to design resources and implement water efficiency programs from five categories of CII BMPs: 1) Outreach, Technical Assistance, and Education, (2) Incentives, (3) Landscape, (4) Collaboration and Coordination, and (5) Operational. Two BMPs from each category must be offered to the top 97.5th percentile of CII users and one BMP from each category must be offered to the top 80th percentile of CII users. Singular BMPs can address multiple categories. Suppliers must have a conservation program that meets the BMP requirements in place by 2039, and progress towards compliance must be reported annually.

Table 4-1. *CII Categories for Classification*

ENERGY STAR Portfolio Manager Categories			California Water Boards Categories
Banking/Financial Services	Lodging/Residential	Retail Services	CII Laundries
Education	Manufacturing/Industrial	Technology/Science	Landscapes with Dedicated Irrigation Meters (DIM)
Entertainment/Public Assembly	Mixed-Use	Utility	
Food Sales and Service	Office	Warehouse/Storage	Water Recreation
Health Care	Parking	Workshop	Car Wash
Public Services	Religious	Other	

4.4 Reporting and Compliance Schedule

Reporting on the regulation started in 2025, and water use is expected to be in compliance with each supplier's UWUO by 2026. The City submitted its second report in December 2025. Beginning in 2026, the State Board may issue conservation orders to suppliers that are not in compliance, and beginning in 2027, the State Board may impose administrative civil liabilities for non-compliance with the UWUO.

Additionally, ongoing compliance with the targets set by SB 7 of Special Extended Session 7 (SB X7-7, 2009) is required. SB X7-7 required water suppliers to calculate their actual 2020 gross water use to determine whether they had met their 2020 target of reducing per-capita water consumption by 20%. The City's 2020 target was 117 gallons per capita per day (gpcd) or less and the City achieved an actual per capita water in 2020 of 92 gpcd.

The Regulation uses the 2020 target as a backstop for calculating the UWUO. The City's 2020 target is lower than its calculated UWUO, with a calculated UWUO plus excluded water demand of 13,970 AF compared to the SB X7-7 target of 12,933 AF,[13] resulting in a capped UWUO that aligns with the 2020 target.

In future reporting years, if the UWUO is higher than the SB X7-7 target, then it is capped at the SB X7-7 target as the objective that the City will be subject to and report on annually. Since the various standards decrease over time, compliance is based on the applicable standards that are in effect for each reporting year. Compliance is assessed based on the total UWUO, and not on each individual component.

Although the City is already in compliance with current standards and estimates compliance with future standards for the UWUO, the long-term framework underpins that the City must "stay the course" with community water conservation measures. The exemplary water conservation achieved by City water customers and the leadership demonstrated by the Water Commission and City Council has positioned the community to better withstand droughts and state regulations. It is important to note that the long-term framework necessitates significant staff time for tracking, analyzing, and reporting on the UWUO, the water loss standard, and the CII performance measures. Additionally, the UWUO will require some changes and enhancements to City water conservation programs and outreach to continue to achieve compliance.

4.5 UWUO Compliance Status

As part of this Plan update, the City and MWM conducted a gap analysis completed over a series of meetings to discuss all aspects of the new Regulation and the City's current activities and water use metrics for compliance. The City is currently in compliance with all components of the Regulation. A recap of the City's compliance with each component is as follows:

- **Urban Water Use Objective** – The City is in compliance with current urban water use objectives. Below are a couple objectives that are in progress for future continued compliance.
  - **CII Mixed-Use Meter Large Landscape Compliance** – This component of the UWUO requires all CII landscapes with MUMs that are greater than half an acre in size to be measured and reported by July 1, 2027. By June 30, 2039, suppliers will have to implement one of the compliance options described earlier. The City plans to offer irrigation audits to comply with the reporting requirements of this component by 2039. Staff time costs for this Regulation requirement have been modeled in the "Regulation Requirements" measure presented in following chapters; more details for this measure can be found in Appendix E.
  - **Water Loss Standard –** For the initial compliance period, the State Water Resources Control Board will assess if the City has met its water loss standard in at least one of three years for the period of 2025 – 2027. As described in Chapter 3 above, the City's FY2025 Water Loss Audit shows the City's total water losses were 14 gpscd, and real water losses were 10.1 gpscd, which is below the City's real water loss standard of 28.8 gpscd. Although the City has met its water loss standard established by the State Water Resources Control Board for the initial compliance period, it must continue to do so in all subsequent compliance periods. Going forward, the City's compliance will be assessed every three years based on its average losses across the three-year compliance period. The City is working on development of a Water Loss Control Strategic Plan.
- **CII Performance Measures** – The City must also adhere to regulatory requirements for the CII performance measures listed below. Administrative costs to comply with these requirements are included in the measure titled "Regulation Requirements" that will be presented in the following chapters.
  - **Identify Disclosable Buildings** – The City is required to provide owners of disclosable buildings with at least 12 months of historical water use data upon request. The City is currently compliant with this performance measure.
  - **CII Account Classification** – The City completed its CII classification according to the ENERGY STAR Portfolio Manager Tool classification categories in November 2024 and has maintained classifications.
  - **Identify High Volume Users** – The regulation requires identification of high-volume CII water customers. The City completes this analysis every year and is in compliance with this performance measure.
  - **Implement Best Management Practices (BMPs)** – This task requires water suppliers to design resources and implement water efficiency programs for CII customers. The City is currently compliant with this component of the Regulation through its existing conservation program and measure offerings.

The City's comprehensive conservation programs, tracking, and monitoring processes support compliance with CII Best Management Practices. The conservation program recommended in this Plan is designed to sustain existing conservation achievements as per the Regulation while also allowing the City to address additional priorities, including equity-focused program design.

13 This figure was reported in the City's FY2024 Annual UWUO and Water Use Report.

5. Conservation Measure Evaluation

This section details the screening process, the conservation measures that were analyzed, the measure assumptions, and inputs used in the DSS Model.

5.1 Screening of Conservation Measures

This section presents an overview of the measure screening and analysis process completed to arrive at conservation program recommendations that balance the greatest ease and efficiency of program administration, the lowest cost of implementation, water savings, and current program priorities (such as continued compliance with the Regulation and equity considerations informed by the Affordability Report).

An important step in updating the City's Water Conservation Strategic Plan included identification of new measures that may be appropriate and the screening of these measures to a short-list for detailed evaluation (benefit-cost analysis). This evaluation was specific to the factors that were unique to the City's service area, such as water use characteristics, economies of scale, and demographics, and were aligned with the City's program priorities as mentioned above. The measure screening process also involved a review of the gap analysis (summarized in the previous section) conducted to evaluate the City's activities against the requirements of the new state Regulation to ensure any gaps in measure activities were addressed.

The experience of many utilities has shown there is a reasonable limit to how many measures can be feasibly implemented at one time. Programs that consist of a large number of measures are historically difficult to implement successfully. Therefore, prioritization of measures is important both as an outcome of this planning effort and as the program is implemented. The approach to program implementation is viewed as a "living" process where opportunities may arise and be adopted as new technologies become available over time. Program timelines can also be adjusted, with the recognition that doing so may impact the savings objectives. The screening process undertaken with the City's staff yielded 18 measures for further evaluation.

Potential new measures were screened using qualitative evaluation that considered a list of more than 100 potential water conservation measures, the experience of MWM and City staff, the previous conservation planning effort conducted in 2020, and a review of what other water agencies with innovative and effective conservation programs were effectively (or unsuccessfully) implementing. In this effort's measure screening, City staff considered the criteria outlined in the following figure when evaluating whether a measure should be included in the cost-benefit analysis.

Figure 5-1. *City of Santa Barbara Measure Screening Criteria*

Water Savings Potential (Per Account):
Refers to the water savings potential a measure has on an account-by-account basis and the expected adoption rate. This is a qualitative assessment of expected water savings potential; actual savings will be quantitatively measured using the DSS Model.

Diversity, Equity, and Inclusion:
Considers how the measure benefits different customer groups, income levels, and housing types, and how accessible it is to non-English-speaking or underrepresented communities.

Service Area Match:
Evaluates whether the measure is appropriate for Santa Barbara's climate, building stock, and lifestyle characteristics.

Additional Service Area Benefits:
Identifies co-benefits such as stormwater management, habitat creation, energy savings, community aesthetics, or educational opportunities.

Photo: Clayton Cardinalli • Unsplash

5.2 Conservation Measures Analyzed

Table 5-1 describes the 18 measures that were selected for analysis during the screening process. The list includes devices or measures that can be used to achieve water conservation; methods through which the device or measure will be implemented; and what distribution method, or mechanism, can be used to activate the device or measure.

Table 5-1. *Measure Descriptions*

Measure Name	Description
Commercial	
CII Water Survey	City staff will conduct a comprehensive water survey of fixtures and appliances and provide recommendations as to how the customer can become more water efficient and save money. Participation in the survey is a requirement for eligibility in the Customized CII Incentive measure.
Customized CII Incentive	This measure models an incentive program for CII users that will be conducted after analyzing the recommendations on the findings report that is provided through the CII Water Survey measure. Financial incentives will be provided after analyzing the cost-benefit ratio of each proposed project. Rebates are tailored to each individual site as each site has varying water savings potential.
Restaurant Spray Nozzles Rebate	Rebate 1.15 gallons per minute (gpm) or lower spray nozzles for the rinse and clean operation in restaurants and other commercial kitchens. Stack with existing SoCalGas rebate.
Irrigation	
Irrigation Evaluation	All public and private irrigators of large landscapes would be eligible for free landscape water surveys upon request. Typically those with high water use would be targeted and provided a customized report.
Sprinkler to Drip Irrigation Retrofit	Provide rebate for customers to convert their sprinkler system to efficient drip irrigation. Eligible materials include: pressure regulator filter assembly, drip tubing, ¼" tubing, drip emitters, connectors, figure 8s, goof plugs, and stakes/staples. Does not include micro spray, irrigation valves, labor, or tax. Cannot be used in combination with the Sustainable Lawn Replacement rebate.
Sustainable Lawn Replacement Rebate	The Sustainable Lawn Replacement Rebate provides incentives to help offset the cost of replacing water-thirsty lawns with water-wise plants and efficient irrigation. Total rebate amount is based upon square footage of lawn removed. Stacked rebate available for rain gardens, with funding provided by the Creeks Division.
Spray Sprinklers to Low-Precipitation Sprinklers Retrofit	Provide rebate for customers to upgrade nozzles to reduce misting, runoff, and allow the water to soak into the ground more easily. Eligible materials include: Rotating or low-precipitation nozzles at 1 gpm flow or less.
Smart Sprinkler Timer Rebate	Provide a rebate for the purchase of a weather-based/smart irrigation controller. Smart irrigation controllers can be programmed to give plants the right amount of water for the type of plant, soil, time of year, and weather - often with a smartphone. Eligible materials include: smart controller or weather sensor add-on for existing controller.
Water Efficient Landscape Standards	Compliance with the City's WELS is mandatory whenever a landscaping or irrigation plan is required by any Chapter or Section of the City Municipal Code or by any City design review or land use review body.[14] The Standards are intended to promote water conservation while allowing flexibility in designing attractive and cost effective water-wise landscapes. As part of this measure, staff perform plan reviews and final inspections for compliance.
Mulch Delivery Rebate	Rebate of two deliveries of the County mulch per customer per year. Mulch helps reduce evaporation and retain soil moisture, reducing irrigation needs.

14 SBMC § 14.23.005, Ordinance 6101, and Council Resolution No. 23-007

Measure Name	Description
Residential	
Residential High Efficiency Clothes Washer (HECW) Rebates	Rebate for a high efficiency clothes washer. Only applicable on eligible models and for replacing an existing high-water using washer.
Plumber Initiated High Efficiency Toilet (HET) Retrofit Program[E]	Subsidize installation cost of new HETs purchased in bulk by the utility to replace 3.5 gallons per flush (gpf) toilets with 0.8 gpf toilets. Licensed plumbers, pre-qualified by the utility would solicit customers directly. Customers would get a new HET installed at no cost or a discounted price. May focus efforts on income-qualified residential account holders and partner with gas company for economies of scale.
Community and Education	
School Education	This measure includes the City's school education initiatives: 1) The LivingWise Program wherein 6th grade students receive a kit containing high-efficiency water and energy fixtures to install within their homes. 2) Musical assemblies for K-6 grade students to promote water efficiency and conservation. 3) In-class presentations to K-6 grade students about where water comes from and how to conserve it.
General Public Education	This measure includes the City's varied public outreach efforts, including printed and digital advertising, information on the City's websites, targeted messaging campaigns, informational videos, and educational workshop series.
Green Gardener Program	15-week bilingual course taught through Santa Barbara City College's School of Extended Learning. The class covers topics on resource-efficient and pollution prevention landscape maintenance practices. After completion of the course and a final test, gardeners are placed on the Green Gardener list which is promoted to the public. Green Gardener recertification issued annually with completion of 2 hours continuing education.
Leak Assistance	
AMI Customer Portal and Leak Alerts	This measure includes the AMI customer portal and the automated leak alert system. Leak alerts are sent by WaterSmart via email, text, phone, or print. This measure includes staff time to respond to calls and emails about leak alerts as well as to discuss water use with customers (i.e. conduct Virtual Water Checkups).
Leak Detection Device Rebate	This measure models the CalWEP direct-distribution program for Flume rebates. Customers order leak detection devices directly through the Santa Barbara website and the rebate is built into reduced cost.
Leak Repair Rebate[E]	This measure will provide a rebate to cover part of the labor and materials cost for repairing water leaks, with a higher rebate amount for income-qualified account holders.

Note: *Measures denoted with an "E" incorporate equity considerations recommended in the Affordability Report (see Section 3.5.5 for more information on recommendations to improve equity in the City's water conservation program).*

Information about the DSS Model analysis approach to measure unit costs, water savings, and market penetrations can be found in Appendix D. Actual measure inputs used in the DSS Model to evaluate the water conservation measures selected by the City can be found in individual measure screenshots in Appendix E.

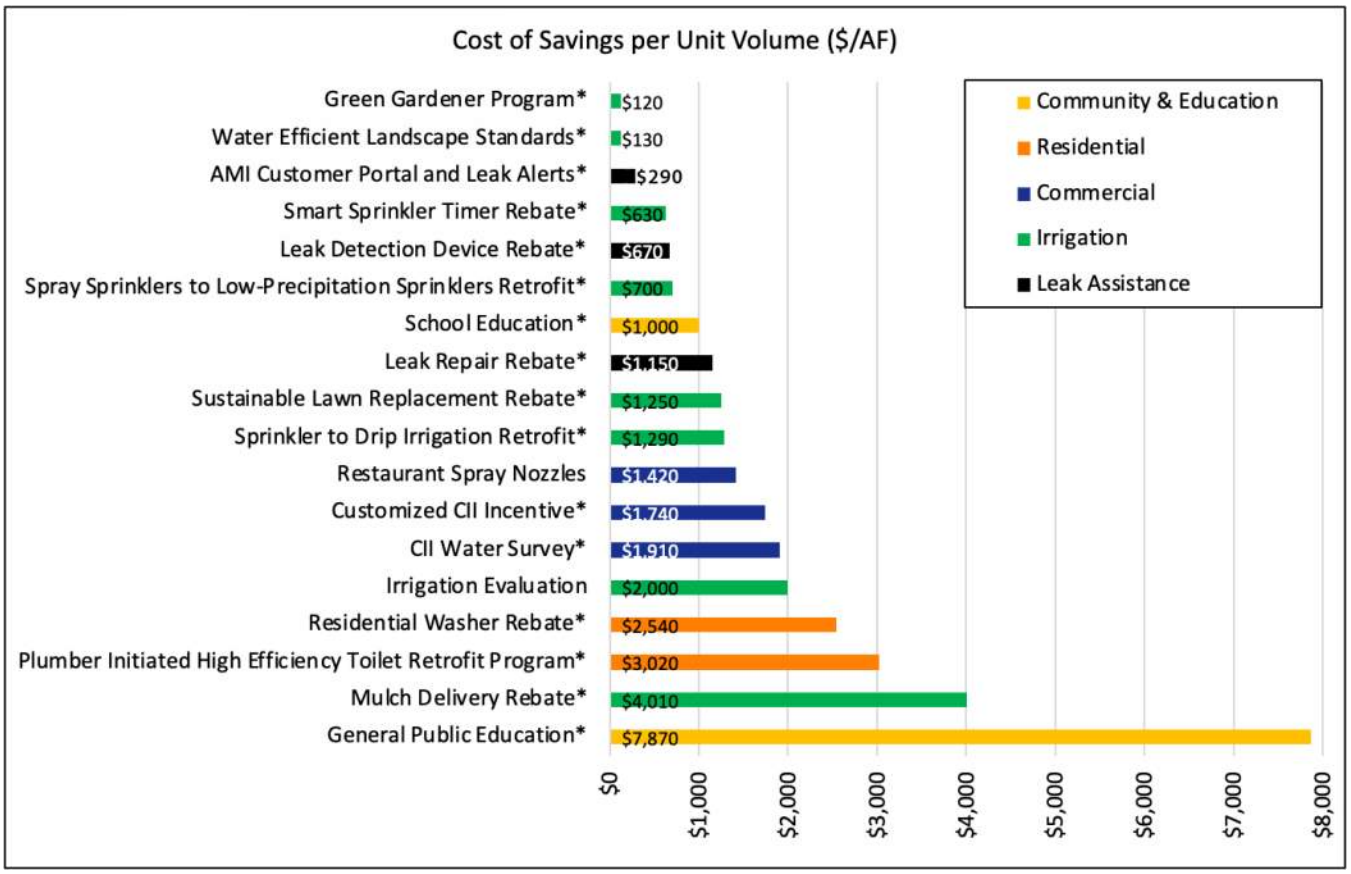
5.3 Comparison of Individual Conservation Measures

MWM conducted an economic evaluation of each selected water conservation measure using the DSS Model. Appendix F presents detailed results with how much water each measure will save through 2050, how much each measure will cost (including utility and staff time cost estimates), and the cost of saved water per unit volume if the measure were to be implemented on a stand-alone basis (i.e., without interaction or overlap from other measures that might address the same end use or uses). Cost savings from reduced water demand was quantified annually and based on avoided costs provided by the City.[15]

While each measure was analyzed independently, it is important to note that very few measures operate independently. For example, The AMI customer portal and leak alert measure may lead to an irrigation evaluation or an irrigation or landscape rebate. Higher efficiency indoor fixtures go hand-in-hand with school and public education.

It should be noted that the utility costs and water savings from general public education measure are not double counted with other conservation measures. That is, savings from measures which address the same end use(s) are not additive; the model uses impact factors to avoid double counting in estimating the water savings from programs of measures (for more information on impact factors, please refer to Appendix F). As a result, the costs appear significantly higher for the general public education measure than for other measures due to the very minimal water savings estimated for the high staff time investment. However, other measures certainly would be less effective or possibly infeasible without an active outreach program. Without public outreach, customers would be unaware of conservation measures and participation would likely plummet. With that in mind, Figure 5-2 presents a comparison of each measure's cost of water saved per unit volume.

Figure 5-2. *Conservation Measures – Cost Per Acre-Foot of Water Saved*



Notes: *The "General Public Education" conservation measure has minimal assigned water savings and is based on an investment in community education and awareness to help drive participation in other conservation measures. Costs are rounded to the nearest $10.*

**These measures are part of the recommended program (Program B).*

15 The City's estimated average water production cost is $1,078/AF including treatment, energy, and transport costs. Water production costs are based on FY 2024 variable costs including the following supply sources: Cachuma, Gibraltar/Mission Tunnel, Cachuma carryover/MWD, groundwater, State Water, banked water/water purchases, existing desalination, and expanded desalination.

6. Conservation Program Evaluation

This section provides a summary of which measures were included in each of the three conservation programs analyzed, as well as the program the City selected to implement. The three programs were designed to illustrate a range of various measure combinations and resulting water savings taking into consideration the following:

- Existing conservation measures
- Conservation measures recommended by AWWA, CalWEP, California Department of Water Resources, and others
- New and innovative measures
- Measure equity among customer categories
- Customer demographics

In addition, this section identifies and prioritizes the conservation programs and projects by cost effectiveness, quantifiable water savings, and compliance with American Water Works Association G480 Water Conservation Program Operation and Management Standard (G480 Standard).

6.1 Measure Selection for Conservation Program Alternatives

MWM conducted an economic analysis to show the actual cost of implementing water conservation programs. The City's existing conservation program was evaluated, as well as two additional, increasingly aggressive programs. MWM and the City created a list of potential program concepts that were appropriate for the City's service area and that could meet the City's goals of continued Regulation compliance and implementation of equity recommendations from the Affordability Report. As the City is currently in compliance with all aspects of the Regulation, the program concepts centered on implementing equity recommendations and maintaining current conservation efforts. Factors for determining which measures should be in each program included evaluation of two types of parameters, (1) measure feasibility parameters and (2) program priority alignment. Measure feasibility was evaluated based on budgeting, feasibility to implement the program as informed by City staff time estimates, and the time at which each measure would need to be introduced to promote conservation efforts. Measures were also evaluated for alignment with the Affordability Report recommendations and to ensure the suites of measures in programs save water across all customer categories.

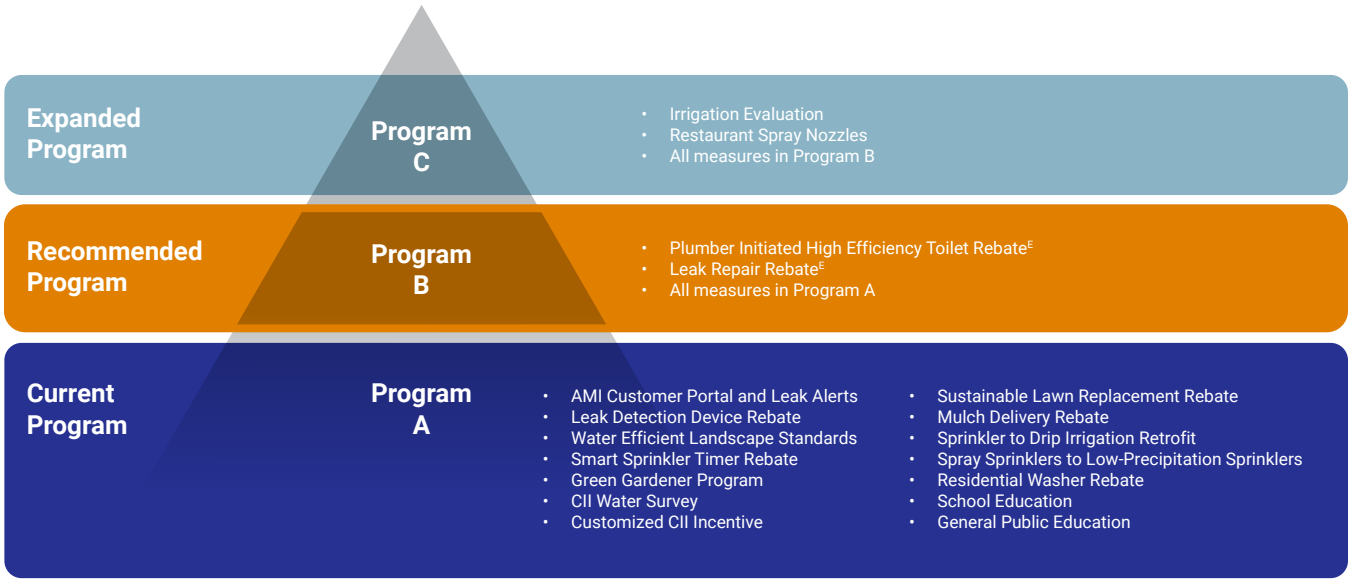
These program scenarios were not intended to be rigid but rather to demonstrate the range in savings that could be generated if selected measures were run at the same time. When programs were analyzed, any overlap in water savings (and benefits) from individual measures was considered to provide a total combined water savings (and benefits). Each program is described below:

- **Program A** – Current Measures. Current conservation program with no changes; includes 14 measures.
- **Program B** – Recommended Measures. In addition to existing efforts, this Program includes more measures that incorporate equity recommendations from the Affordability Report through two additional measures (plumber-initiated high efficiency toilet retrofit program measure and the leak repair rebate measure) and is comprised of 16 measures. This is the recommended program.
- **Program C** – All Modeled Measures. In addition to the measures in the Programs described above, this Program includes an additional outdoor measure and commercial rebate. This Program represents all modeled measures that include water savings[16] in this effort (a total of 18 measures).

Figure 6-1 presents the City's conservation measure program scenarios, indicating which measures were selected and modeled within each program.

16 An additional measure, "Regulation Requirements", was modeled to estimate the staffing costs of Regulation related reporting activities but has no water savings associated with it and was not included in modeled programs. This measure can be updated by the City and can serve as a tool to estimate staffing costs for reporting requirements in the future.

Figure 6-1. *Selected Conservation Program Measures*



Note: *Measures denoted with an "E" were designed to integrate equity considerations.*

Table 6-1 shows the benefit-cost ratios for conservation Programs A, B, and C as well as average annual utility costs and Full-Time Equivalent (FTE) staff required. Each program's present value of water savings and utility costs as well as cost of water saved can be found in Appendix F.

Table 6-1. *Comparison of Program Benefit-Cost Ratios, Average Costs, and FTE Requirements*

Conservation Program	Water Utility Benefit-Cost Ratio	Average Annual Utility Costs (2026-2050)	Full-Time Equivalent Staff Required (2030)
Program A with Plumbing Code	1.08	$415,300	4.5
Program B with Plumbing Code	1.04	$446,100	6
Program C with Plumbing Code	0.99	$486,700	6

Table 6-2 shows the water system demands for the City of Santa Barbara. Demand is shown in acre-feet in 5-year increments over the modeling period. Table 6-2 and Figure 6-2 include demand with and without plumbing code, and projected demand with plumbing codes and three active conservation program scenarios.

Table 6-2. *City of Santa Barbara Potable Water System Demands in AFY for Years 2030-2050*

	2030	2035	2040	2045	2050
Baseline Demands	10,539	10,774	10,927	11,029	11,133
Plumbing Code Savings	188	304	379	450	500
Demands with Plumbing Code Savings	10,351	10,470	10,547	10,579	10,633
Conservation Program A Savings	402	426	433	455	468
Demands with Plumbing Code and Conservation Program A Savings	9,949	10,044	10,105	10,124	10,166
Conservation Program B Savings	402	438	459	472	484
Demands with Plumbing Code and Conservation Program B Savings	9,949	10,031	10,088	10,107	10,149
Conservation Program C Savings	405	454	477	490	503
Demands with Plumbing Code and Conservation Program C Savings	9,947	10,016	10,070	10,089	10,131

Figure 6-2 presents historical and projected water demand in AFY given multiple scenarios. Plumbing code elements include current local, state, and federal plumbing code standards for retrofits of items such as toilets, urinals, showerheads, faucets, and clothes washers.

Figure 6-2. *City of Santa Barbara Historical and Projected Demand*

All line types shown in the legend are presented in the graph. Program B and Program C demand scenarios are close in value and therefore may be somewhat indistinguishable in the figure.

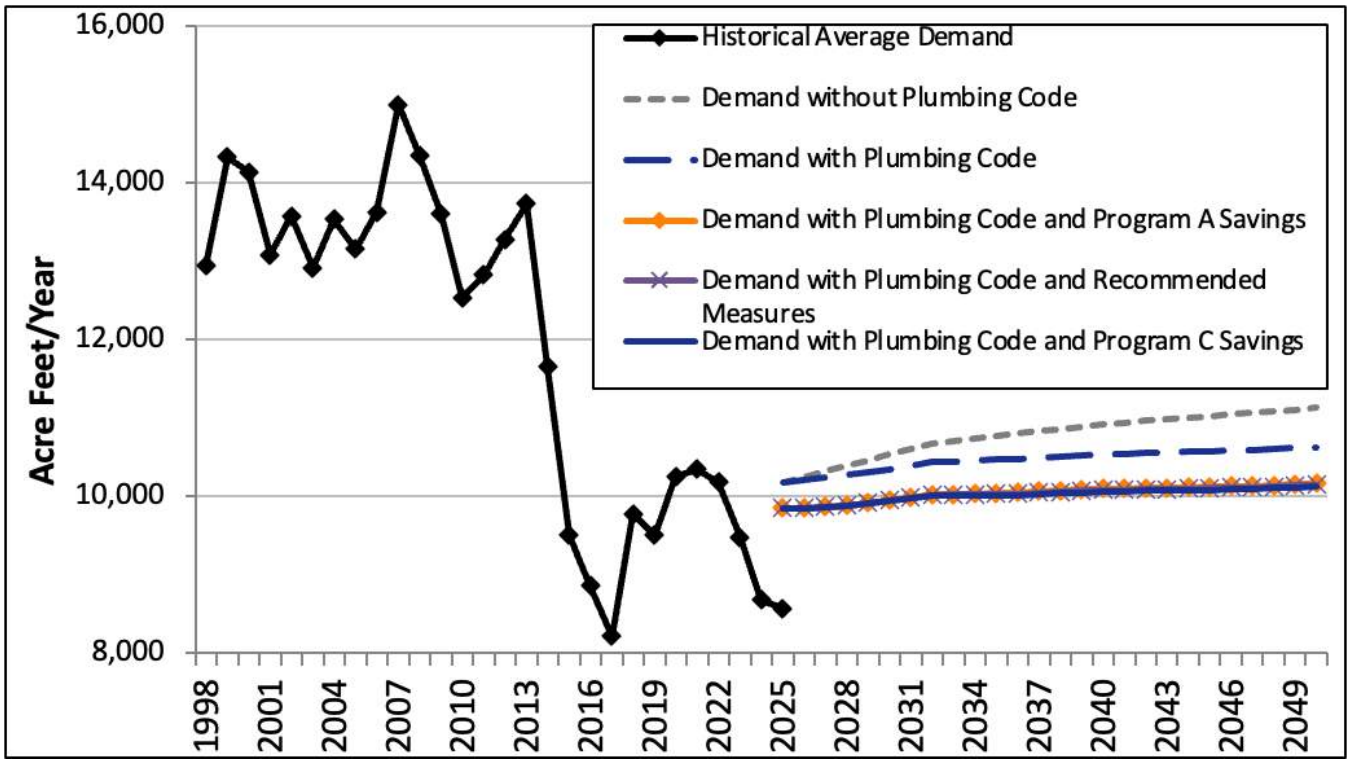
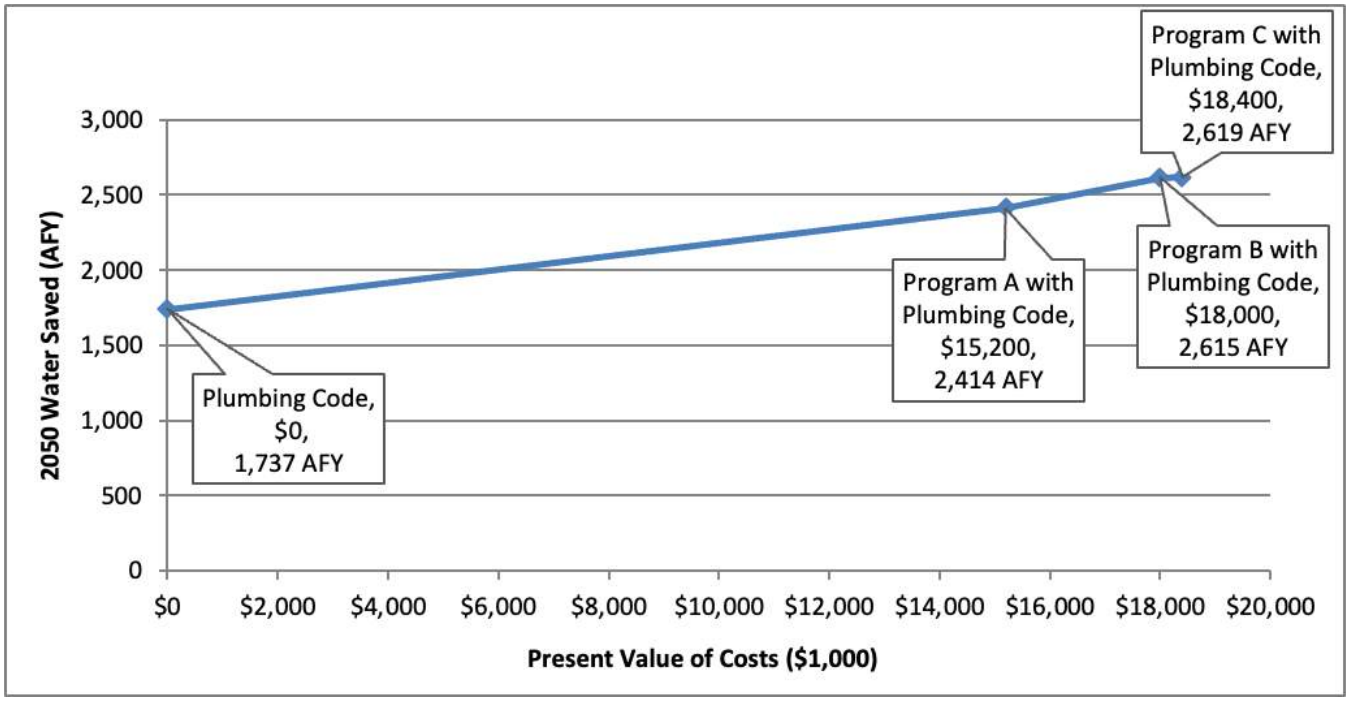


Figure 6-3 illustrates how marginal returns change as more money is spent to achieve water savings in AFY in 2050. A cost-effectiveness curve displays the results of the present value of each program's costs versus the cumulative water savings at the end of the planning period, as the curve flattens out more expenditure is needed to get less savings. This curve is helpful in determining how far to push the "conservation envelope" as the point of diminishing economic returns is evident.

Figure 6-3. *Present Value of Utility Costs Versus Water Saved in 2050*



6.2 Selected/Recommended Program

To achieve continued water conservation savings, comply with new Regulation and state reporting requirements, incorporate equity into program design, and maintain water use reductions, the City has elected to implement Program B. Of all the measures evaluated, those in Program B were chosen for the following reasons:

- Alignment with the One Water Santa Barbara guiding principle to improve local water supply reliability by diversifying the supply portfolio and using water efficiently.
- Addresses recommendations from the Affordability Report (Alliance for Water Efficiency, 2024) that incorporate equity considerations for the conservation program through inclusion of two new measures that directly address equity concerns
- Expansion of existing efforts to meet state-mandated targets and aggregate water use objectives.
- Result in a long-term plan that models a cost-effective means to manage water supplies.

Program B includes 16 of the measures evaluated in this planning effort and represents a robust, forward-looking program with a favorable benefit-cost ratio. This Recommended Program (Program B) is the most comprehensive option that best meets the City's current program objectives. Its measures are likely to be implemented, eligible for funding, and well-suited for outside partnerships. The Recommended Program provides a broad range of customer benefits in a more equitable manner, incorporates recommendations from the 2024 Affordability Report, and aligns with Regulation requirements. The Recommended Program has a benefit-cost ratio of 1.04 and is estimated to achieve 984 AFY in water savings by 2050.

7. Conclusions and Next Steps

Current conditions have resulted in the City to choosing Program B as the Recommended Program for implementation. However, water use is very dynamic and responds to changes in population, economy, weather, efficiency of devices, and types of industry. In the future, as the community evolves and water use patterns and weather change, the City may adjust implemented measures, and measure targets and schedules. This may include expanding upon, or scaling back, various program components and measures to increase efficiency, improve cost-effectiveness, adopt or adjust to better technology or methods, or adjust to budget and staffing parameters. Whether additional measures become necessary is dependent on several factors, including potential future drought conditions, compliance with the annual aggregate water use objectives as provided by the state, and the City's ability to support new and more innovative programs.

With clearly defined individual conservation measures as well as calculable water saving objectives and customer target goals, the City has quantifiable performance objectives that can be tracked on both an individual conservation measure level and an overall program level.

7.1 Selected Program Estimated Water Savings and Budget

In conjunction with plumbing codes, the Recommended Program saves 9% of projected demand in 2050. From the utility standpoint, the average cost of water saved for the Recommended Program is $719 per AF, which is less than the avoided cost of water at $1,078 per AF. This program has the potential to reduce per capita water use in a very cost-effective manner.

7.2 Implementation

The City will continue to monitor conservation program performance by tracking participation levels, implementation progress, and measure effectiveness over time. Table 7-1 summarizes the modeled utility costs of implementing the Recommended Program through 2050, while the discussion that follows describes the associated staffing needs and factors that may influence future costs.

The City will also submit annual reports to the State Board, five-year updates of the Water Management Plan submitted to the US Bureau of Reclamation, and five-year updates of the Urban Water Management Plan to the CA Department of Water Resources, among other efforts as described in the following subsections. Additionally, progress on the demand management measures is tracked quarterly and annually through performance measures.

7.2.1 Tracking and Monitoring

The City will continue to monitor progress and track the level of participation and effectiveness of conservation measures through the following:

- Prepare an annual performance measure plan in concert with the budget planning process.
- Store and manage measure participation, cost, and other data to gauge successes and areas that need improvement. Consider establishing data best practices as part of this tracking effort so that participation tracking can integrate with AMI data, such as to estimate water savings from measure participation.
- Review Plan goals in the DSS Model annually and update measure participation or other elements that are refined through experience.
- Track water use annually relative to the City's Urban Water Use Objective to ensure the City remains on track for compliance . Monitoring UWUO progress annually will allow the City to identify potential gaps early and provide sufficient time to adjust program strategies, ramp up conservation efforts, or revise measures and participation targets as needed.
- Monitor equity outcomes using GIS-based analysis by leveraging the demographic and spatial analysis completed as part of the Affordability Report. This approach can help evaluate whether conservation measures that include equity considerations are successfully reaching low-income customer groups. The City's participation in the Alliance for Water Efficiency *"Characterizing Water Use in Low-Income Households Seeking Bill Pay Assistance"* study is also expected to provide additional insights into customer behavior and program accessibility, which can help refine measure offerings and outreach strategies to improve equitable participation.
- Expand the use of AMI data to inform program targeting and evaluation. AMI data can help identify customers with water use patterns associated with higher conservation potential such as high seasonal irrigation demand and persistent high use, which can inform targeted outreach and improve the effectiveness of certain conservation measures. As equity metrics and best practices for equitable conservation planning continue to evolve, AMI-based analyses can also be integrated with demographic and spatial data to support more refined and data-driven program targeting.
- Track costs and staff time requirements to implement the conservation program. The new Regulations and other state reporting requirements demand significant staff time for continued compliance. Tracking staff time to complete required reporting and Regulation activities as well as time to implement programs will help inform future staffing decisions and allow the City to respond more effectively to changes to the conservation program (for example, if participation targets are increased as a response to higher demands materializing in future years).
- Track water use to ensure the Plan is on track to meet water use reduction goals. Use the input from City staff and the annual work planning process as the forum to amend the Plan, budget, staffing, schedule, and so forth to stay on track.

Figure 7-1. *Conservation Program Tracking & Monitoring*

7.2.2 Implementation Costs

Table 7-1 depicts the modeled utility expense to implement the Recommended Program through 2050. Expenses for each measure are calculated from device and material expenses and do not include staffing costs (staffing requirements are noted in the following subsection). In addition, individual measure cost is based on target implementation metrics. For example, some measures are based on a percentage of accounts and therefore may grow or decline as the customer populations change, while others are based on the number of accounts and may therefore remain steady.

It is anticipated that the current participation in the City's conservation program measures will continue to increase modestly through 2030 (when new measures are modeled to come online). The higher modeled projected costs in 2028 and 2029 are mostly driven by participation estimates for lawn replacement rebates in the commercial customer category, which are modeled to decrease in 2030 when compliance with the statewide nonfunctional turfgrass watering ban is anticipated to be largely complete.[17]

The costs presented in this table are programmatic and measure-specific expenses for the water conservation program. There are broader allocated administrative costs associated with running the conservation program that are not included in the costs below. It is estimated that a 24% additional expenditure is required to meet City allocated and administrative costs each year.

17 Information about California Assembly Bill 1572 can be found at: https://legiscan.com/CA/text/AB1572/id/2814825

Table 7-1. *Modeled Utility Costs for the Recommended Program*

Fiscal Year	Utility Cost
Projected Budget Provided by City	
2026	$343,000
Proposed Budget Provided by City	
2027	$346,000
Modeled Projected Costs	
2028	$457,000
2029	$426,000
2030	$429,000
2031	$426,000
2032	$450,000
2033	$450,000
2034	$451,000
2035	$452,000
2036	$453,000
2037	$454,000
2038	$454,000
2039	$455,000
2040	$455,000
2041	$436,000
2042	$437,000
2043	$437,000
2044	$438,000
2045	$438,000
2046	$439,000
2047	$439,000
2048	$440,000
2049	$440,000
2050	$441,000

Notes: *Costs are rounded to the nearest thousand dollars, a 6.1% nominal interest rate was used to estimate present value costs.*

7.2.3 Staffing Requirements

This section summarizes the staff time requirements needed to achieve the key objectives driving this Plan update: maintaining compliance with new regulatory requirements and annual reporting obligations, integrating equity considerations into the conservation program, and sustaining long-term water conservation savings.

7.2.4 Overview

The City is currently running a conservation program with 4.5 FTE staff (one full-time Water Conservation Analyst and other positions whose role includes support for water conservation activities). It is recommended that the City increase the FTE water conservation team by at least 1.5 staff with water conservation experience (for a total of 5.5 FTEs by year 2030 and 6 FTEs by 2032) to implement the Recommended Program, address continued Regulation compliance and annual state reporting requirements, and implement the recommendations from the Affordability Report.

7.2.5 Implementing Affordability Report Recommendations

Implementing the recommendations from the Affordability Report will require significant coordination, outreach, and program administration. In addition, engaging households often requires trusted community partners, language-accessible outreach, and hands-on support for programs such as WaterSmart enrollment, conservation education, or direct-install efficiency upgrades. Developing and maintaining these partnerships, while also administering potential programs such as leak repair services or direct-install fixture replacements, would require dedicated staff capacity. As outlined in the Affordability Report, it is estimated that approximately one additional full-time equivalent position would be needed to effectively implement the remaining Affordability Report recommendations and support long-term community engagement in those programs.

7.2.6 Implementing the Recommended Program and Activities for Continued Regulation Compliance

As part of the gap analysis conducted to assess the City's compliance with the new Regulation, staff time requirements for annual reporting and upcoming requirements (such as CII MUMs, CII Best Management Practices, AB 1572, and SAFER reporting) were estimated in collaboration with the City. Compliance activities are estimated to require approximately 350 staff hours in 2027, declining slightly to about 300 hours annually thereafter.

The Recommended Program was developed using historical participation data to estimate achievable targets. The program includes two additional equity-focused measures: the leak repair rebate and the plumber-initiated high efficiency toilet retrofit program, which are intended to better reach customers facing financial and structural barriers. These measures are estimated to require an additional 40-60 staff hours annually to administer (at the modeled participation rates) and are assumed to begin in 2030, when improved data from Affordability Report recommendation implementation and enhanced tracking can support more refined targeting. However, this additional staff time to administer the new measures assumes the measures have been established and does not model the staff time required to create them such as outreach, internal coordination, setting up administrative protocols, and other required activities to establish the systems and processes to run the measures. Therefore, these estimates assume participation rates that are conservative, time requirements per participant that are conservative, and do not include time for increased outreach or community coordination. Therefore, these staff time estimates can be significantly higher. In combination, implementation of the Recommended Program and ongoing compliance efforts is projected to require approximately 0.5 FTE by 2032, with potential increases as participation grows and programs evolve.

However, staffing needs arise earlier due to near-term compliance demands. With compliance activities alone requiring approximately 350 hours in 2027, additional capacity is needed to avoid overextending existing staff while maintaining and advancing program priorities. To support regulatory compliance and implementation of Affordability Report recommendations, as well as implement the Recommended Program, it is recommended that one full-time equivalent (1.0 FTE) position be added by 2030. This role would support reporting, coordination, and program administration, while progressing the implementation of Affordability Report recommendations as mentioned above. As efforts to implement Affordability Report recommendations mature and data improves, staffing can be scaled accordingly, with an estimated additional 0.5 needed by 2032 to support full program implementation.

In summary, staffing recommendations to meet program needs and implement the Affordability Study recommendations would be phased in the following way:

- Hire an additional FTE by FY 2030 (consider hiring in FY 2028). This position would begin the implementation of Affordability Report recommendations, while supporting Regulation reporting requirements. It is anticipated that launching the two new measures in the recommended program will require significant staff time and iteration, and this position can synergistically work on the relationship-building activities recommended in the Affordability Report while also working to establish the two new measures.
- Hire an additional half FTE by 2032 (consider hiring in FY 2030). This position would support the implementation of the new measures and reporting requirements. The FTE and half FTE duties and workload can continue to be synergistic as data found through the implementation of Affordability Report recommendations will likely inform changes to conservation measures that can be implemented by the FTE and half FTE.

7.2.7 Next Steps

In addition to conducting Recommended Program implementation as described in the previous section, some next steps are as follows:

- Review program staff needs and hire staff accordingly to adequately support program needs. Refine as needed around budget, water savings needs, staff capabilities, and community interests.
- Prioritize measures for implementation, with the highest priority for implementation given to those that contribute the most to meeting water saving targets and/or can be implemented with relative ease. Key questions to direct action include:
  - What level of support will be required from conservation staff to run the selected measures?
  - What other support is needed (e.g., outsourced support or other sources of funding) to run these programs?
- Develop implementation plans that describe in detail how to implement each conservation measure.
- Prepare annual performance measures in concert with the budget process.
- Identify potential partnership opportunities and form collaborations, applying for grants where appropriate.
- Continue to collect and analyze measure participation, costs, and other data to gauge successes and areas that need improvement.

7.3 Conclusions

The following is a summary of the Water Conservation Strategic Plan analysis findings:

- Conservation is one of the least expensive means of meeting future water supply needs for the area. The avoided cost of water was estimated to be $1,078/AF, while the average cost of water saved for the Recommended Program is $719/AF. Implementation of the recommended conservation measures should reduce per capita water use and has the potential to defer the need for further infrastructure expansion. While the conservation actions identified can have a significant cost (annual utility costs for the Recommended Program range from $414,000 to $465,000 rounded to the nearest thousand dollars), the cost of not participating in conservation and having to address increased demands through engineering solutions is higher. Furthermore, with climate change, long-term drought, and environmental restrictions on the delivery of imported water, additional water supplies may not be available to meet future increases in demand.
- The City is currently in compliance with all components of the *"Making Water Conservation a California Way of Life"* Regulation. This Plan incorporates staffing costs for continued compliance activities and presents a suite of measures that are estimated to maintain water conservation achievements for continued compliance with water use objectives.
- Equity is a main driver in this Plan update, and the recommendations from the 2024 Affordability Report prepared by the Alliance for Water Efficiency are integrated into the Recommended Program .
- The availability of AMI data presents the City with opportunities to enhance conservation measure outreach efforts and targets, as well as potential water savings estimates for future planning efforts. As equity metrics and more information about customers is made available, such as through the AWE *"Characterizing Water Use in Low-Income Households Seeking Bill Pay Assistance"* study, the City can leverage its AMI data to inform its conservation program.
- Through the DSS Model analysis, the City identified fixture costs, applicable customer classes, time period of implementation, measure life, administrative costs, end uses, end-use savings per replacement, and a target number or percentage of accounts per program year. This thorough analysis is used in the 2025 City of Santa Barbara Urban Water Management Plan and additional Santa Barbara planning documents.
- Continuing water conservation efforts appears to be a feasible and cost-effective means of:
  - Being more sustainable within existing water supplies.
  - Meeting the water use objectives outlined in the *"Making Conservation a California Way of Life"* Regulation as well as complying with the CII Performance Measures.
  - Measuring, tracking, and reducing non-revenue water losses as outlined in SB 555 and to stay in compliance with the Water Loss Standard of the Regulation.
- Approximately 72% of the City's service area water use is associated with residential water use. Consequently, residential conservation programs will produce the most savings. At 22% of overall water use, the City's service area does not include extensive commercial activity. Therefore, the conservation potential for the commercial sector is not as high.
- Based on the analysis, the City has selected to implement Recommended Program (Program B), with 16 measures, a utility benefit-cost ratio of 1.04 and a cost of water saved of $719 per AF, an average annual next 5-year utility cost of $438,000, and an average annual FTE staff of 6 (1.5 more FTE than currently needed).

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Appendix A – Performance Measures Report

FY2025 Performance Measures Results

Relevant Objectives from Program 4612 (Water Supply & Conservation) and Program 4611 (Meter Services)

Goal	FY25 Target	FY25 Qtr1 Actual	FY25 Qtr2 Actual	FY25 Mid-Year Actual	FY25 Qtr3 Actual	FY25 Qtr4 Actual	FY25 Year-End Actual
Track digital outreach efforts in City publications (Water e-newsletter, new customer e-newsletters, etc.).	50% Open Rate	52%	61%	57%	53%	62%	57%
Number of plans reviewed for conformance with Water Efficiency Landscape Standards for Water Conservation	100	52	62	114	68	59	241
Number of plans reviewed for conformance with individual water metering requirements	100	48	58	106	91	69	266
Number of customer support interactions for WaterSmart/conservation	3,500	1,128	907	2,035	1,000	948	3,983
Residential gallons per capita per day (GPCD) (Average over time period)	70 or less	63	66	61	55	58	58
Promote public education of the City's water resources by providing tours of Desal and EEWWTP	10	8	2	10	12	9	31
Promote public education of the City's water resources by providing presentations to community	3	2	1	3	2	1	6
Percent of accounts registered for WaterSmart	10%	42.9%	48.2%	48.2%	50%	55%	55%
(accounts registered/total of accounts eligible for WaterSmart = percentage)		13,198/30,768	14,871/30,853	14,871/30,853	15,472/30,884	16,865/30,884	16,865/30,884
AMI read rate success maintained above 98%	98%	98.8%	99.3%	99.1%	99.38%	99.24%	99.24%
Percent of Waste of Water (WoW) investigated	100%	100%	100%	100%	100%	100%	100%
(WoW investigated/total WoW reports = percentage)		10/10	9/9	19/19	11/11	10/10	40/40

Appendix B – DSS Model Overview

DSS Model Overview – The Least Cost Planning Decision Support System Model (DSS Model) is used to prepare long-range, detailed demand projections. The purpose of the extra detail is to enable a more accurate assessment of the impact of water efficiency programs on demand and to provide a rigorous and defensible modeling approach necessary for projects subject to regulatory or environmental review.

Originally developed in 1999 and continuously updated, the DSS Model is an "end-use" model that breaks down total water production (water demand in the service area) to specific water end uses, such as plumbing fixtures and appliances. The model uses a bottom-up approach that allows for multiple criteria to be considered when estimating future demands, such as the effects of natural fixture replacement, plumbing codes, and conservation efforts. The DSS Model may also use a top-down approach with a utility-prepared water demand forecast.

Demand Forecast Development and Model Calibration – To forecast urban water demands using the DSS Model, customer demand data is obtained from the water agency being modeled. Demand data is reconciled with available demographic data to characterize water usage for each customer category in terms of number of users per account and per capita water use. Data is further analyzed to approximate the split of indoor and outdoor water usage in each customer category. The indoor/outdoor water usage is further divided into typical end uses for each customer category. Published data on average per capita indoor water use and average per capita end use is combined with the number of water users to calibrate the volume of water allocated to specific end uses in each customer category. In other words, the DSS Model checks that social norms from end studies on water use behavior (e.g., flushes per person per day) are not exceeded or drop below reasonable use limits.

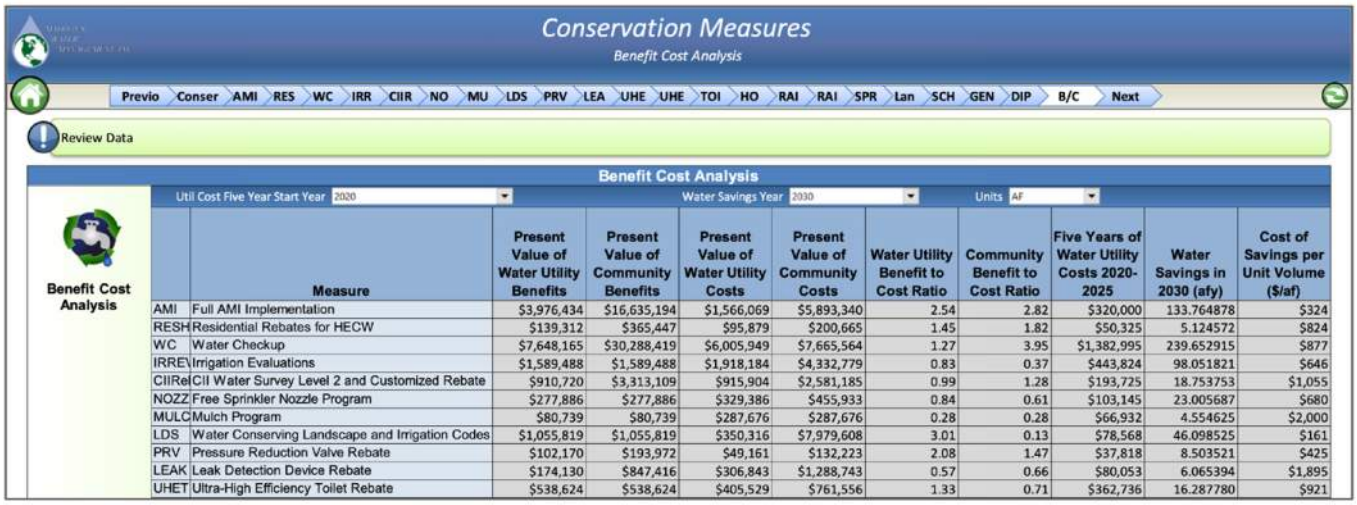
Passive Water Savings Calculations – The DSS Model is used to forecast service area water fixture use. Specific end-use type, average water use, and lifetime are compiled for each fixture. Additionally, state and national plumbing codes and appliance standards are modeled by customer category. These fixtures and plumbing codes can be added to, edited, or deleted by the user. This process yields two demand forecasts, one with plumbing codes and one without plumbing codes.

Figure B-1. *DSS Model Main Page*

Active Conservation Measure Analysis Using Benefit-Cost Analysis – The DSS Model evaluates active conservation measures using benefit-cost analysis with the present value of the cost of water saved ($/Million Gallons or $/Acre-Feet). Benefits are based on savings in water and wastewater facility operations and maintenance (O&M) and any deferred capital expenditures. The figures on the following page illustrate the processes for forecasting conservation water savings, including the impacts of fixture replacement due to existing plumbing codes and standards.

Model Use and Validation – The DSS Model has been used for over 20 years for practical applications of conservation planning in over 300 service areas representing 60 million people, including extensive efforts nationally and internationally in Australia, New Zealand, and Canada.

Figure B-2. *Sample Benefit-Cost Analysis Summary*



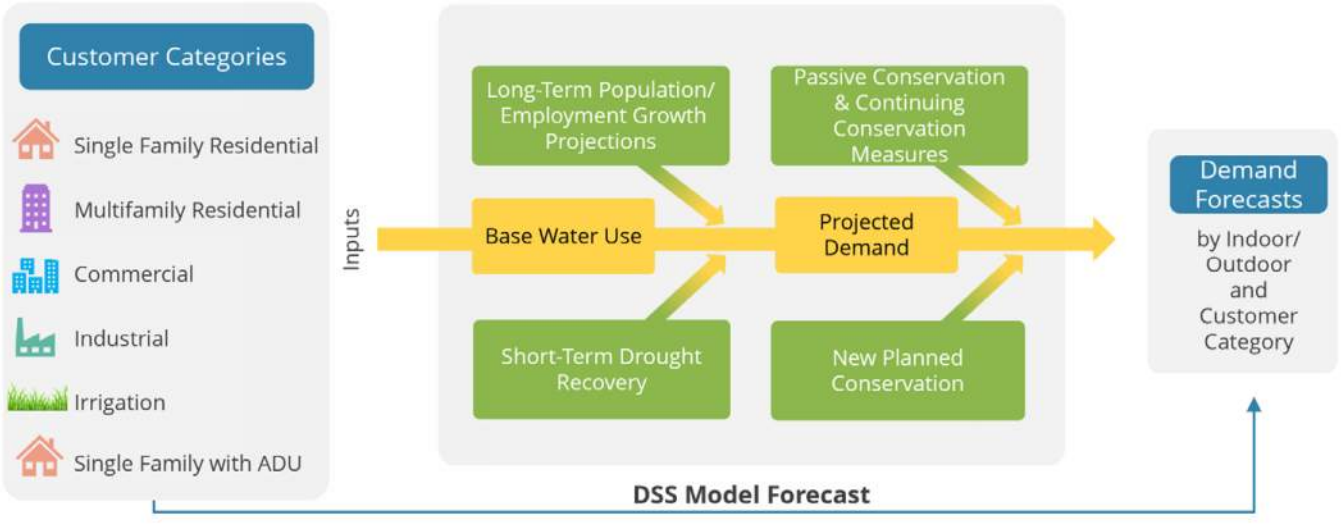
	Measure	Present Value of Water Utility Benefits	Present Value of Community Benefits	Present Value of Water Utility Costs	Present Value of Community Costs	Water Utility Benefit to Cost Ratio	Community Benefit to Cost Ratio	Five Years of Water Utility Costs 2020-2025	Water Savings in 2030 (afy)	Cost of Savings per Unit Volume ($/af)
AMI	Full AMI Implementation	$3,976,434	$16,635,194	$1,566,069	$5,893,340	2.54	2.82	$320,000	133.764878	$324
RESH	Residential Rebates for HECW	$139,312	$365,447	$95,879	$200,665	1.45	1.82	$50,325	5.124572	$824
WC	Water Checkup	$7,648,165	$30,288,419	$6,005,949	$7,665,564	1.27	3.95	$1,382,995	239.652915	$877
IRRE	Irrigation Evaluations	$1,589,488	$1,589,488	$1,918,184	$4,332,779	0.83	0.37	$443,824	98.051821	$646
CIIRe	CII Water Survey Level 2 and Customized Rebate	$910,720	$3,313,109	$915,904	$2,581,185	0.99	1.28	$193,725	18.753753	$1,055
NOZZ	Free Sprinkler Nozzle Program	$277,886	$277,886	$329,386	$455,933	0.84	0.61	$103,145	23.005687	$680
MULC	Mulch Program	$80,739	$80,739	$287,676	$287,676	0.28	0.28	$66,932	4.554625	$2,000
LDS	Water Conserving Landscape and Irrigation Codes	$1,055,819	$1,055,819	$350,316	$7,979,608	3.01	0.13	$78,568	46.098525	$161
PRV	Pressure Reduction Valve Rebate	$102,170	$193,972	$49,161	$132,223	2.08	1.47	$37,818	8.503521	$425
LEAK	Leak Detection Device Rebate	$174,130	$847,416	$306,843	$1,288,743	0.57	0.66	$80,053	6.065394	$1,895
UHET	Ultra-High Efficiency Toilet Rebate	$538,624	$538,624	$405,529	$761,556	1.33	0.71	$362,736	16.287780	$921

Figure B-3. *DSS Model Analysis Locations in the U.S.*

The California Water Efficiency Partnership (CalWEP) has peer reviewed and endorsed the model since 2006. It is offered to all CalWEP members for use to estimate water demand, plumbing code, and conservation program savings.

The DSS Model can use one of the following: 1) a statistical approach to forecast demands (e.g., an econometric model); 2) a forecasted increase in population and employment; 3) predicted future demands; or 4) a demand projection entered into the model from an outside source. For the City, baseline demand was developed based on deriving a non-drought year average year demand per account factor for each customer category and projecting each customer category's account growth based on either population growth or commercial growth projections. The following figure presents the flow of information in the DSS Model Analysis.

Figure B-4. *DSS Model Analysis Flow*



Appendix C – Projected Water Demands With and Without Plumbing Code Savings

This section presents baseline water demands with and without the plumbing code; details regarding the national and state plumbing codes; and key inputs and assumptions used in the DSS Model, which is used to prepare long-range, detailed demand projections. This rigorous modeling approach is especially important if the project will be subject to regulatory or environmental review.

C.1 Projected Baseline Demand

The assumptions having the most dramatic effect on future demands are: 1) the natural replacement rate of fixtures; 2) how residential or commercial future use is projected; and 3) the percent of estimated real water losses. As described in the previous section, baseline customer category water use was determined using 2021–2024 historical monthly water use as the data available for this range of years represents more recent demand trends after the 2014-2019 drought and the COVID-19 Pandemic. After several demand scenarios were explored, City staff determined that the projected baseline water demand would represent demands with plumbing code and the recommended program (Program B). As part of the development of the 2025 Urban Water Management Plan, the City reviewed a total of 7 different scenarios. The scenarios included faster and slower housing and employment growth rates, demand creep, climate change, and water rates impacts.

C.2 Estimated Plumbing Code Savings

The DSS Model forecasts service area water fixture use. In the codes and standards part of the DSS Model, specific fixture end-use type (point of use fixture or appliance), average water use, and lifetime are compiled. Additionally, state and national plumbing codes and appliance standards for toilets, urinals, showers, and clothes washers are modeled by customer category. This approach yields two distinct demand forecasts related to plumbing code savings: 1) with plumbing codes and 2) without plumbing codes. Plumbing code measures are independent of any conservation program and are based on customers following applicable local, state and federal laws, building codes, and ordinances.

Plumbing code-related water savings are considered "passive" and reliable long-term savings and can be depended upon over time to help reduce overall system water demand. In contrast, water savings are considered "active" if a specific action unrelated to the implementation of codes and standards is taken by the water agency to accomplish conservation measure savings (e.g., offering turf replacement rebates). The DSS Model incorporates the following items as a "code," meaning that the savings are assumed to occur and therefore are "passive" savings:

- The Federal Energy Policy Act of 1992 (amended in 2005)
- California Code of Regulations Title 20 California State Law (Assembly Bill 715)
- California State Law Senate Bill 407
- 2015 California Code of Regulations Title 20 Appliance Efficiency Regulations
- 2025 CALGreen Code (effective January 1, 2026)
- Energy Conservation Standards for Residential Clothes Washers (United States Department of Energy ruling, effective July 15, 2024)

Figure C-1 conceptually describes how plumbing codes using "fixture models" are incorporated into the flow of information in the DSS Model.[1] The demand projections, including plumbing code savings, further assumes no active involvement by the water utility, and that the costs of purchasing and installing replacement equipment (and new equipment in new construction) are borne solely by the customers, occurring at no direct utility expense. The inverse of the fixture life is the natural replacement rate expressed as a percentage (i.e., 10 years is a rate of 10% per year).

1 Fixture models are used in the DSS Model to track individual plumbing devices and their water savings as they change and become more efficient over time.

Figure C-1. *DSS Model Overview Used to Make Potable Water Demand Projections*

The DSS Model makes water demand projections using a multi-level process.

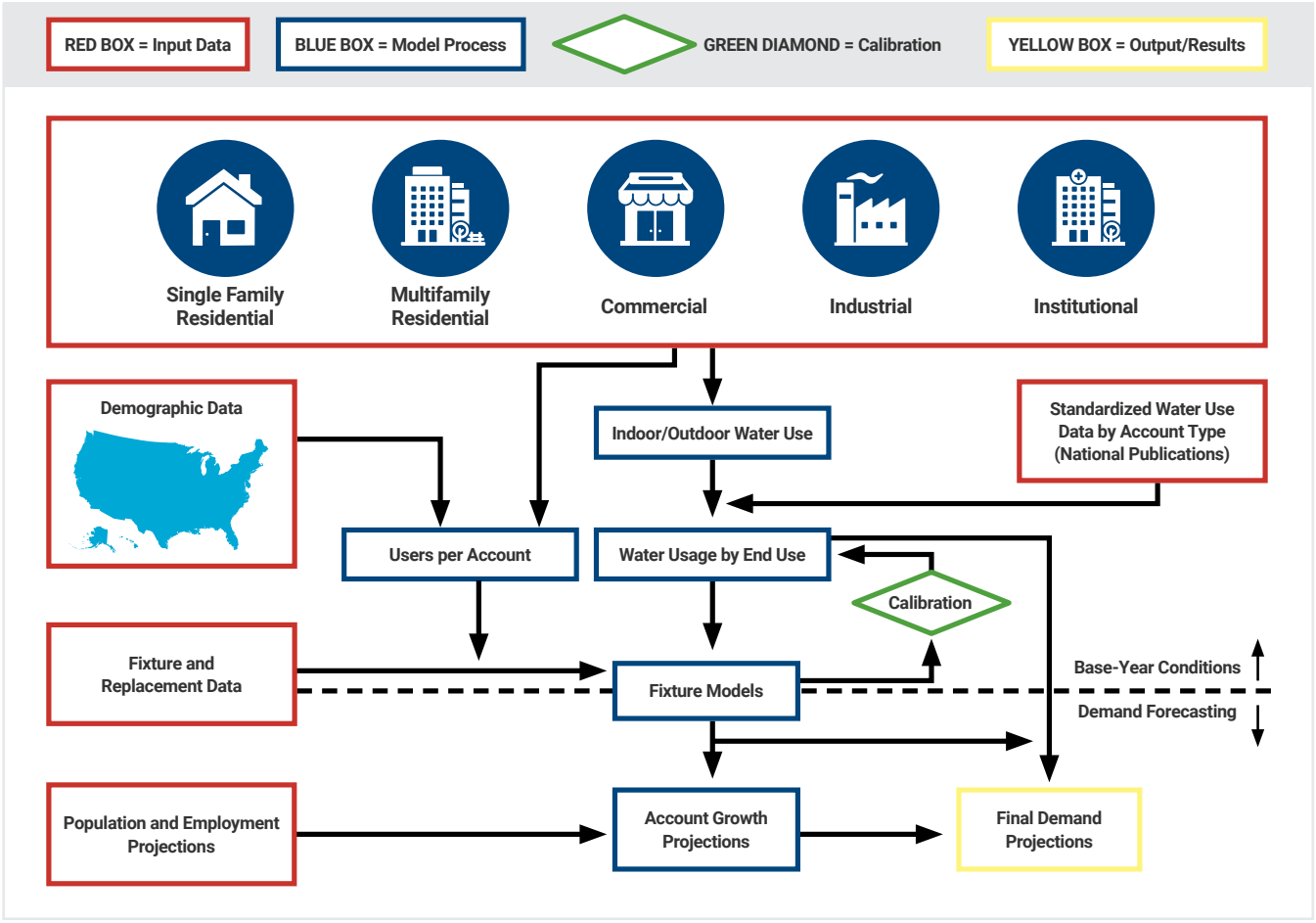
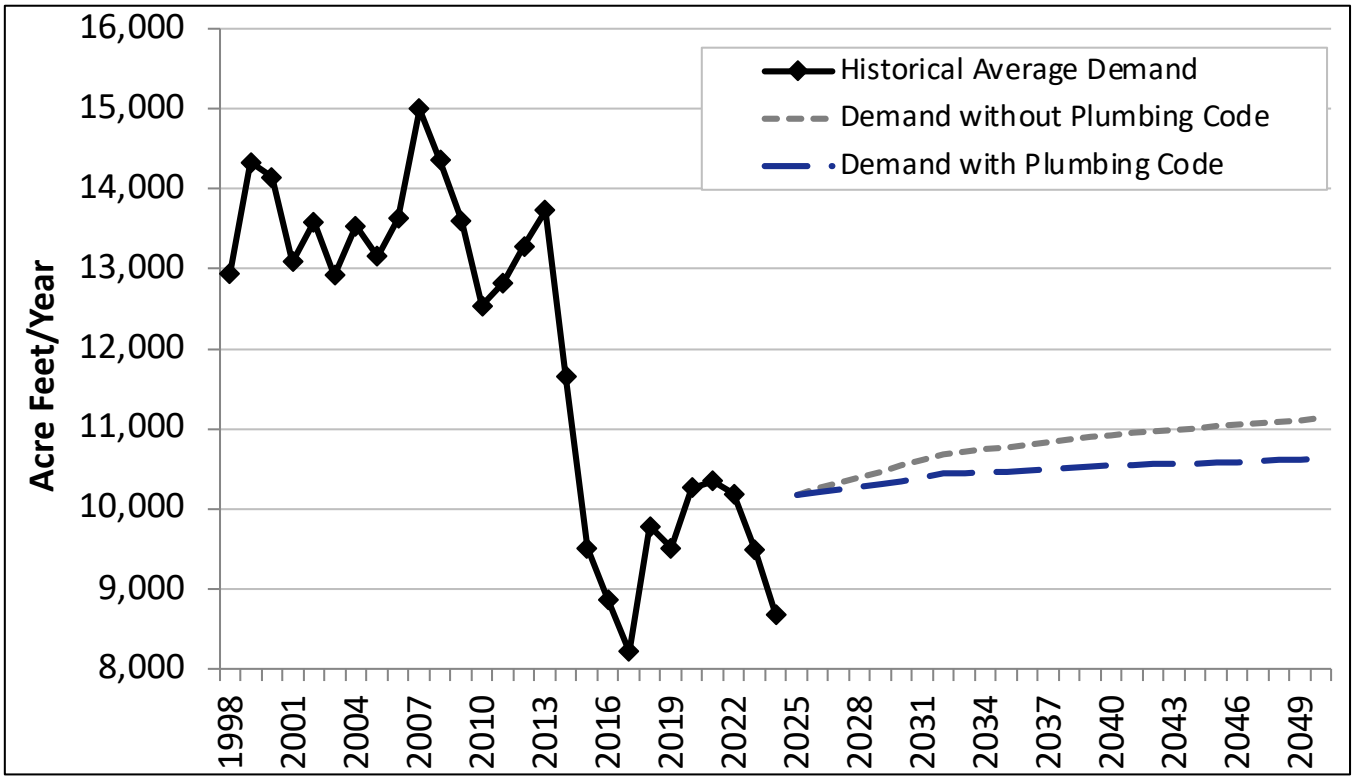


Table C-1 shows the water system demands for the City in acre-feet in 5-year increments over the 25-year modeling period (years 2025-2050), demands are presented starting in 2026. Figure C-2 illustrates demands in graphical format. Both the table and the figure include historical (baseline) demand as well as demand with and without plumbing code. While the demand projection in modeling began in 2025, this year has been omitted as at the time of writing, actual demand data for the year is available.

Table C-1. *City of Santa Barbara Potable Water System Demands in AFY for Years 2026-2050*

	2026	2030	2035	2040	2045	2050
Baseline Demands	10,252	10,539	10,774	10,927	11,029	11,133
Plumbing Code Savings	43	188	304	379	450	500
Demands with Plumbing Code Savings	10,210	10,351	10,470	10,547	10,579	10,633

Figure C-2. *City of Santa Barbara Potable Water System Demands*



C.3 National Plumbing Code

The Federal Energy Policy Act of 1992, as amended in 2005, mandates that only fixtures meeting the following standards can be installed in new buildings:

- **Toilet** – 1.6 gal/flush maximum
- **Urinals** – 1.0 gal/flush maximum
- **Showerhead** – 2.5 gal/min at 80 pounds per square inch (psi)
- **Residential faucets** – 2.2 gal/min at 60 psi
- **Public restroom faucets** – 0.5 gal/min at 60 psi
- **Dishwashing pre-rinse spray valves** – 1.6 gal/min at 60 psi
- **Clothes washers** – Integrated Water Factor (IWF) of 6.5

Replacement of fixtures in existing buildings is also governed by the Federal Energy Policy Act, which mandates that only devices with the specified level of efficiency (as shown above) can be sold as of 2006. The net result of the plumbing code is that new buildings will have more efficient fixtures and old inefficient fixtures will slowly be replaced with new, more efficient models. The national plumbing code is an important piece of legislation and must be carefully taken into consideration when analyzing the overall water efficiency of a service area.

In addition to the plumbing code, the U.S. Department of Energy regulates appliances, such as residential clothes washers, further reducing indoor water demands. Regulations to make these appliances more energy efficient have driven manufactures to dramatically reduce the amount of water these machines use. Generally, front-loading washing machines use 30-50% less water than conventional models (which are still available).

C.3.1 Clothes Washers

In this analysis, the DSS Model forecasts a gradual transition to high efficiency clothes washers (using 15 gallons or less) so that by the year 2028 that will be the only type of machine available for purchase. In addition to the industry becoming more efficient, rebate programs for washers have been successful in encouraging customers to buy more water efficient models. Given that machines last about 10 years, eventually all machines on the market will be the more water efficient models. ENERGY STAR washing machines have a water factor of 6.0 or less – the equivalent of using 3.1 cubic feet (or 23.2 gallons) of water per load. The maximum water factor for residential clothes washers under current federal standards is 9.5. The water factor equals the number of gallons used per cycle per cubic foot of capacity. Prior to the year 2000, the water factor for a typical new residential clothes washer was about 12. In March 2015, the federal standard reduced the maximum water factor for top- and front-loading machines to 8.4 and 4.7, respectively. In 2018, the maximum water factor for top-loading machines was further reduced to 6.5. For commercial washers, the maximum water factors were reduced in 2010 to 8.5 and 5.5 for top- and front-loading machines, respectively. Beginning in 2021, the maximum water factor for ENERGY STAR certified washers was 3.2 for front-loading and 4.3 for top-loading machines. In 2011, the U.S. Environmental Protection Agency estimated that ENERGY STAR washers comprised more than 60% of the residential market and 30% of the commercial market (ENERGY STAR, 2011). A new ENERGY STAR compliant washer uses about two-thirds less water per cycle than washers manufactured in the 1990s.Standards for residential clothes washers fall under the regulations of the U.S. Department of Energy. In 2018, the maximum water factor for standard top-loading machines was reduced to 6.5. Under the Energy Conservation Standards for Residential Clothes Washers (United States Department of Energy ruling, effective July 15, 2024), the minimum water efficiency ratio for standard top-loading machines (greater than 1.6 cubic feet of capacity) would be 0.57 pounds of laundry per gallon per cycle. At the time of writing (March 2026), the Department of Energy has proposed to rescind the Conservation Standards for Residential Clothes Washers.

C.3.2 Dishwashers

For residential dishwashers manufactured on or after January 1, 2010, Congress has set the maximum water use for a standard size dishwasher at 6.5 gallons per cycle and for a compact size dishwasher at 4.5 gallons per cycle. The Department of Energy has set more stringent requirements. For dishwashers manufactured on or after May 30, 2013, standard size dishwashers must not exceed 5.0 gallons per cycle and compact size dishwashers shall not exceed 3.5 gallons per cycle. Per the Amended Water Use Standards for Residential Dishwashers set by the Department of Energy, all dishwashers manufactured on or after April 23, 2027 must not exceed 3.3 gallons per cycle and 3.1 gallons per cycle for standard and compact models respectively. At the time of writing this Plan, the Department of Energy has requested comments for a proposal to rescind the water requirements established under the Amended Water Use Standards for Residential Dishwashers.

C.4 State Plumbing Code

This section describes California state codes applicable to the City's water use.

C.4.1 California State Law – AB 715

Plumbing codes for toilets, urinals, showerheads, and faucets were initially adopted by California in 1991, mandating the sale and use of ultra-low flush toilets (ULFTs) using 1.6 gpf, urinals using 1 gpf, and low-flow showerheads and faucets. AB 715 led to an update to California Code of Regulations Title 20 mandating that all toilets and urinals sold and installed in California as of January 1, 2014 must be high efficiency versions having flush ratings that do not exceed 1.28 gpf (toilets) and 0.5 gpf (urinals).

C.4.2 California State Laws – SB 407 and SB 837

SB 407 addresses plumbing fixture retrofits on resale or remodel. The DSS Model carefully considers the overlap with SB 407, the plumbing code (natural replacement), CALGreen, AB 715 and rebate programs (such as toilet rebates). SB 407 (enacted in 2009) requires that properties built prior to 1994 be fully retrofitted with water conserving fixtures by the year 2017 for single family residential houses and 2019 for multifamily and commercial properties. SB 407 program length is variable and continues until all the older high flush toilets have been replaced in the service area. The number of accounts with high flow fixtures is tracked to make sure that the situation of replacing more high flow fixtures than actually exist does not occur. Additionally, SB 407 conditions issuance of building permits for major improvements and renovations upon retrofit of non-compliant plumbing fixtures. SB 837 (enacted in 2011) requires that sellers of real estate property disclose on their Real Estate Transfer Disclosure Statement whether their property complies with these requirements. Both laws are intended to accelerate the replacement of older, low efficiency plumbing fixtures, and ensure that only high efficiency fixtures are installed in new residential and commercial buildings.

C.4.3 2019 CALGreen and 2015 CA Code of Regulations Title 20 Appliance Efficiency Regulations

Fixture characteristics in the DSS Model are tracked in new accounts, which are subject to the requirements of the 2025 California Green Building Code and 2015 California Code of Regulations Title 20 Appliance Efficiency Regulations adopted by the California Energy Commission (CEC) on September 1, 2015. The CEC 2015 appliance efficiency standards apply to the following new appliances, if they are sold in California: showerheads, lavatory faucets, kitchen faucets, metering faucets, replacement aerators, wash fountains, tub spout diverters, public lavatory faucets, commercial pre-rinse spray valves, urinals, and toilets. The DSS Model accounts for plumbing code savings due to the effects these standards have on showerheads, faucet aerators, urinals, toilets, and clothes washers.

- **Showerheads** – January 2026: 1.8 gpm
- **Wall Mounted Urinals** – January 2026: 0.125 gpf (pint)
- **Lavatory Faucets and Aerator** – January 2026: 1.2 gpm at 60 psi
- **Kitchen Faucets and Aerator** – January 2026: 1.8 gpm with optional temporary flow of 2.2 gpm at 60 psi
- **Public Lavatory Faucets** – January 2026: 0.5 gpm at 60 psi

In summary, the controlling law for toilets is Assembly Bill 715, requiring high efficiency **toilets** of 1.28 gpf sold in California beginning in 2014. The controlling law for wall-mounted urinals is the 2015 CEC efficiency regulations requiring that ultra-high efficiency pint **urinals** (0.125 gpf) be exclusively sold in California beginning January 1, 2016. This is an efficiency progression for urinals from AB 715's requirement of high efficiency (0.5 gpf) urinals starting in 2014.

Standards for r**esidential clothes washers** fall under the regulations of the U.S. Department of Energy. In 2018, the maximum water factor for standard top-loading machines was reduced to 6.5.

Showerhead flow rates are regulated under the 2015 California Code of Regulations Title 20 Appliance Efficiency Regulations adopted by the CEC, which requires the exclusive sale in California of 2.0 gpm showerheads at 80 psi as of July 1, 2016 and 1.8 gpm showerheads at 80 psi as of July 1, 2018. The WaterSense specification applies to showerheads that have a maximum flow rate of 2.0 gpm or less. This represents a 20% reduction in showerhead flow rate over the current federal standard of 2.5 gpm, as specified by the Energy Policy Act of 1992.

Faucet flow rates likewise have been regulated by the 2015 CEC Title 20 regulations. This standard requires that the residential faucets and aerators manufactured on or after July 1, 2016 be exclusively sold in California at 1.2 gpm at 60 psi; and public lavatory and kitchen faucets/aerators sold or offered for sale on or after July 1, 2016 be 0.5 gpm at 60 psi and 1.8 gpm at 60 psi (with optional temporary flow of 2.2 gpm), respectively. Previously, the 2010 California Green Building Code had regulated all faucets at 2.2 gpm at 60 psi.

C.5 Key Baseline Potable Demand Inputs, Passive Savings Assumptions, and Resources

The following table presents the key assumptions and references that are used in the DSS Model in determining projected demands with plumbing code savings.

Table C-2. *List of Key Assumptions*

Parameter	Model Input Value, Assumptions, and Key References
Model Start Year for Analysis	2025
Water Demand Factor Year (Base Year)	2021-2024
Population Projection Source	2020 Census Data, Santa Barbara County Association of Governments Regional Growth Forecast 2050 and the Mission Canyon community plan.
Employment Projection Source	California Employment Development Department Santa Barbara County Association of Governments Regional Growth Forecast
Avoided Cost of Water	The City's estimated average water production cost is $1,078/AF including treatment, energy, and transport costs. Water production costs are based on FY 2024 variable costs including the following supply sources: Cachuma, Gibraltar/Mission Tunnel, Cachuma carryover/MWD, groundwater, State Water, banked water/ water purchases, existing desalination, and expanded desalination.

Potable Water System Base Year Water Use Profile					
Customer Categories	**Start Year Accounts**	**Total Water Use Distribution**	**Demand Factors (gpd/acct)**	**Indoor Use %**	**2025 Modeled Residential Indoor Water Use (GPCD)**
Single Family	16,712	43.1%	207	57%	45
Multifamily	6,731	27.1%	323	83%	40
Commercial	2,745	20.2%	591	69%	N/A
Industrial	51	1.9%	2,917	57%	N/A
Irrigation (Potable)	900	6.2%	553	0%	N/A
Single Family with ADU	431	1.6%	295	58%	42
Total/Avg	**27,627**	**100%**	**N/A**	**74%**	**N/A**

Table C-3. *Key Assumptions Resources*

Parameter	Resource
Residential End Uses	Key Reference: California Department of Water Resources Report "California Single Family Water Use Efficiency Study," (DeOreo, 2011 – Page 28, Figure 3: Comparison of household end-uses) and AWWA Research Foundation (AWWARF) Report "Residential End Uses of Water, Version 2 - 4309" (DeOreo, 2016). Table 2-A. Water Consumption by Water-Using Plumbing Products and Appliances - 1980-2012. PERC Phase 1 Report. Plumbing Efficiency Research Coalition. 2013. Model Input Values are found in the "End Uses" section of the DSS Model on the "Breakdown" worksheet.
Non-Residential End Uses, percent	Key Reference: AWWARF Report "Commercial and Institutional End Uses of Water" (Dziegielewski, 2000 – Appendix D: Details of Commercial and Industrial Assumptions, by End Use). Santa Clara Valley Water District Water Use Efficiency Unit. "SCVWD CII Water Use and Baseline Study." February 2008. Model Input Values are found in the "End Uses" section of the DSS Model on the "Breakdown" worksheet.
Efficiency Residential Fixture Current Installation Rates	2023 U.S. Census American Community Survey (5-year estimates), Housing age by type of dwelling plus natural replacement plus rebate program (if any). Key Reference: GMP Research, Inc. (2019). 2019 U.S. WaterSense Market Penetration Industry Report. Key Reference: Consortium for Efficient Energy Model Input Values are found in the "Codes and Standards" green section of the DSS Model by customer category fixtures. Probolsky Residential Community Survey (2019). MWM Market Saturation Study (2010, Santa Barbara).
Water Savings for Fixtures, gal/capita/day	Key Reference: AWWARF Report "Residential End Uses of Water, Version 2 - 4309" (DeOreo, 2016). Key Reference: California Department of Water Resources Report "California Single Family Water Use Efficiency Study" (DeOreo, 2011 – Page 28, Figure 3: Comparison of household end-uses). WCWCD supplied data on costs and savings; professional judgment was made where no published data was available. Key Reference: California Energy Commission, Staff Analysis of Toilets, Urinals and Faucets, Report # CEC-400-2014-007-SD, 2014. Model Input Values are found in the "Codes and Standards" green section on the "Fixtures" worksheet of the DSS Model.
Non-Residential Fixture Efficiency Current Installation Rates	Key Reference: 2023 U.S. Census American Community Survey (5-year estimates), Housing age by type of dwelling plus natural replacement plus rebate program (if any). Assume commercial establishments built at same rate as housing, plus natural replacement. California Energy Commission, Staff Analysis of Toilets, Urinals and Faucets, Report # CEC-400-2014-007-SD, 2014. Santa Clara Valley Water District Water Use Efficiency Unit. "SCVWD CII Water Use and Baseline Study." February 2008. Model Input Values are found in the "Codes and Standards" green section of the DSS Model by customer category fixtures. MWM Market Saturation Study (2010, Santa Barbara).

Parameter	Resource
Residential Frequency of Use Data, Toilets, Showers, Faucets, Washers, Uses/user/day	Key Reference: AWWARF Report "Residential End Uses of Water, Version 2 - 4309" (DeOreo, 2016). Summary values can be found in the full report. Key Reference: California Energy Commission, Staff Analysis of Toilets, Urinals and Faucets, Report # CEC-400-2014-007-SD, 2014. Key Reference: Alliance for Water Efficiency, The Status of Legislation, Regulation, Codes & Standards on Indoor Plumbing Water Efficiency, January 2016. Model Input Values are found in the "Codes and Standards" green section on the "Fixtures" worksheet of the DSS Model and confirmed in each "Service Area Calibration End Use" worksheet by customer category.
Non-Residential Frequency of Use Data, Toilets, Urinals, and Faucets, Uses/user/day	Key References: Estimated based on AWWARF Report "Commercial and Institutional End Uses of Water" (Dziegielewski, 2000 – Appendix D: Details of Commercial and Industrial Assumptions, by End Use). Key Reference: California Energy Commission, Staff Analysis of Toilets, Urinals and Faucets, Report # CEC-400-2014-007-SD, 2014. Fixture uses over a 5-day work week are prorated to 7 days. Non-residential 0.5gpm faucet standards per Table 2-A. Water Consumption by Water-Using Plumbing Products and Appliances - 1980-2012. PERC Phase 1 Report. Plumbing Efficiency Research Coalition, 2012. Model Input Values are found in the "Codes and Standards" green section on the "Fixtures" worksheet of the DSS Model and confirmed in each "Service Area Calibration End Use" worksheet by customer category. East Bay Municipal Utility District – *Commercial Water Efficiency Guidebook (2025).*
Natural Replacement Rate of Fixtures (percent per year)	Residential Toilets 2%-4%
	Non-Residential Toilets 2%-3%
	Residential Showers 4% (corresponds to 25-year life of a new fixture)
	Residential Clothes Washers 10% (based on 10-year washer life). Key References: "Residential End Uses of Water" (DeOreo, 2016) and "Bern Clothes Washer Study, Final Report" (Oak Ridge National Laboratory, 1998).
	Residential Faucets 10% and Non-Residential Faucets 6.7% (every 15 years). CEC uses an average life of 10 years for faucet accessories (aerators). A similar assumption can be made for public lavatories, though no hard data exists and since CII fixtures are typically replaced less frequently than residential, 15 years is assumed. CEC, Analysis of Standards Proposal for Residential Faucets and Faucet Accessories, a report prepared under CEC's Codes and Standards Enhancement Initiative, Docket #12-AAER-2C, August 2013.
	Model Input Value is found in the "Codes and Standards" green section on the "Fixtures" worksheet of the DSS Model.
Residential Future Water Use	Increases Based on Population Growth and Demographic Forecast
Non-Residential Future Water Use	Increases Based on Employment Growth and Demographic Forecast

C.5.1 Fixture Estimates

Determining the current level of efficient fixtures in a service area while evaluating passive savings in the DSS Model is part of the standard process and is called "initial fixture proportions." MWM reconciled water efficient fixtures and devices installed within the City of Santa Barbara service area and estimated the number of outstanding inefficient fixtures.

MWM used the DSS Model to perform a saturation analysis for toilets, urinals, showerheads, faucets, and clothes washers. The process included a review of age of buildings from census data, number of rebates per device, and assumed natural replacement rates. MWM presumed the fixtures that were nearing saturation and worth analysis would include residential toilets and residential clothes washers, as both have been included in recommended conservation practices for over two decades.

In 2016, the Water Research Foundation updated its 1999 Residential End Uses of Water Study (REUWS). Water utilities, industry regulators, and government planning agencies consider it the industry benchmark for single family home indoor water use. This Plan incorporates recent study results which reflect the change to the profile of water use in residential homes including adoption of more water efficient fixtures over the 15 years that transpired from 1999 to 2016. REUWS results were combined with City historical rebate and billing data to enhance and verify assumptions made for all customer accounts, including saturation levels on the above-mentioned plumbing fixtures.

The DSS Model presents the estimated current and projected proportions of these fixtures by efficiency level within the City's service area. These proportions were calculated by:

- Using standards in place at the time of building construction.
- Taking the initial proportions of homes by age (corresponding to fixture efficiency levels).
- Adding the net change due to natural replacement.
- Adding the change due to rebate measure minus the "free rider effect."[2]

Further adjustments were made to initial proportions to account for the reduction in fixture use due to lower occupancy and based on field observations. The projected fixture proportions do **not** include any future active conservation measures implemented by the City. More information about the development of initial and projected fixture proportions can be found in the DSS Model "Codes and Standards" section.

The DSS Model is capable of modeling multiple types of fixtures, including fixtures with different designs. For example, currently toilets can be purchased that flush at a rate of 0.8 gallons per flush (gpf), 1.0 gpf or 1.28 gpf. The 1.6 gpf and higher toilets still exist but can no longer be purchased in California. Therefore, they cannot be used for replacement or new installation of a toilet. So, the DSS Model utilizes fixture replacement rates to determine what type of fixture should be used for a new construction installation or replacement. The replacement of the fixtures is listed as a percentage within the DSS Model. A value of 100% would indicate that all the toilets installed would be of one particular flush volume. A value of 75% means that three out of every four toilets installed would be of that particular flush volume. All the fixture model information and assumptions were carefully reviewed and accepted by City staff.

The DSS Model provides inputs and analysis of the number, type, and replacement rates of fixtures for each customer category (e.g., single family toilets, commercial toilets, residential clothes washing machines). For example, the DSS Model incorporates the effects of the 1992 Federal Energy Policy Act and AB 715 on toilet fixtures. A DSS Model feature determines the "saturation" of 1.6 gpf toilets as the 1992 Federal Energy Policy Act was in effect from 1992-2014 for 1.6 gpf toilet replacements. AB 715 now applies for the replacement of toilets at 1.28 gpf. Further consideration and adjustments have been made to replacement rates to account for the reduction in fixture use and fixture wear, based on field observations.

2 It is important to note that in water conservation program management the "free rider effect" occurs when a customer applies for and receives a rebate on a targeted high efficiency fixture that they would have purchased even without a rebate. In this case, the rebate was not the incentive for their purchase but a "bonus." Rebate measures are designed to target customers needing financial incentive to install the more efficient fixture.

Appendix D – DSS Model Measure Analysis, Methodology, Perspectives, and Assumptions

Throughout the planning process, the City of Santa Barbara and MWM conducted multiple meetings, primarily in an effort to complete the DSS Model, which is robust for each of the 18 measures modeled. In the model, the City identified fixture costs, applicable customer classes, time period of implementation, measure life, administrative costs, end uses, end-use savings per replacement, and a target number or percentage of accounts per program year. The robust analysis is planned to be used in further Santa Barbara planning documents such as the 2025 City of Santa Barbara Urban Water Management Plan.

D.1 Water Reduction Methodology

Each conservation measure targets a particular water use, such as indoor single family water use. Targeted water uses are categorized by water user group and by end use. Targeted water user groups include single family residential; multifamily residential; commercial, industrial, and institutional; and so forth. Measures may apply to more than one water user group. Targeted end uses include indoor and outdoor use. The targeted water use is important to identify because the water savings are generated from reductions in water use for the targeted end use. For example, a residential retrofit conservation measure targets single family and multifamily residential indoor use, and in some cases specifically shower use. When considering the water savings potential generated by a residential retrofit, one considers the water saved by installing low-flow showerheads in single family and multifamily homes.

The market penetration goal for a measure is the extent to which the product or service related to the conservation measure occupies the potential market. Essentially, the market penetration goal identifies how many fixtures, rebates, surveys, and so forth that the wholesale customer would have to offer or conduct over time to reach its water savings goal for that conservation measure. This is often expressed in terms of the number of fixtures, rebates, or surveys offered or conducted per year.

The potential for error in market penetration goal estimates for each measure can be significant because the estimates are based on previous experience, chosen implementation methods, projected utility effort, and funds allocated to implement the measure. The potential error can be corrected through reevaluation of the measure as the implementation of the measure progresses. For example, if the market penetration required to achieve specific water savings turns out to be different than predicted, adjustments to the implementation efforts can be made. Larger rebates or additional promotions are often used to increase the market penetration. The process is iterative to reflect actual conditions and helps to ensure that market penetration and needed savings are achieved regardless of future variances between estimates and actual conditions.

In contrast, market penetration for mandatory ordinances can be more predictable with the greatest potential for error occurring in implementing the ordinance change. For example, requiring dedicated irrigation meters for new accounts through an ordinance can ensure an almost 100% market penetration for affected properties.

The City is constantly examining when a measure might reach saturation. Baseline surveys are the best approach to having the most accurate information on market saturation. This was considered when analyzing individual conservation measures where best estimates were made. A market saturation study conducted in 2010 by MWM was taken into consideration to establish initial proportions and replacement rates as a more recent saturation study was not available, and discussions were held with the City regarding what the saturation best estimates were within its service area.

D.2 Present Value Analysis and Perspectives on Benefits and Costs

The determination of the economic feasibility of water conservation programs involves comparing the costs of the programs to the benefits provided using the DSS Model, which calculates the cost effectiveness of conservation measure savings at the end-use level. For example, the model determines the amount of water a toilet rebate program saves in daily toilet use for each single family account.

Present value analysis using present day dollars and a real discount rate of 3% is used to discount costs and benefits to the base year. From this analysis, benefit-cost ratios of each measure are computed. When measures are put together in programs, the model is set up to avoid double counting savings from multiple measures that act on the same end use of water. For example, multiple measures in a program may target toilet replacements. The model includes assumptions to apportion water savings between the multiple measures.

Economic analysis can be performed from several different perspectives, based on which party is affected. For planning water use efficiency programs for utilities, perspectives most commonly used for benefit-cost analyses are the "utility" perspective and the "community" perspective. The "utility" benefit-cost analysis is based on the benefits and costs to the water provider. The "community" benefit-cost analysis includes the utility benefit and costs together with account owner/ customer benefits and costs. These include customer energy and other capital or operating cost benefits plus costs of implementing the measure beyond what the utility pays.

The utility perspective offers two advantages. First, it considers only the program costs that will be directly borne by the utility. This enables the utility to fairly compare potential investments for saving versus supplying increased quantities of water. Second, revenue shifts are treated as transfer payments, which means program participants will have lower water bills and non-participants will have slightly higher water bills so that the utility's revenue needs continue to be met. Therefore, the analysis is not complicated with uncertainties associated with long-term rate projections and retail rate design assumptions. It should be noted that there is a significant difference between the utility's savings from the avoided cost of procurement and delivery of water and the reduction in retail revenue that results from reduced water sales due to water use efficiency. This budget impact occurs slowly and can be accounted for in water rate planning. Because it is the water provider's role in developing a water use efficiency plan that is vital in this study, the utility perspective was primarily used to evaluate elements of this report.

The community perspective is defined to include the utility and the customer costs and benefits. Costs incurred by customers striving to save water while participating in water use efficiency programs are considered, as well as benefits received in terms of reduced energy bills (from water heating costs) and wastewater savings, among others. Water bill savings are not a customer benefit in aggregate for reasons described previously. Other factors external to the utility, such as environmental effects, are often difficult to quantify or are not necessarily under the control of the utility. They are therefore frequently excluded from economic analyses, including this one.

The time value of money is explicitly considered. Typically, the costs to save water occur early in the planning period whereas the benefits usually extend to the end of the planning period. A long planning period of over 30 years is often used because costs and benefits that occur beyond these 30 years (beyond the year 2050 in this Plan) have very little influence on the total present value of the costs and benefits. The value of all future costs and benefits is discounted to the first year in the DSS Model (the base year) at the real interest rate of 3.01%. The DSS Model calculates this real interest rate, adjusting the current nominal interest rate (assumed to be approximately 6.1%) by the assumed rate of inflation (3.0%).

The formula to calculate the real interest rate is shown in Figure D-1 below. Cash flows discounted in this manner are herein referred to as "Present Value" sums.

Figure D-1. *Interest Rate Formula*

(nominal interest rate – assumed rate of inflation) / (1 + assumed rate of inflation)

D.3 Measure Cost and Water Savings Assumptions

Appendix E presents more detail on the assumptions and inputs used in the City's DSS Model to evaluate each water conservation measure. Assumptions regarding the following variables were made for each measure:

- **Targeted Water User Group End Use** – Water user group (e.g., single family residential) and end use (e.g., indoor or outdoor water use).
- **Utility Unit Cost** – Cost of rebates, incentives, and contractors hired to implement measures. The assumed dollar values for the measure unit costs were closely reviewed by staff and are found to be adequate for each individual measure. The values in most cases are in the range of what is currently offered by other water utilities in the region.
- **Retail Customer Unit Cost** – Cost for implementing measures that is paid by retail customers (i.e., the remainder of a measure's cost that is not covered by a utility rebate or incentive).
- **Utility Administration and Marketing Cost** – The cost to the utility for administering the measure, including consultant contract administration, marketing, and participant tracking. The mark-up is sufficient (in total) to cover conservation staff time, general expenses, and overhead.

Costs are determined for each of the measures based on industry knowledge, past experience, and data provided by the City. Costs may include incentive costs, usually determined on a per-participant basis; fixed costs, such as marketing; variable costs, such as the cost to staff the measures and to obtain and maintain equipment; and a one-time set-up cost. The set-up cost is for measure design by staff or consultants, any required pilot testing, and preparation of materials that are used in marketing the measure. Measure costs are estimated each year through 2050. Costs are spread over the time period depending on the length of the implementation period for the measure and estimated voluntary customer participation levels.

Lost revenue due to reduced water sales is not included as a cost because the water use conservation measures evaluated herein generally take effect over a long span of time. This span is sufficient to enable timely rate adjustments, if necessary, to meet fixed cost obligations and savings on variable costs such as energy and chemicals.

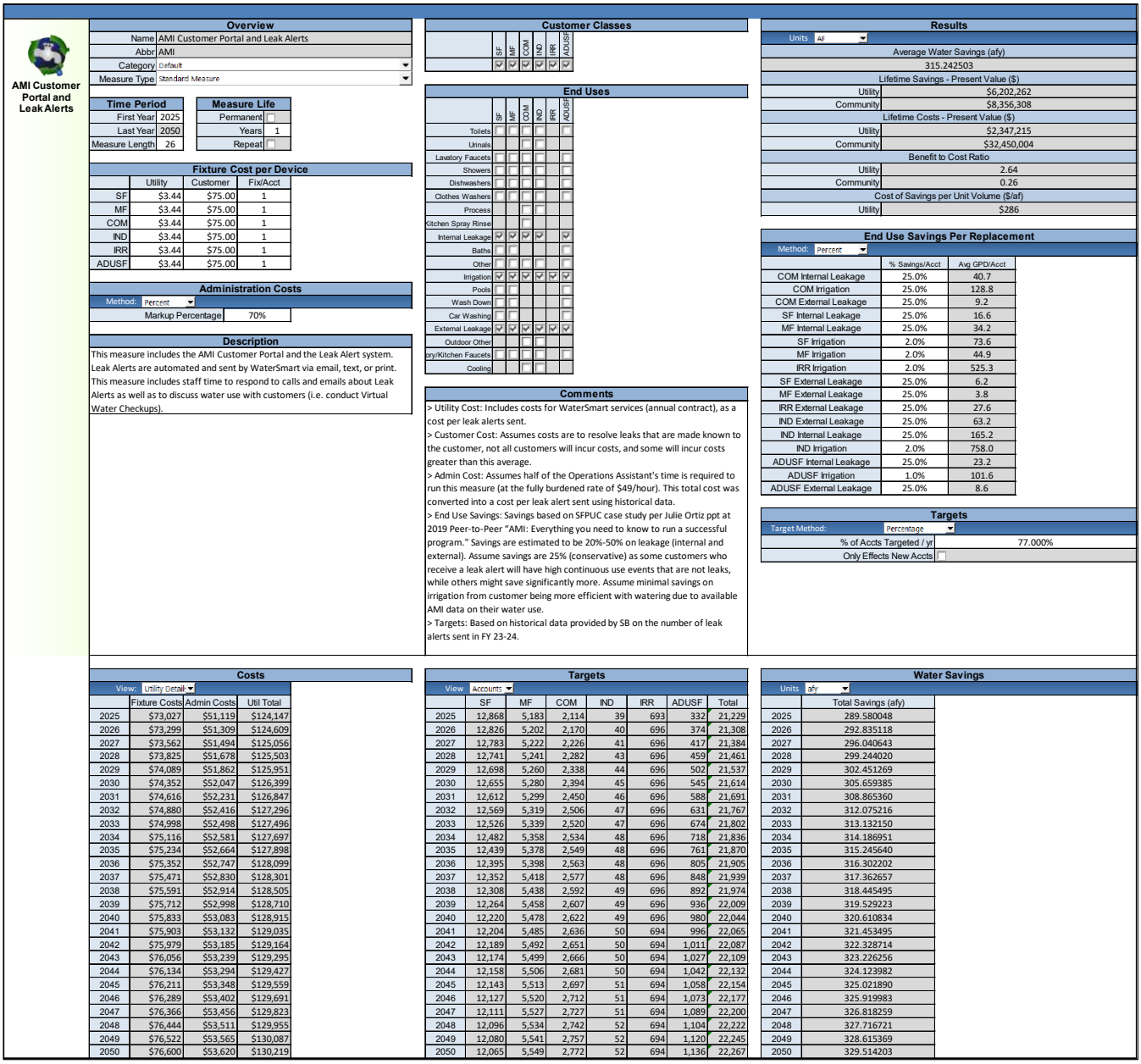
The unit costs vary according to the type of customer account and implementation method being addressed. For example, a measure might cost a different amount for a residential single family account than for a residential multifamily account, and for a rebate versus an ordinance requirement or a direct installation implementation method. Typically, water utilities have found there are increased costs associated with achieving higher market saturation, such as more surveys per year. The DSS Model calculates the annual costs based on the number of participants each year. The general formula for calculating annual utility costs is:

- **Annual Utility Cost** – Annual market penetration rate x total accounts in category x unit cost per account x (1+administration and marketing markup percentage)
- **Annual Customer Cost** – Annual number of participants x unit customer cost
- **Annual Community Cost** – Annual utility cost + annual customer cost

Data necessary to forecast water savings of measures include specifics on water use, demographics, market penetration, and unit water savings. Savings normally develop at a measured and predetermined pace, reaching full maturity after full market penetration is achieved. This may occur 3–10 years after the start of implementation, depending upon the implementation schedule.

For every water use efficiency activity or replacement with more efficient devices, there is a useful life. The useful life is called the "Measure Life" and is defined to be how long water use conservation measures stay in place and continue to save water. It is assumed that measures implemented because of codes, standards, or ordinances (e.g., toilets) would be "permanent" and not revert to an old inefficient level of water use if the device needed to be replaced. However, some measures that are primarily behavior-based, such as residential surveys, are assumed to need to be repeated on an ongoing basis to retain the water savings (e.g., homeowners move away, and the new homeowners may have less efficient water using practices). Surveys typically have a measure life on the order of five years.

Appendix E – Individual Conservation Measure Design Inputs and Results



AMI Customer Portal and Leak Alerts

Overview

Name	AMI Customer Portal and Leak Alerts
Abbr	AMI
Category	Default
Measure Type	Standard Measure

Time Period

First Year	2025
Last Year	2050
Measure Length	26

Measure Life

Permanent	☐
Years	1
Repeat	☐

Fixture Cost per Device

	Utility	Customer	Fix/Acct
SF	$3.44	$75.00	1
MF	$3.44	$75.00	1
COM	$3.44	$75.00	1
IND	$3.44	$75.00	1
IRR	$3.44	$75.00	1
ADUSF	$3.44	$75.00	1

Administration Costs

Method: Percent

Markup Percentage	70%

Description

This measure includes the AMI Customer Portal and the Leak Alert system. Leak Alerts are automated and sent by WaterSmart via email, text, or print. This measure includes staff time to respond to calls and emails about Leak Alerts as well as to discuss water use with customers (i.e. conduct Virtual Water Checkups).

Customer Classes

SF	MF	COM	IND	IRR	ADUSF
☑	☑	☑	☑	☑	☑

End Uses

	SF	MF	COM	IND	IRR	ADUSF
Toilets	☐	☐	☐	☐	☐	☐
Urinals			☐	☐		
Lavatory Faucets	☐	☐	☐	☐	☐	☐
Showers	☐	☐	☐	☐	☐	☐
Dishwashers	☐	☐	☐	☐	☐	☐
Clothes Washers	☐	☐	☐	☐	☐	☐
Process			☐	☐		
Kitchen Spray Rinse			☐			
Internal Leakage	☑	☑	☑	☑		☑
Baths	☐	☐				☐
Other	☐	☐	☐	☐	☐	☐
Irrigation	☑	☑	☑	☑	☑	☑
Pools	☐	☐				☐
Wash Down	☐	☐				☐
Car Washing	☐	☐				☐
External Leakage	☑	☑	☑	☑	☑	☑
Outdoor Other			☐	☐		
ory/Kitchen Faucets	☐	☐	☐	☐	☐	☐
Cooling			☐	☐		

Comments

> Utility Cost: Includes costs for WaterSmart services (annual contract), as a cost per leak alerts sent.
> Customer Cost: Assumes costs are to resolve leaks that are made known to the customer, not all customers will incur costs, and some will incur costs greater than this average.
> Admin Cost: Assumes half of the Operations Assistant's time is required to run this measure (at the fully burdened rate of $49/hour). This total cost was converted into a cost per leak alert sent using historical data.
> End Use Savings: Savings based on SFPUC case study per Julie Ortiz ppt at 2019 Peer-to-Peer "AMI: Everything you need to know to run a successful program." Savings are estimated to be 20%-50% on leakage (internal and external). Assume savings are 25% (conservative) as some customers who receive a leak alert will have high continuous use events that are not leaks, while others might save significantly more. Assume minimal savings on irrigation from customer being more efficient with watering due to available AMI data on their water use.
> Targets: Based on historical data provided by SB on the number of leak alerts sent in FY 23-24.

Results

Units: AF

Average Water Savings (afy)	
	315.242503
Lifetime Savings - Present Value ($)	
Utility	$6,202,262
Community	$8,356,308
Lifetime Costs - Present Value ($)	
Utility	$2,347,215
Community	$32,450,004
Benefit to Cost Ratio	
Utility	2.64
Community	0.26
Cost of Savings per Unit Volume ($/af)	
Utility	$286

End Use Savings Per Replacement

Method: Percent

	% Savings/Acct	Avg GPD/Acct
COM Internal Leakage	25.0%	40.7
COM Irrigation	25.0%	128.8
COM External Leakage	25.0%	9.2
SF Internal Leakage	25.0%	16.6
MF Internal Leakage	25.0%	34.2
SF Irrigation	2.0%	73.6
MF Irrigation	2.0%	44.9
IRR Irrigation	2.0%	525.3
SF External Leakage	25.0%	6.2
MF External Leakage	25.0%	3.8
IRR External Leakage	25.0%	27.6
IND External Leakage	25.0%	63.2
IND Internal Leakage	25.0%	165.2
IND Irrigation	2.0%	758.0
ADUSF Internal Leakage	25.0%	23.2
ADUSF Irrigation	1.0%	101.6
ADUSF External Leakage	25.0%	8.6

Targets

Target Method: Percentage

% of Accts Targeted / yr	77.000%
Only Effects New Accts	☐

Costs

View: Utility Details

	Fixture Costs	Admin Costs	Util Total
2025	$73,027	$51,119	$124,147
2026	$73,299	$51,309	$124,609
2027	$73,562	$51,494	$125,056
2028	$73,825	$51,678	$125,503
2029	$74,089	$51,862	$125,951
2030	$74,352	$52,047	$126,399
2031	$74,616	$52,231	$126,847
2032	$74,880	$52,416	$127,296
2033	$74,998	$52,498	$127,496
2034	$75,116	$52,581	$127,697
2035	$75,234	$52,664	$127,898
2036	$75,352	$52,747	$128,099
2037	$75,471	$52,830	$128,301
2038	$75,591	$52,914	$128,505
2039	$75,712	$52,998	$128,710
2040	$75,833	$53,083	$128,915
2041	$75,903	$53,132	$129,035
2042	$75,979	$53,185	$129,164
2043	$76,056	$53,239	$129,295
2044	$76,134	$53,294	$129,427
2045	$76,211	$53,348	$129,559
2046	$76,289	$53,402	$129,691
2047	$76,366	$53,456	$129,823
2048	$76,444	$53,511	$129,955
2049	$76,522	$53,565	$130,087
2050	$76,600	$53,620	$130,219

Targets

View: Accounts

	SF	MF	COM	IND	IRR	ADUSF	Total
2025	12,868	5,183	2,114	39	693	332	21,229
2026	12,826	5,202	2,170	40	696	374	21,308
2027	12,783	5,222	2,226	41	696	417	21,384
2028	12,741	5,241	2,282	43	696	459	21,461
2029	12,698	5,260	2,338	44	696	502	21,537
2030	12,655	5,280	2,394	45	696	545	21,614
2031	12,612	5,299	2,450	46	696	588	21,691
2032	12,569	5,319	2,506	47	696	631	21,767
2033	12,526	5,339	2,520	47	696	674	21,802
2034	12,482	5,358	2,534	48	696	718	21,836
2035	12,439	5,378	2,549	48	696	761	21,870
2036	12,395	5,398	2,563	48	696	805	21,905
2037	12,352	5,418	2,577	48	696	848	21,939
2038	12,308	5,438	2,592	49	696	892	21,974
2039	12,264	5,458	2,607	49	696	936	22,009
2040	12,220	5,478	2,622	49	696	980	22,044
2041	12,204	5,485	2,636	50	694	996	22,065
2042	12,189	5,492	2,651	50	694	1,011	22,087
2043	12,174	5,499	2,666	50	694	1,027	22,109
2044	12,158	5,506	2,681	50	694	1,042	22,132
2045	12,143	5,513	2,697	51	694	1,058	22,154
2046	12,127	5,520	2,712	51	694	1,073	22,177
2047	12,111	5,527	2,727	51	694	1,089	22,200
2048	12,096	5,534	2,742	52	694	1,104	22,222
2049	12,080	5,541	2,757	52	694	1,120	22,245
2050	12,065	5,549	2,772	52	694	1,136	22,267

Water Savings

Units: afy

	Total Savings (afy)
2025	289.580048
2026	292.835118
2027	296.040643
2028	299.244020
2029	302.451269
2030	305.659385
2031	308.865360
2032	312.075216
2033	313.132150
2034	314.186951
2035	315.245640
2036	316.302202
2037	317.362657
2038	318.445495
2039	319.529223
2040	320.610834
2041	321.453495
2042	322.328714
2043	323.226256
2044	324.123982
2045	325.021890
2046	325.919983
2047	326.818259
2048	327.716721
2049	328.615369
2050	329.514203

Plumber Initiated High Efficiency Toilet

Overview

Name	Plumber Initiated High Efficiency Toilet Retrofit Program
Abbr	UHET
Category	Default
Measure Type	Standard Measure

Time Period

First Year	2030
Last Year	2040
Measure Length	11

Measure Life

Permanent ☑

Fixture Cost per Device

	Utility	Customer	Fix/Acct
SF	$550.00	$0.00	1
MF	$550.00	$0.00	1

Administration Costs

Method: Percent

Markup Percentage	4%

Description

Utility would subsidize installation cost of a new HET purchased in bulk by the utility to replace 3.5 GPF toilets with 0.8 GPF toilets. Licensed plumbers, pre-qualified by the Utility would solicit customers directly. Customers would get a new HET installed at no cost or a discounted price. May focus efforts on income-qualified account holders in SFR and MFR and partner with gas company for economies of scale as their contractors are already direct-installing energy saving fixtures in homes.

Customer Classes

SF	MF	COM	IND	IRR	ADUSF
☑	☑	☐	☐	☐	☐

End Uses

	SF	MF	COM	IND	IRR	ADUSF
Toilets	☑	☑				
Urinals						
Lavatory Faucets	☐	☐				
Showers	☐	☐				
Dishwashers	☐	☐				
Clothes Washers	☐	☐				
Process						
Kitchen Spray Rinse						
Internal Leakage	☐	☐				
Baths	☐	☐				
Other	☐	☐				
Irrigation	☐	☐				
Pools	☐	☐				
Wash Down	☐	☐				
Car Washing	☐	☐				
External Leakage	☐	☐				
Outdoor Other						
atory/Kitchen Faucets	☐	☐				
Cooling						

Comments

> Utility Cost: Cost includes burdened cost to buy toilet, remove old, install new, and dispose of old, plus admin cost (as might be incurred for a regional partner to administer this measure).
> Customer Cost: Assumes minimal costs incurred by customer, as SB is purchasing the fixture and paying for installation.
> Admin Cost: Assumes 15 minutes of supervisory time per rebate awarded (at $84/hr for the fully burdened rate of the Analyst II position) to oversee the general management of this measure.
> End Use Savings: Switching from a 3.5gpf toilet to a 0.8gpf toilet presents about 77% savings, assuming that only 1 toilet is replaced per account and dividing by the number of toilets estimated to be present per account results in 35% savings for SF and 20% savings for MF.
> Targets: SB estimates that a pilot program might start with a budget of $20,000, targets have been set to start at this approximate cost (including utility and admin costs).

Results

Units: AF

Average Water Savings (afy)	2.077917
Lifetime Savings - Present Value ($)	
Utility	$35,534
Community	$35,534
Lifetime Costs - Present Value ($)	
Utility	$163,124
Community	$163,124
Benefit to Cost Ratio	
Utility	0.22
Community	0.22
Cost of Savings per Unit Volume ($/af)	
Utility	$3,019

End Use Savings Per Replacement

Method: Percent

	% Savings/Acct	Avg GPD/Acct
SF Toilets	35.0%	20.1
MF Toilets	20.0%	65.1

Targets

Target Method: Percentage

% of Accts Targeted / yr	0.150%
Only Effects New Accts	☐

Costs

View: Utility Details

	Fixture Costs	Admin Costs	Util Total
2025	$0	$0	$0
2026	$0	$0	$0
2027	$0	$0	$0
2028	$0	$0	$0
2029	$0	$0	$0
2030	$19,216	$769	$19,985
2031	$19,191	$768	$19,959
2032	$19,166	$767	$19,932
2033	$19,141	$766	$19,906
2034	$19,115	$765	$19,880
2035	$19,090	$764	$19,853
2036	$19,064	$763	$19,827
2037	$19,039	$762	$19,800
2038	$19,013	$761	$19,774
2039	$18,988	$760	$19,747
2040	$18,962	$758	$19,720
2041	$0	$0	$0
2042	$0	$0	$0
2043	$0	$0	$0
2044	$0	$0	$0
2045	$0	$0	$0
2046	$0	$0	$0
2047	$0	$0	$0
2048	$0	$0	$0
2049	$0	$0	$0
2050	$0	$0	$0

Targets

View: Accounts

	SF	MF	Total
2025	0	0	0
2026	0	0	0
2027	0	0	0
2028	0	0	0
2029	0	0	0
2030	25	10	35
2031	25	10	35
2032	24	10	35
2033	24	10	35
2034	24	10	35
2035	24	10	35
2036	24	11	35
2037	24	11	35
2038	24	11	35
2039	24	11	35
2040	24	11	34
2041	0	0	0
2042	0	0	0
2043	0	0	0
2044	0	0	0
2045	0	0	0
2046	0	0	0
2047	0	0	0
2048	0	0	0
2049	0	0	0
2050	0	0	0

Water Savings

Units: afy

	Total Savings (afy)
2025	0.000000
2026	0.000000
2027	0.000000
2028	0.000000
2029	0.000000
2030	0.329218
2031	0.653366
2032	0.972965
2033	1.288476
2034	1.600314
2035	1.908846
2036	2.214401
2037	2.517274
2038	2.817728
2039	3.116001
2040	3.412304
2041	3.393199
2042	3.374952
2043	3.357498
2044	3.340778
2045	3.324740
2046	3.309334
2047	3.294516
2048	3.280245
2049	3.266484
2050	3.253199

Leak Detection Device Rebate

Overview

Name	Leak Detection Device Rebate
Abbr	LEAK
Category	Default
Measure Type	Standard Measure

Time Period	
First Year	2025
Last Year	2050
Measure Length	26

Measure Life	
Permanent	☐
Years	5
Repeat	☐

Fixture Cost per Device

	Utility	Customer	Fix/Acct
SF	$100.00	$140.00	1
MF	$100.00	$140.00	1
COM	$100.00	$140.00	1
IND	$100.00	$140.00	1
IRR	$100.00	$140.00	1
ADUSF	$100.00	$140.00	1

Administration Costs

Method:	Percent
Markup Percentage	14%

Description

This measure models the CalWEP direct-distribution program for Flume rebates. Customers order leak detection devices directly through the Santa Barbara website and the rebate is built into reduced cost.

Customer Classes

	SF	MF	COM	IND	IRR	ADUSF
	☑	☑	☑	☑	☑	☑

End Uses

	SF	MF	COM	IND	IRR	ADUSF
Toilets	☐	☐	☐	☐		☐
Urinals			☐	☐		
Lavatory Faucets	☐	☐	☐	☐		☐
Showers	☐	☐	☐	☐		☐
Dishwashers	☐	☐	☐	☐		☐
Clothes Washers	☐	☐	☐	☐		☐
Process			☑	☑		
Kitchen Spray Rinse			☐			
Internal Leakage	☑	☑	☑	☑		☑
Baths	☐	☐				☐
Other	☐	☐	☐	☐		☐
Irrigation	☑	☑	☑	☑	☑	☑
Pools	☐	☐				☐
Wash Down	☐	☐				☐
Car Washing	☐	☐				☐
External Leakage	☑	☑	☑	☑	☑	☑
Outdoor Other			☐	☐		
atory/Kitchen Faucets	☐	☐	☐	☐		☐
Cooling			☐	☐		

Comments

> Utility Cost: Rebate paid by SB per device.
> Customer Cost: Remaining cost for purchase of device and shipping.
> Admin Cost: 4 hours of Admin Analyst II per year (at the fully burdened rate of $84/hr) and 10 hours of Ops Assistant per year (at the fully burdened rate of $49/hour), as much of the logistical and administrative processes are foregone through the set up of this measure (customer purchases device online with rebate applied).
> End Use Savings: Assumes similar savings as expected from AMI installation, with an additional 5% savings for irrigation savings from more granular water use data. SFPUC case study per Julie Ortiz ppt at 2019 Peer-to-Peer "AMI: Everything you need to know to run a successful program." Savings are estimated to be 20%-50% on leakage (internal and external). Assume higher end of this range as participants incur costs for device and assume they are more invested in tracking and managing their water use.
> Targets: Derived using historical data provided by SB for 2024.

Results

Units: AF

Average Water Savings (afy)	
	6.780824
Lifetime Savings - Present Value ($)	
Utility	$129,739
Community	$179,718
Lifetime Costs - Present Value ($)	
Utility	$118,847
Community	$264,800
Benefit to Cost Ratio	
Utility	1.09
Community	0.68
Cost of Savings per Unit Volume ($/af)	
Utility	$674

End Use Savings Per Replacement

Method: Percent

	% Savings/Acct	Avg GPD/Acct
SF Internal Leakag	50.0%	16.6
SF Irrigation	10.0%	73.6
F External Leakag	50.0%	6.2
MF Internal Leakag	50.0%	34.2
MF Irrigation	10.0%	44.9
IF External Leakag	50.0%	3.8
COM Process	5.0%	81.3
OM Internal Leakag	50.0%	40.7
COM Irrigation	5.0%	128.8
OM External Leaka	50.0%	9.2
IND Process	5.0%	495.6
ND Internal Leakag	50.0%	165.2
ID External Leakag	50.0%	63.2
IND Irrigation	5.0%	758.0
IRR Irrigation	5.0%	525.3
RR External Leakag	50.0%	27.6
USF Internal Leaka	50.0%	23.2
ADUSF Irrigation	5.0%	101.6
USF External Leak	50.0%	8.6
COM Pools	10.0%	12.9
) Kitchen Spray Rir	5.0%	0.0

Targets

Target Method:	Percentage
% of Accts Targeted / yr	0.200%
Only Effects New Accts	☐

Costs

View: Utility Details

	Fixture Costs	Admin Costs	Util Total
2025	$5,514	$772	$6,286
2026	$5,535	$775	$6,309
2027	$5,554	$778	$6,332
2028	$5,574	$780	$6,355
2029	$5,594	$783	$6,377
2030	$5,614	$786	$6,400
2031	$5,634	$789	$6,423
2032	$5,654	$792	$6,445
2033	$5,663	$793	$6,456
2034	$5,672	$794	$6,466
2035	$5,681	$795	$6,476
2036	$5,690	$797	$6,486
2037	$5,699	$798	$6,496
2038	$5,708	$799	$6,507
2039	$5,717	$800	$6,517
2040	$5,726	$802	$6,527
2041	$5,731	$802	$6,533
2042	$5,737	$803	$6,540
2043	$5,743	$804	$6,547
2044	$5,749	$805	$6,553
2045	$5,754	$806	$6,560
2046	$5,760	$806	$6,567
2047	$5,766	$807	$6,573
2048	$5,772	$808	$6,580
2049	$5,778	$809	$6,587
2050	$5,784	$810	$6,593

Targets

View: Accounts

	SF	MF	COM	IND	IRR	ADUSF	Total
2025	33	13	5	0	2	1	55
2026	33	14	6	0	2	1	55
2027	33	14	6	0	2	1	56
2028	33	14	6	0	2	1	56
2029	33	14	6	0	2	1	56
2030	33	14	6	0	2	1	56
2031	33	14	6	0	2	2	56
2032	33	14	7	0	2	2	57
2033	33	14	7	0	2	2	57
2034	32	14	7	0	2	2	57
2035	32	14	7	0	2	2	57
2036	32	14	7	0	2	2	57
2037	32	14	7	0	2	2	57
2038	32	14	7	0	2	2	57
2039	32	14	7	0	2	2	57
2040	32	14	7	0	2	3	57
2041	32	14	7	0	2	3	57
2042	32	14	7	0	2	3	57
2043	32	14	7	0	2	3	57
2044	32	14	7	0	2	3	57
2045	32	14	7	0	2	3	58
2046	31	14	7	0	2	3	58
2047	31	14	7	0	2	3	58
2048	31	14	7	0	2	3	58
2049	31	14	7	0	2	3	58
2050	31	14	7	0	2	3	58

Water Savings

Units: afy

	Total Savings (afy)
2025	1.403844
2026	2.816147
2027	4.236612
2028	5.665225
2029	7.102009
2030	7.143125
2031	7.183942
2032	7.224782
2033	7.260783
2034	7.291908
2035	7.318175
2036	7.339585
2037	7.356137
2038	7.372757
2039	7.389466
2040	7.406224
2041	7.421795
2042	7.436349
2043	7.449885
2044	7.462398
2045	7.473905
2046	7.485657
2047	7.497461
2048	7.509270
2049	7.521083
2050	7.532901

General Public Education

Overview

Name	General Public Education
Abbr	EDU
Category	Default
Measure Type	Standard Measure

Time Period	
First Year	2025
Last Year	2050
Measure Length	26

Measure Life	
Permanent	☐
Years	1
Repeat	☐

Fixture Cost per Device

	Utility	Customer	Fix/Acct
SF	$5.80	$1.00	1
MF	$5.80	$1.00	1
COM	$5.80	$2.00	1
IND	$5.80	$2.00	1
IRR	$5.80	$2.00	1
ADUSF	$5.80	$1.00	1

Administration Costs

Method: Percent

Markup Percentage	77%

Description

This measure describes and captures the varied outreach activities conducted and for consideration by the City that would continue indefinitely.

> Use a range of printed materials to raise awareness of conservation measures available to customers. This can include newsletters, bill stuffers, brochures, working with local newspapers, signage at retailers, and/or signs on public buses.

> Regional participation and development would be considered where applicable to help assure consistent message.

> Provide variety of conservation information on city or utility web site, distribution of videos. Other activities would include conducting presentations at various venues, from radio and TV to service organizations and focused groups, booths at relevant community events, etc.

> City would develop branded/targeted messaging with focused action like: "Take Control of your Controller" Campaign.

> This measure also captures efforts including poster contests, speakers to community groups, conservation hotline, website, radio and television time, demonstration gardens, and sponsoring series of educational workshops or other means for educating homeowners, landscapers and contractors in efficient landscaping and irrigation principles or other water conservation topics, utilizing guest speakers, and incentives, such as a nursery plant coupons.

Customer Classes

SF	MF	COM	IND	IRR	ADUSF
☑	☑	☑	☑	☑	☑

End Uses

	SF	MF	COM	IND	IRR	ADUSF
Toilets	☑	☑	☑	☑		☑
Urinals			☑	☑		
Lavatory Faucets	☑	☑	☑	☑		☑
Showers	☑	☑	☑	☑		☑
Dishwashers	☑	☑	☑	☑		☑
Clothes Washers	☑	☑	☑	☑		☑
Process			☐	☐		
Kitchen Spray Rinse			☑			
Internal Leakage	☑	☑	☑	☑		☑
Baths	☑	☑				☑
Other	☑	☑	☑	☑		☑
Irrigation	☑	☑	☑	☑	☑	☑
Pools	☑	☑				☑
Wash Down	☑	☑				☑
Car Washing	☑	☑				☑
External Leakage	☑	☑	☑	☑	☑	☑
Outdoor Other			☐	☐		
Non-Lavatory/Kitchen Faucets	☑	☑	☑	☑		☑
Cooling			☐	☐		

Comments

> Utility Cost: Advertising costs incurred by SB annually.

> Customer Cost: Assume minimal costs for customers to change behaviors or for small fixture upgrades (average customer cost is low to reflect that many customers will not purchase fixtures or upgrade equipment).

> Admin Cost: Assumes 1/3 of the annual time for the Analyst II position is required to oversee public education efforts, at the fully burdened rate of $84/hour.

> End Use Savings: Public info water savings range is 0.1%-0.5% on each end use. Assumed average savings of 0.3%.

> Targets: Assume target 50% of customers annually, so that every 2 years all customers have been reached through some form of outreach effort conducted by the City.

Results

Units: AF

Average Water Savings (afy)	
	13.079044
Lifetime Savings - Present Value ($)	
Utility	$258,840
Community	$258,840
Lifetime Costs - Present Value ($)	
Utility	$2,675,630
Community	$2,975,012
Benefit to Cost Ratio	
Utility	0.10
Community	0.09
Cost of Savings per Unit Volume ($/af)	
Utility	$7,868

End Use Savings Per Replacement

Method: Percent

	% Savings/Acct	Avg GPD/Acct
COM Toilets	0.3%	61.0
IND Toilets	0.3%	247.8
COM Urinals	0.3%	16.3
IND Urinals	0.3%	99.1
COM Lavatory Faucets	0.3%	20.3
IND Lavatory Faucets	0.3%	124.9
COM Showers	0.3%	36.6
IND Showers	0.3%	49.6
COM Dishwashers	0.3%	24.4
IND Dishwashers	0.3%	66.1
COM Clothes Washers	0.3%	61.0
IND Clothes Washers	0.3%	132.1
COM Kitchen Spray Rinse	0.3%	20.3
COM Internal Leakage	0.3%	40.7
IND Internal Leakage	0.3%	165.2
COM Irrigation	0.3%	128.8
IND Irrigation	0.3%	758.0
IRR Irrigation	0.3%	525.3
COM External Leakage	0.3%	9.2
IND External Leakage	0.3%	63.2
IRR External Leakage	0.3%	27.6
COM Other	0.3%	24.4
IND Other	0.3%	165.2
COM Non-Lavatory/Kitchen Faucets	0.3%	20.3
IND Non-Lavatory/Kitchen Faucets	0.3%	106.4
SF Toilets	0.3%	20.1
MF Toilets	0.3%	65.1
SF Lavatory Faucets	0.3%	7.8
MF Lavatory Faucets	0.3%	17.8
SF Showers	0.3%	27.2
MF Showers	0.3%	56.0
SF Dishwashers	0.3%	2.4
MF Dishwashers	0.3%	4.8
SF Clothes Washers	0.3%	17.8
MF Clothes Washers	0.3%	44.4
SF Internal Leakage	0.3%	16.6
MF Internal Leakage	0.3%	34.2
SF Baths	0.3%	3.6
MF Baths	0.3%	5.9
SF Other	0.3%	7.6
MF Other	0.3%	8.1
SF Irrigation	0.3%	73.6
MF Irrigation	0.3%	44.9
SF Pools	0.3%	1.8
MF Pools	0.3%	1.1

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MF Pools	0.3%	1.1
SF Wash Down	0.3%	3.5
MF Wash Down	0.3%	2.2
SF Car Washing	0.3%	3.5
MF Car Washing	0.3%	2.2
SF External Leakage	0.3%	6.2
MF External Leakage	0.3%	3.8
SF Non-Lavatory/Kitchen Faucets	0.3%	15.4
MF Non-Lavatory/Kitchen Faucets	0.3%	32.8
ADUSF Toilets	0.3%	41.8
ADUSF Lavatory Faucets	0.3%	11.4
ADUSF Showers	0.3%	32.7
ADUSF Dishwashers	0.3%	2.1
ADUSF Clothes Washers	0.3%	28.2
ADUSF Internal Leakage	0.3%	23.2
ADUSF Baths	0.3%	4.4
ADUSF Other	0.3%	7.4
ADUSF Irrigation	0.3%	101.6
ADUSF Pools	0.3%	2.4
ADUSF Wash Down	0.3%	4.9
ADUSF Car Washing	0.3%	4.9
ADUSF External Leakage	0.3%	8.6
ADUSF Non-Lavatory/Kitchen Faucets	0.3%	21.2

Targets		
Target Method:	Percentage	
% of Accts Targeted / yr		50.000%
Only Effects New Accts	☐	

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Costs			
View:	Utility Details		
	Fixture Costs	Admin Costs	Util Total
2025	$79,953	$61,564	$141,517
2026	$80,251	$61,793	$142,043
2027	$80,539	$62,015	$142,553
2028	$80,827	$62,236	$143,063
2029	$81,115	$62,459	$143,573
2030	$81,404	$62,681	$144,084
2031	$81,692	$62,903	$144,595
2032	$81,981	$63,126	$145,107
2033	$82,110	$63,225	$145,335
2034	$82,239	$63,324	$145,564
2035	$82,369	$63,424	$145,793
2036	$82,499	$63,524	$146,022
2037	$82,628	$63,624	$146,252
2038	$82,760	$63,725	$146,486
2039	$82,892	$63,827	$146,719
2040	$83,024	$63,929	$146,953
2041	$83,101	$63,988	$147,089
2042	$83,184	$64,052	$147,236
2043	$83,269	$64,117	$147,386
2044	$83,354	$64,182	$147,536
2045	$83,439	$64,248	$147,687
2046	$83,524	$64,313	$147,837
2047	$83,609	$64,379	$147,987
2048	$83,694	$64,444	$148,138
2049	$83,779	$64,510	$148,288
2050	$83,864	$64,575	$148,439

Targets							
View	Accounts						
	SF	MF	COM	IND	IRR	ADUSF	Total
2025	8,356	3,366	1,373	26	450	216	13,785
2026	8,328	3,378	1,409	26	452	243	13,836
2027	8,301	3,391	1,445	27	452	271	13,886
2028	8,273	3,403	1,482	28	452	298	13,936
2029	8,245	3,416	1,518	28	452	326	13,985
2030	8,218	3,428	1,554	29	452	354	14,035
2031	8,190	3,441	1,591	30	452	382	14,085
2032	8,162	3,454	1,627	31	452	410	14,135
2033	8,134	3,467	1,636	31	452	438	14,157
2034	8,106	3,479	1,646	31	452	466	14,179
2035	8,077	3,492	1,655	31	452	494	14,202
2036	8,049	3,505	1,664	31	452	523	14,224
2037	8,021	3,518	1,674	31	452	551	14,246
2038	7,992	3,531	1,683	32	452	579	14,269
2039	7,964	3,544	1,693	32	452	608	14,292
2040	7,935	3,557	1,702	32	452	636	14,315
2041	7,925	3,562	1,712	32	451	647	14,328
2042	7,915	3,566	1,721	32	451	657	14,342
2043	7,905	3,571	1,731	33	451	667	14,357
2044	7,895	3,575	1,741	33	451	677	14,371
2045	7,885	3,580	1,751	33	451	687	14,386
2046	7,875	3,585	1,761	33	451	697	14,401
2047	7,865	3,589	1,771	33	451	707	14,415
2048	7,854	3,594	1,781	34	451	717	14,430
2049	7,844	3,598	1,790	34	451	727	14,445
2050	7,834	3,603	1,800	34	451	737	14,459

Water Savings		
Units	afy	
	Total Savings (afy)	
2025	12.833130	
2026	12.855026	
2027	12.878167	
2028	12.904975	
2029	12.935361	
2030	12.971110	
2031	13.011693	
2032	13.057115	
2033	13.061003	
2034	13.067620	
2035	13.077927	
2036	13.090168	
2037	13.104475	
2038	13.119854	
2039	13.137275	
2040	13.156617	
2041	13.154386	
2042	13.155869	
2043	13.159408	
2044	13.164401	
2045	13.170734	
2046	13.178304	
2047	13.187017	
2048	13.196786	
2049	13.207533	
2050	13.219184	

Water Efficient Landscape Standards

Overview

Name	Water Efficient Landscape Standards
Abbr	WEL
Category	Default
Measure Type	Standard Measure

Time Period

First Year	2025
Last Year	2050
Measure Length	26

Measure Life

Permanent ☑

Fixture Cost per Device

	Utility	Customer	Fix/Acct
SF	$70.00	$15.00	1
MF	$70.00	$15.00	1
COM	$70.00	$15.00	1
IND	$70.00	$15.00	1
IRR	$70.00	$15.00	1
ADUSF	$70.00	$15.00	1

Administration Costs

Method: Percent

Markup Percentage	6%

Description

Compliance with the City's WELS is mandatory whenever a landscaping or irrigation plan is required by any Chapter or Section of the City Municipal Code or by any City design review or land use review body (SBMC § 14.23.005, Ordinance 6101, and Council Resolution No. 23-007). The Standards are intended to promote water conservation while allowing flexibility in designing attractive and cost effective water-wise landscapes. Standards specify that development projects subject to design review are landscaped according to climate appropriate principals, with appropriate plant selection, efficient irrigation systems and smart irrigation controllers. Some accounts transition from mixed meters to irrigation meters. As part of this measure, staff perform plan reviews and final inspections for compliance.

Customer Classes

SF	MF	COM	IND	IRR	ADUSF
☑	☑	☑	☑	☑	☑

End Uses

	SF	MF	COM	IND	IRR	ADUSF
Toilets	☐	☐	☐	☐		☐
Urinals			☐	☐		
Lavatory Faucets	☐	☐	☐	☐		☐
Showers	☐	☐	☐	☐		☐
Dishwashers	☐	☐	☐	☐		☐
Clothes Washers	☐	☐	☐	☐		☐
Process			☐	☐		
Kitchen Spray Rinse			☐			
Internal Leakage	☐	☐	☐	☐		☐
Baths	☐	☐				☐
Other	☐	☐	☐	☐		☐
Irrigation	☑	☑	☑	☑	☑	☑
Pools	☐	☐				☐
Wash Down	☐	☐				☐
Car Washing	☐	☐				☐
External Leakage	☑	☑	☑	☑	☑	☑
Outdoor Other			☐	☐		
Non-Lavatory/Kitchen Faucets	☐	☐	☐	☐		☐
Cooling			☐	☐		

Comments

> Utility Cost: Utility cost here is the admin cost to review plans and perform inspections. Plan reviews take ~0.75hours of the Water Resources Specialist position at the rate of $70/hour. 16% of plans that are reviewed prompt an inspection, which takes 1.5 hours, at the fully burdened rate of $70/hour.
> Customer Cost: Assume minimal additional costs are incurred from compliance, as installation and maintenance of acceptable landscape is not necessarily more expensive than alternatives.
> Admin Cost: Assumes admin cost is for general administration of this program by the Analyst II position, assume minimal supervisory time is required per rebate, at the fully burdened rate of $84/hour, for a 6% markup on the utility cost.
> End Use Savings: Native plants save 60-80% of water use compared to grass, assume half of these savings are achieved from compliance with WEL Standards as not all sites will be converting from high water using plants. Assumes small savings from reducing leakage when landscape is changed.
> Targets: Based on historical data received, about 250 plan reviews are conducted annually and about 40 inspections are conducted, resulting in a target of 0.14% of accounts completing their compliant WELS landscape each year.

Results

Units: AF

Average Water Savings (afy)	
	16.251129
Lifetime Savings - Present Value ($)	
Utility	$282,278
Community	$282,278
Lifetime Costs - Present Value ($)	
Utility	$54,046
Community	$64,993
Benefit to Cost Ratio	
Utility	5.22
Community	4.34
Cost of Savings per Unit Volume ($/af)	
Utility	$128

End Use Savings Per Replacement

Method: Percent

	% Savings/Acct	Avg GPD/Acct
COM Irrigation	30.0%	128.8
COM External Leakage	5.0%	9.2
IND Irrigation	30.0%	758.0
IND External Leakage	5.0%	63.2
SF Irrigation	30.0%	73.6
MF Irrigation	30.0%	44.9
IRR Irrigation	30.0%	525.3
SF External Leakage	5.0%	6.2
MF External Leakage	5.0%	3.8
IRR External Leakage	5.0%	27.6
ADUSF Irrigation	30.0%	101.6
ADUSF External Leakage	5.0%	8.6
IND Kitchen Spray Rinse	0.0%	0.0
COM Pools	0.0%	12.9

Targets

Target Method: Percentage

% of Accts Targeted / yr	0.140%
Only Effects New Accts	☐

Costs

View: Utility Details

	Fixture Costs	Admin Costs	Util Total
2025	$2,702	$157	$2,859
2026	$2,712	$157	$2,869
2027	$2,722	$158	$2,880
2028	$2,731	$158	$2,890
2029	$2,741	$159	$2,900
2030	$2,751	$160	$2,910
2031	$2,761	$160	$2,921
2032	$2,770	$161	$2,931
2033	$2,775	$161	$2,936
2034	$2,779	$161	$2,940
2035	$2,784	$161	$2,945
2036	$2,788	$162	$2,950
2037	$2,792	$162	$2,954
2038	$2,797	$162	$2,959
2039	$2,801	$162	$2,964
2040	$2,806	$163	$2,968
2041	$2,808	$163	$2,971
2042	$2,811	$163	$2,974
2043	$2,814	$163	$2,977
2044	$2,817	$163	$2,980
2045	$2,820	$164	$2,983
2046	$2,823	$164	$2,986
2047	$2,825	$164	$2,989
2048	$2,828	$164	$2,992
2049	$2,831	$164	$2,995
2050	$2,834	$164	$2,998

Targets

View: Accounts

	SF	MF	COM	IND	IRR	ADUSF	Total
2025	23	9	4	0	1	1	39
2026	23	9	4	0	1	1	39
2027	23	9	4	0	1	1	39
2028	23	10	4	0	1	1	39
2029	23	10	4	0	1	1	39
2030	23	10	4	0	1	1	39
2031	23	10	4	0	1	1	39
2032	23	10	5	0	1	1	40
2033	23	10	5	0	1	1	40
2034	23	10	5	0	1	1	40
2035	23	10	5	0	1	1	40
2036	23	10	5	0	1	1	40
2037	22	10	5	0	1	2	40
2038	22	10	5	0	1	2	40
2039	22	10	5	0	1	2	40
2040	22	10	5	0	1	2	40
2041	22	10	5	0	1	2	40
2042	22	10	5	0	1	2	40
2043	22	10	5	0	1	2	40
2044	22	10	5	0	1	2	40
2045	22	10	5	0	1	2	40
2046	22	10	5	0	1	2	40
2047	22	10	5	0	1	2	40
2048	22	10	5	0	1	2	40
2049	22	10	5	0	1	2	40
2050	22	10	5	0	1	2	40

Water Savings

Units: afy

	Total Savings (afy)
2025	1.163327
2026	2.333749
2027	3.510433
2028	4.693367
2029	5.882570
2030	7.078047
2031	8.279783
2032	9.487800
2033	10.698394
2034	11.911552
2035	13.127294
2036	14.345608
2037	15.566514
2038	16.790050
2039	18.016219
2040	19.245008
2041	20.475038
2042	21.706846
2043	22.940468
2044	24.175906
2045	25.413160
2046	26.652230
2047	27.893118
2048	29.135824
2049	30.380349
2050	31.626694

Smart Sprinkler Timer Rebate

Overview

Name	Smart Sprinkler Timer Rebate
Abbr	SPRINK
Category	Default
Measure Type	Standard Measure

Time Period	
First Year	2025
Last Year	2050
Measure Length	26

Measure Life	
Permanent	☐
Years	5
Repeat	☐

Fixture Cost per Device

	Utility	Customer	Fix/Acct
SF	$70.00	$170.00	1
MF	$70.00	$170.00	1
COM	$70.00	$170.00	1
IND	$70.00	$170.00	1
IRR	$70.00	$170.00	1
ADUSF	$70.00	$170.00	1

Administration Costs

Method: Percent

Markup Percentage	18%

Description

Provide a rebate for the purchase of a weather-based/smart irrigation controller. Smart irrigation controllers can be programmed to give plants the right amount of water for the type of plant, soil, time of year, and weather - often with a smartphone. Eligible materials include: smart controller or weather sensor add-on for existing controller. Does not include labor or tax.

Customer Classes

	SF	MF	COM	IND	IRR	ADUSF
	☑	☑	☑	☑	☑	☑

End Uses

	SF	MF	COM	IND	IRR	ADUSF
Toilets	☐	☐	☐	☐		☐
Urinals			☐	☐		
Lavatory Faucets	☐	☐	☐	☐		☐
Showers	☐	☐	☐	☐		☐
Dishwashers	☐	☐	☐	☐		☐
Clothes Washers	☐	☐	☐	☐		☐
Process			☐	☐		
Kitchen Spray Rinse			☐			
Internal Leakage	☐	☐	☐	☐		☐
Baths	☐	☐				☐
Other	☐	☐	☐	☐		☐
Irrigation	☑	☑	☑	☑	☑	☑
Pools	☐	☐				☐
Wash Down	☐	☐				☐
Car Washing	☐	☐				☐
External Leakage	☐	☐	☐	☐	☐	☐
Outdoor Other			☐	☐		
Non-Lavatory/Kitchen Faucets	☐	☐	☐	☐		☐
Cooling			☐	☐		

Comments

> Utility Cost: Rebate amount offered by the City, assumes average device cost is approximately $140, and City is rebating 50%.
> Customer Cost: Remaining costs to purchase device, assumes installation cost of on average $200 and that half of rebate participants hire a contractor for installation.
> Admin Cost: Estimated staff time required is 0.25hours of the Operations Assistant position, at the fully burdened rate of $49/hour, or approximately a 18% markup on utility cost per rebate.
> End Use Savings: EPA estimates annual water savings of 7,600 for the average home from installation of a smart irrigation controller. Converted this estimate into percentages based on the average irrigation use of different customer categories.
> Targets: Based on historical data, ~10 rebates have been offered, assume participation increases to ~30 participants in following years as the program becomes more known through outreach efforts.

Results

Units: AF

Average Water Savings (afy)	
	2.638121
Lifetime Savings - Present Value ($)	
Utility	$50,633
Community	$50,633
Lifetime Costs - Present Value ($)	
Utility	$43,056
Community	$131,670
Benefit to Cost Ratio	
Utility	1.18
Community	0.38
Cost of Savings per Unit Volume ($/af)	
Utility	$628

End Use Savings Per Replacement

Method: Percent

	% Savings/Acct	Avg GPD/Acct
COM Irrigation	15.0%	128.8
IND Irrigation	3.0%	758.0
IRR Irrigation	4.0%	525.3
SF Irrigation	25.0%	73.6
MF Irrigation	40.0%	44.9
ADUSF Irrigation	4.0%	101.6

Targets

Target Method: Percentage

% of Accts Targeted / yr	0.100%
Only Effects New Accts	☐

Costs

View: Utility Details

	Fixture Costs	Admin Costs	Util Total
2025	$1,930	$347	$2,277
2026	$1,937	$349	$2,286
2027	$1,944	$350	$2,294
2028	$1,951	$351	$2,302
2029	$1,958	$352	$2,310
2030	$1,965	$354	$2,319
2031	$1,972	$355	$2,327
2032	$1,979	$356	$2,335
2033	$1,982	$357	$2,339
2034	$1,985	$357	$2,342
2035	$1,988	$358	$2,346
2036	$1,991	$358	$2,350
2037	$1,994	$359	$2,353
2038	$1,998	$360	$2,357
2039	$2,001	$360	$2,361
2040	$2,004	$361	$2,365
2041	$2,006	$361	$2,367
2042	$2,008	$361	$2,369
2043	$2,010	$362	$2,372
2044	$2,012	$362	$2,374
2045	$2,014	$363	$2,377
2046	$2,016	$363	$2,379
2047	$2,018	$363	$2,381
2048	$2,020	$364	$2,384
2049	$2,022	$364	$2,386
2050	$2,024	$364	$2,389

Targets

View: Accounts

	SF	MF	COM	IND	IRR	ADUSF	Total
2025	17	7	3	0	1	0	28
2026	17	7	3	0	1	0	28
2027	17	7	3	0	1	1	28
2028	17	7	3	0	1	1	28
2029	16	7	3	0	1	1	28
2030	16	7	3	0	1	1	28
2031	16	7	3	0	1	1	28
2032	16	7	3	0	1	1	28
2033	16	7	3	0	1	1	28
2034	16	7	3	0	1	1	28
2035	16	7	3	0	1	1	28
2036	16	7	3	0	1	1	28
2037	16	7	3	0	1	1	28
2038	16	7	3	0	1	1	29
2039	16	7	3	0	1	1	29
2040	16	7	3	0	1	1	29
2041	16	7	3	0	1	1	29
2042	16	7	3	0	1	1	29
2043	16	7	3	0	1	1	29
2044	16	7	3	0	1	1	29
2045	16	7	4	0	1	1	29
2046	16	7	4	0	1	1	29
2047	16	7	4	0	1	1	29
2048	16	7	4	0	1	1	29
2049	16	7	4	0	1	1	29
2050	16	7	4	0	1	1	29

Water Savings

Units: afy

	Total Savings (afy)
2025	0.563811
2026	1.128933
2027	1.695286
2028	2.262867
2029	2.831678
2030	2.837906
2031	2.844048
2032	2.850185
2033	2.855118
2034	2.858845
2035	2.861366
2036	2.862683
2037	2.862795
2038	2.862914
2039	2.863040
2040	2.863172
2041	2.863519
2042	2.864131
2043	2.865009
2044	2.866155
2045	2.867570
2046	2.869048
2047	2.870537
2048	2.872024
2049	2.873511
2050	2.874996

Green Gardener Program

Overview

Name	Green Gardener Program
Abbr	GGP
Category	Default
Measure Type	Standard Measure

Time Period

First Year	2025
Last Year	2050
Measure Length	26

Measure Life

Permanent	☐
Years	2
Repeat	☐

Fixture Cost per Device

	Utility	Customer	Fix/Acct
SF	$0.00	$15.00	1
MF	$0.00	$15.00	1
COM	$0.00	$15.00	1
IND	$0.00	$15.00	1
IRR	$0.00	$15.00	1
ADUSF	$0.00	$15.00	1

Administration Costs

Method: Fixed

Annual Admin Costs	$2,400

Description

15 week bilingual course taught through Santa Barbara City College's School of Extended Learning.The class covers topics on resource-efficient and pollution prevention landscape maintenance practices. After completion of the course and a final test, gardeners are placed on the Green Gardener list which is promoted to the public. Green Gardener recertification issued annually with completion of 2 hours continuing education.

Customer Classes

SF	MF	COM	IND	IRR	ADUSF
☑	☑	☑	☐	☐	☐

End Uses

	SF	MF	COM	IND	IRR	ADUSF
Toilets	☐	☐	☐			☐
Urinals			☐			
Lavatory Faucets	☐	☐	☐			☐
Showers	☐	☐	☐			☐
Dishwashers	☐	☐	☐			☐
Clothes Washers	☐	☐	☐			☐
Process			☐			
Kitchen Spray Rinse			☐			
Internal Leakage	☐	☐	☐			☐
Baths	☐	☐				☐
Other	☐	☐	☐			☐
Irrigation	☑	☑	☑	☑	☑	☑
Pools	☐	☐				☐
Wash Down	☐	☐				☐
Car Washing	☐	☐				☐
External Leakage	☑	☑	☑	☑	☑	☑
Outdoor Other			☐	☐		
Non-Lavatory/Kitchen Faucets	☐	☐	☐			☐
Cooling			☐	☐		

Comments

> Utility Cost: Utility cost is included in admin costs, the annual utility cost for this program is $1500.
> Customer Cost: Assume minimal customer costs are incurred, as participants are performing behavioral changes (proper irrigation scheduling) and small fixture upgrades from irrigation leak corrections.
> Admin Cost: Costs for Analyst II position staff time to oversee the general administration of this program, approximately 10 hours of staff time are required per year, at the fully burdened rate of $84/hour. This administration fixed costs includes utility costs.
> End Use Savings: Assume 10% irrigation savings from proper irrigation scheduling, and small savings from leak corrections (not captured through AMI or flume) to not overlap with other measures offered.
> Targets: Based on SB participation data, ~140 gardeners that participate are from the service area and professional gardeners (and work on ~5 sites per gardener), so targeting 700 accounts. SB surveys indicate that average number of sites affected per gardener that participates in the program is ~7, but not all sites are in the SB service area.

Results

Units: AF

Average Water Savings (afy)	
	14.552161
Lifetime Savings - Present Value ($)	
Utility	$285,017
Community	$285,017
Lifetime Costs - Present Value ($)	
Utility	$44,146
Community	$239,619
Benefit to Cost Ratio	
Utility	6.46
Community	1.19
Cost of Savings per Unit Volume ($/af)	
Utility	$117

End Use Savings Per Replacement

Method: Percent

	% Savings/Acct	Avg GPD/Acct
SF Irrigation	10.0%	73.6
MF Irrigation	10.0%	44.9
COM Irrigation	10.0%	128.8
IND Irrigation	10.0%	758.0
IRR Irrigation	10.0%	525.3
SF External Leakage	5.0%	6.2
MF External Leakage	5.0%	3.8
COM External Leakage	5.0%	9.2
IND External Leakage	5.0%	63.2
IRR External Leakage	5.0%	27.6
ADUSF Irrigation	10.0%	101.6
ADUSF External Leakage	5.0%	8.6

Targets

Target Method: Percentage

% of Accts Targeted / yr	2.500%
Only Effects New Accts	☐

Costs

View: Utility Details

	Fixture Costs	Admin Costs	Util Total
2025	$0	$2,400	$2,400
2026	$0	$2,400	$2,400
2027	$0	$2,400	$2,400
2028	$0	$2,400	$2,400
2029	$0	$2,400	$2,400
2030	$0	$2,400	$2,400
2031	$0	$2,400	$2,400
2032	$0	$2,400	$2,400
2033	$0	$2,400	$2,400
2034	$0	$2,400	$2,400
2035	$0	$2,400	$2,400
2036	$0	$2,400	$2,400
2037	$0	$2,400	$2,400
2038	$0	$2,400	$2,400
2039	$0	$2,400	$2,400
2040	$0	$2,400	$2,400
2041	$0	$2,400	$2,400
2042	$0	$2,400	$2,400
2043	$0	$2,400	$2,400
2044	$0	$2,400	$2,400
2045	$0	$2,400	$2,400
2046	$0	$2,400	$2,400
2047	$0	$2,400	$2,400
2048	$0	$2,400	$2,400
2049	$0	$2,400	$2,400
2050	$0	$2,400	$2,400

Targets

View: Accounts

	SF	MF	COM	IND	IRR	ADUSF	Total
2025	418	168	69	1	23	11	689
2026	416	169	70	1	23	12	692
2027	415	170	72	1	23	14	694
2028	414	170	74	1	23	15	697
2029	412	171	76	1	23	16	699
2030	411	171	78	1	23	18	702
2031	409	172	80	1	23	19	704
2032	408	173	81	2	23	20	707
2033	407	173	82	2	23	22	708
2034	405	174	82	2	23	23	709
2035	404	175	83	2	23	25	710
2036	402	175	83	2	23	26	711
2037	401	176	84	2	23	28	712
2038	400	177	84	2	23	29	713
2039	398	177	85	2	23	30	715
2040	397	178	85	2	23	32	716
2041	396	178	86	2	23	32	716
2042	396	178	86	2	23	33	717
2043	395	179	87	2	23	33	718
2044	395	179	87	2	23	34	719
2045	394	179	88	2	23	34	719
2046	394	179	88	2	23	35	720
2047	393	179	89	2	23	35	721
2048	393	180	89	2	23	36	721
2049	392	180	90	2	23	36	722
2050	392	180	90	2	23	37	723

Water Savings

Units: afy

	Total Savings (afy)
2025	7.098485
2026	14.240213
2027	14.321654
2028	14.397967
2029	14.474323
2030	14.550829
2031	14.627273
2032	14.703759
2033	14.757807
2034	14.789201
2035	14.820640
2036	14.852123
2037	14.883650
2038	14.915537
2039	14.947677
2040	14.979755
2041	15.003344
2042	15.021785
2043	15.043705
2044	15.065848
2045	15.088000
2046	15.110161
2047	15.132332
2048	15.154512
2049	15.176701
2050	15.198900

Sustainable Lawn Replacement Rebate

Overview

Name	Sustainable Lawn Replacement Rebate
Abbr	LAWN
Category	Default
Measure Type	Standard Measure

Time Period	
First Year	2025
Last Year	2050
Measure Length	26

Measure Life	
Permanent	☑

Fixture Cost per Device

	Utility	Customer	Fix/Acct
SF	$1,500.00	$4,500.00	1
MF	$2,000.00	$8,000.00	1
COM	$2,500.00	$10,000.00	1
IND	$2,500.00	$10,000.00	1
IRR	$2,500.00	$10,000.00	1

Administration Costs

Method: Percent

Markup Percentage	0%

Description

The Sustainable Lawn Replacement Rebate provides incentives to help offset the cost of replacing water-thirsty lawns with water-wise plants and efficient irrigation. Total rebate amount is based upon square footage of lawn removed: $2.00 / square foot of eligible lawn replaced. Single Family Residential and Small Multi-Family Residential (1-4 dwelling units): $1,500 maximum rebate.
Commercial and Large Multi-Family Residential (5+ dwelling units): $2,500 per meter serving irrigation, maximum of $5,000 per property. Stacked rebate availble for rain gardens, funding provided by the Creeks Division.

Customer Classes

	SF	MF	COM	IND	IRR	ADJSF
	☑	☑	☑	☑	☑	☐

End Uses

	SF	MF	COM	IND	IRR	ADJSF
Toilets	☐	☐	☐	☐		
Urinals			☐	☐		
Lavatory Faucets	☐	☐	☐	☐		
Showers	☐	☐	☐	☐		
Dishwashers	☐	☐	☐	☐		
Clothes Washers	☐	☐	☐	☐		
Process			☐	☐		
Kitchen Spray Rinse			☐			
Internal Leakage	☐	☐	☐	☐		
Baths	☐	☐				
Other	☐	☐	☐	☐		
Irrigation	☑	☑	☑	☑	☑	
Pools	☐	☐				
Wash Down	☐	☐				
Car Washing	☐	☐				
External Leakage	☑	☑	☑	☑	☑	
Outdoor Other			☐	☐		
Non-Lavatory/Kitchen Faucets	☐	☐	☐	☐		
Cooling			☐	☐		

Comments

> Customer Cost: Assumes the rebate represents 1/4 of total costs for replacement, and that customer incurs approximately 3/4 of costs.
> Admin Cost: Estimated staff time required to process rebates and generally manage this measure are 0.5 hour of Meter Tech time (at fully burdened rate of $63/hr), 0.5 hour of Operations Assistant time (at $49/hour) and 0.25 hour of Specialist time (at $70/hour), this is approximately $73 or an admin markup cost of 0.05%.
> End Use Savings: Reductions estimate half of turf is removed from SF and MF and 30% in COM/IND/IRR to be conservative, assumes additional 5% savings from leak reductions and switching to more efficient irrigation systems.
> Targets: Based on historical data, average about 10 rebates per year, expect more with NFT ban. COM, IND, IRR increase during ban effect. Assume 15 rebates per year on ave. This is about 0.06% of accounts.

Results

Units: AF

Average Water Savings (afy)	
	17.608921
Lifetime Savings - Present Value ($)	
Utility	$320,237
Community	$320,237
Lifetime Costs - Present Value ($)	
Utility	$571,765
Community	$2,612,430
Benefit to Cost Ratio	
Utility	0.56
Community	0.12
Cost of Savings per Unit Volume ($/af)	
Utility	$1,249

End Use Savings Per Replacement

Method: Percent

	% Savings/Acct	Avg GPD/Acct
SF Irrigation	50.0%	73.6
MF Irrigation	50.0%	44.9
COM Irrigation	50.0%	128.8
IND Irrigation	50.0%	758.0
IRR Irrigation	50.0%	525.3
SF External Leakage	5.0%	6.2
MF External Leakage	5.0%	3.8
COM External Leakage	5.0%	9.2
IND External Leakage	5.0%	63.2
IRR External Leakage	5.0%	27.6

Targets

Target Method: Detailed

Enter Annual Targets Below

Costs

View: Utility Details

	Fixture Costs	Admin Costs	Util Total
2025	$26,274	$13	$26,287
2026	$37,416	$19	$37,434
2027	$86,156	$43	$86,199
2028	$76,138	$38	$76,176
2029	$43,698	$22	$43,720
2030	$32,956	$16	$32,973
2031	$28,666	$14	$28,680
2032	$22,391	$11	$22,403
2033	$22,374	$11	$22,385
2034	$22,356	$11	$22,367
2035	$22,338	$11	$22,349
2036	$22,320	$11	$22,331
2037	$22,302	$11	$22,314
2038	$22,284	$11	$22,296
2039	$22,266	$11	$22,278
2040	$22,248	$11	$22,259
2041	$22,239	$11	$22,251
2042	$22,233	$11	$22,245
2043	$22,227	$11	$22,239
2044	$22,221	$11	$22,233
2045	$22,215	$11	$22,227
2046	$22,209	$11	$22,221
2047	$22,203	$11	$22,215
2048	$22,197	$11	$22,208
2049	$22,191	$11	$22,202
2050	$22,185	$11	$22,196

Targets

View: Accounts

	SF	MF	COM	IND	IRR	Total
2025	9	4	2	0	0	15
2026	9	4	5	1	0	19
2027	9	4	20	2	4	39
2028	9	4	15	2	5	35
2029	9	4	5	0	4	22
2030	9	4	2	0	3	18
2031	9	4	1	0	2	16
2032	9	4	0	0	0	13
2033	9	4	0	0	0	13
2034	9	4	0	0	0	13
2035	9	4	0	0	0	13
2036	9	4	0	0	0	13
2037	9	4	0	0	0	13
2038	9	4	0	0	0	13
2039	9	4	0	0	0	13
2040	9	4	0	0	0	13
2041	9	4	0	0	0	13
2042	9	4	0	0	0	13
2043	9	4	0	0	0	13
2044	9	4	0	0	0	13
2045	9	4	0	0	0	13
2046	9	4	0	0	0	13
2047	9	4	0	0	0	13
2048	9	4	0	0	0	13
2049	9	4	0	0	0	13
2050	9	4	0	0	0	13

Water Savings

Units: afy

	Total Savings (afy)
2025	0.744266
2026	2.158218
2027	6.126729
2028	10.026778
2029	12.059711
2030	13.556950
2031	14.706066
2032	15.337068
2033	15.967234
2034	16.596549
2035	17.225023
2036	17.852641
2037	18.479412
2038	19.105334
2039	19.730403
2040	20.354607
2041	20.978220
2042	21.601593
2043	22.224725
2044	22.847616
2045	23.470264
2046	24.092671
2047	24.714834
2048	25.336753
2049	25.958429
2050	26.579859

Mulch Delivery Rebate

Overview

Name	Mulch Delivery Rebate
Abbr	MULCH
Category	Default
Measure Type	Standard Measure

Time Period

First Year	2025
Last Year	2050
Measure Length	26

Measure Life

Permanent	☐
Years	1
Repeat	☐

Fixture Cost per Device

	Utility	Customer	Fix/Acct
SF	$45.00	$20.00	1
MF	$45.00	$20.00	1
COM	$45.00	$20.00	1
IND	$45.00	$20.00	1
IRR	$45.00	$20.00	2
ADUSF	$45.00	$20.00	1

Administration Costs

Method:	Percent
Markup Percentage	28%

Description

Rebate of two deliveries of the County mulch per year. Mulch helps reduce evaporation and retain soil moisture, reducing irrigation needs. A maximum of two rebates is offered per customer per year.

Customer Classes

SF	MF	COM	IND	IRR	ADUSF
☑	☑	☑	☑	☑	☑

End Uses

	SF	MF	COM	IND	IRR	ADUSF
Toilets	☐	☐	☐	☐		☐
Urinals			☐	☐		
Lavatory Faucets	☐	☐	☐	☐		☐
Showers	☐	☐	☐	☐		☐
Dishwashers	☐	☐	☐	☐		☐
Clothes Washers	☐	☐	☐	☐		☐
Process			☐	☐		
Kitchen Spray Rinse			☐			
Internal Leakage	☐	☐	☐	☐		☐
Baths	☐	☐				☐
Other	☐	☐	☐	☐		☐
Irrigation	☑	☑	☑	☑	☑	☑
Pools	☐	☐				☐
Wash Down	☐	☐				☐
Car Washing	☐	☐				☐
External Leakage	☑	☑	☑	☑	☑	☑
Outdoor Other			☐	☐		
Non-Lavatory/Kitchen Faucets	☐	☐	☐	☐		☐
Cooling			☐	☐		

Comments

> Utility Cost: The rebate offered by the City is $45/delivery.
> Customer Cost: The total cost of delivery is $65, this is the remaining cost paid by the customer per delivery.
> Admin Cost: Estimated staff time requirements per rebate are approximately 0.25 hour of the Operations Assistant position, or a 28% markup on utility cost per rebate.
> End Use Savings: Mulch can reduce up to 25% of irrigation needs, assume lower savings to be conservative (since customers might not mulch a majority of their landscapes). Assume minimal savings for external leakage as irrigation use is reduced.
> Targets: From historical data, ~78 deliveries per year are rebated. This is about 0.3% of total accounts.

Results

Units	af
Average Water Savings (afy)	
	0.831301
Lifetime Savings - Present Value ($)	
Utility	$16,413
Community	$16,413
Lifetime Costs - Present Value ($)	
Utility	$86,746
Community	$116,867
Benefit to Cost Ratio	
Utility	0.19
Community	0.14
Cost of Savings per Unit Volume ($/af)	
Utility	$4,013

End Use Savings Per Replacement

Method:	Percent	
	% Savings/Acct	Avg GPD/Acct
SF Irrigation	10.0%	73.6
MF Irrigation	10.0%	44.9
COM Irrigation	10.0%	128.8
IRR Irrigation	10.0%	525.3
SF External Leakage	5.0%	6.2
MF External Leakage	5.0%	3.8
COM External Leakage	5.0%	9.2
IRR External Leakage	5.0%	27.6
IND Irrigation	10.0%	758.0
IND External Leakage	5.0%	63.2
ADUSF Irrigation	10.0%	101.6
ADUSF External Leakage	5.0%	8.6
IND Kitchen Spray Rinse	0.0%	0.0

Targets

Target Method:	Percentage
% of Accts Targeted / yr	0.280%
Only Effects New Accts	☐

Costs

View: Utility Details

	Fixture Costs	Admin Costs	Util Total
2025	$3,587	$1,004	$4,592
2026	$3,601	$1,008	$4,609
2027	$3,613	$1,012	$4,625
2028	$3,626	$1,015	$4,641
2029	$3,638	$1,019	$4,657
2030	$3,651	$1,022	$4,673
2031	$3,663	$1,026	$4,689
2032	$3,676	$1,029	$4,705
2033	$3,681	$1,031	$4,712
2034	$3,687	$1,032	$4,719
2035	$3,693	$1,034	$4,727
2036	$3,698	$1,036	$4,734
2037	$3,704	$1,037	$4,741
2038	$3,710	$1,039	$4,748
2039	$3,715	$1,040	$4,756
2040	$3,721	$1,042	$4,763
2041	$3,724	$1,043	$4,767
2042	$3,728	$1,044	$4,772
2043	$3,731	$1,045	$4,776
2044	$3,735	$1,046	$4,781
2045	$3,739	$1,047	$4,786
2046	$3,743	$1,048	$4,790
2047	$3,746	$1,049	$4,795
2048	$3,750	$1,050	$4,800
2049	$3,754	$1,051	$4,805
2050	$3,757	$1,052	$4,809

Targets

View: Accounts

	SF	MF	COM	IND	IRR	ADUSF	Total
2025	47	19	8	0	3	1	77
2026	47	19	8	0	3	1	77
2027	46	19	8	0	3	2	78
2028	46	19	8	0	3	2	78
2029	46	19	9	0	3	2	78
2030	46	19	9	0	3	2	79
2031	46	19	9	0	3	2	79
2032	46	19	9	0	3	2	79
2033	46	19	9	0	3	2	79
2034	45	19	9	0	3	3	79
2035	45	20	9	0	3	3	80
2036	45	20	9	0	3	3	80
2037	45	20	9	0	3	3	80
2038	45	20	9	0	3	3	80
2039	45	20	9	0	3	3	80
2040	44	20	10	0	3	4	80
2041	44	20	10	0	3	4	80
2042	44	20	10	0	3	4	80
2043	44	20	10	0	3	4	80
2044	44	20	10	0	3	4	80
2045	44	20	10	0	3	4	81
2046	44	20	10	0	3	4	81
2047	44	20	10	0	3	4	81
2048	44	20	10	0	3	4	81
2049	44	20	10	0	3	4	81
2050	44	20	10	0	3	4	81

Water Savings

Units: afy

	Total Savings (afy)
2025	0.795030
2026	0.799873
2027	0.804152
2028	0.808421
2029	0.812704
2030	0.816989
2031	0.821265
2032	0.825556
2033	0.827319
2034	0.829072
2035	0.830840
2036	0.832598
2037	0.834371
2038	0.836169
2039	0.837970
2040	0.839762
2041	0.840612
2042	0.841828
2043	0.843067
2044	0.844308
2045	0.845548
2046	0.846790
2047	0.848032
2048	0.849274
2049	0.850517
2050	0.851760

Sprinkler to Drip Irrigation Retrofit

Overview

Name	Sprinkler to Drip Irrigation Retrofit
Abbr	DRIP
Category	Default
Measure Type	Standard Measure

Time Period

First Year	2025
Last Year	2050
Measure Length	26

Measure Life

Permanent	☐
Years	5
Repeat	☐

Fixture Cost per Device

	Utility	Customer	Fix/Acct
SF	$100.00	$300.00	1
MF	$100.00	$300.00	1
COM	$100.00	$300.00	1
IND	$100.00	$300.00	1
IRR	$100.00	$300.00	1
ADUSF	$100.00	$300.00	1

Administration Costs

Method:	Percent
Markup Percentage	25%

Description

Provide rebate for customers to convert their sprinkler system to efficient drip irrigation. Eligible materials include: pressure regulator filter assembly, drip tubing, ¼" tubing, drip emitters, connectors, figure 8s, goof plugs, and stakes/staples. Does not include micro spray, irrigation valves, labor, or tax. Cannot be used in combination with the Sustainable Lawn Replacement rebate.

Customer Classes

SF	MF	COM	IND	IRR	ADUSF
☑	☑	☑	☑	☑	☑

End Uses

	SF	MF	COM	IND	IRR	ADUSF
Toilets	☐	☐	☐	☐		☐
Urinals			☐	☐		
Lavatory Faucets	☐	☐	☐	☐		☐
Showers	☐	☐	☐	☐		☐
Dishwashers	☐	☐	☐	☐		☐
Clothes Washers	☐	☐	☐	☐		☐
Process			☐	☐		
Kitchen Spray Rinse			☐			
Internal Leakage	☐	☐	☐	☐		☐
Baths	☐	☐				☐
Other	☐	☐	☐	☐		☐
Irrigation	☑	☑	☑	☑	☑	☐
Pools	☐	☐				☐
Wash Down	☐	☐				☐
Car Washing	☐	☐				☐
External Leakage	☑	☑	☑	☑	☑	☐
Outdoor Other			☐	☐		
Non-Lavatory/Kitchen Faucets	☐	☐	☐	☐		☐
Cooling			☐	☐		

Comments

> Utility Cost: Represents rebate amount offered by the City.

> Customer Cost: Costs for installation and materials can range from under $100 to over $500 depending on whether customers install their system on their own or hire a contractor. Assumed an average cost of $300 per participant.

> Admin Cost: Estimated staff time required to review receipts is approximately 0.5hours of the Operations Assistant position (at the fully burdened rate of $49/hour) or a 25% markup on the utility costs.

> End Use Savings: Drip irrgation can be up to 90% efficient, compared to sprinkler systems which are 65-75% efficient. Savings are for increased watering efficiency, assume lower savings to be conservative as watering practices will impact savings realized. Assume small additional savings on leakage from leaks that are captured and corrected in the process of switching to drip irrgation.

> Targets: Targets based on historical rebate data, assume similar levels of participation in the future.

Results

Units	AF
Average Water Savings (afy)	
	0.971772
Lifetime Savings - Present Value ($)	
Utility	$18,646
Community	$18,646
Lifetime Costs - Present Value ($)	
Utility	$32,579
Community	$110,768
Benefit to Cost Ratio	
Utility	0.57
Community	0.17
Cost of Savings per Unit Volume ($/af)	
Utility	$1,289

End Use Savings Per Replacement

Method:	Percent	
	% Savings/Acct	Avg GPD/Acct
SF Irrigation	15.0%	73.6
MF Irrigation	15.0%	44.9
COM Irrigation	15.0%	128.8
IND Irrigation	15.0%	758.0
SF External Leakage	5.0%	6.2
MF External Leakage	5.0%	3.8
COM External Leakage	5.0%	9.2
IND External Leakage	5.0%	63.2
IRR Irrigation	15.0%	525.3
IRR External Leakage	5.0%	27.6

Targets

Target Method:	Percentage
% of Accts Targeted / yr	0.050%
Only Effects New Accts	☐

Costs

View: Utility Details

	Fixture Costs	Admin Costs	Util Total
2025	$1,379	$345	$1,723
2026	$1,384	$346	$1,730
2027	$1,389	$347	$1,736
2028	$1,394	$348	$1,742
2029	$1,399	$350	$1,748
2030	$1,404	$351	$1,754
2031	$1,408	$352	$1,761
2032	$1,413	$353	$1,767
2033	$1,416	$354	$1,770
2034	$1,418	$354	$1,772
2035	$1,420	$355	$1,775
2036	$1,422	$356	$1,778
2037	$1,425	$356	$1,781
2038	$1,427	$357	$1,784
2039	$1,429	$357	$1,786
2040	$1,431	$358	$1,789
2041	$1,433	$358	$1,791
2042	$1,434	$359	$1,793
2043	$1,436	$359	$1,795
2044	$1,437	$359	$1,796
2045	$1,439	$360	$1,798
2046	$1,440	$360	$1,800
2047	$1,442	$360	$1,802
2048	$1,443	$361	$1,804
2049	$1,444	$361	$1,806
2050	$1,446	$361	$1,807

Targets

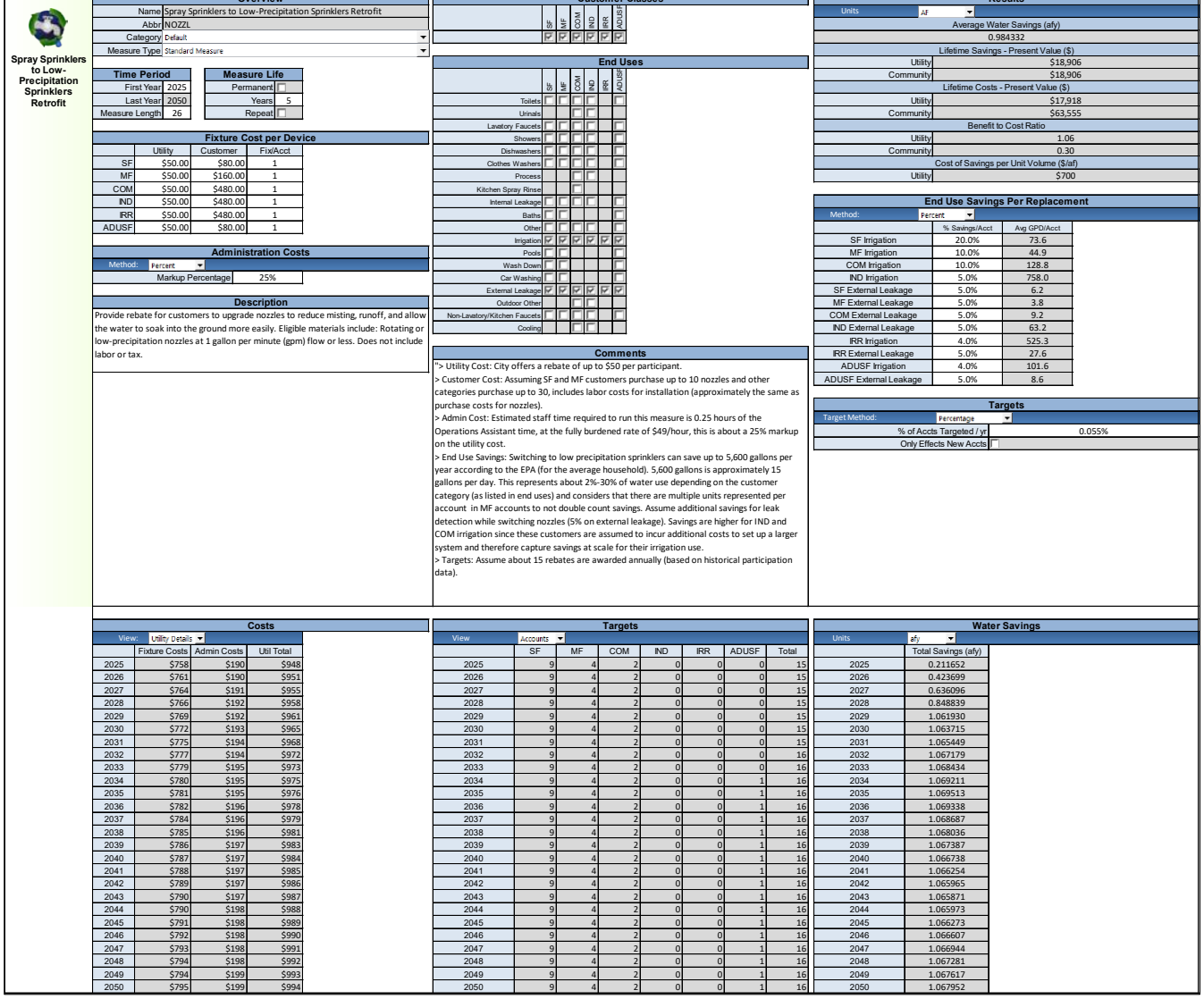
View: Accounts

	SF	MF	COM	IND	IRR	ADUSF	Total
2025	8	3	1	0	0	0	14
2026	8	3	1	0	0	0	14
2027	8	3	1	0	0	0	14
2028	8	3	1	0	0	0	14
2029	8	3	2	0	0	0	14
2030	8	3	2	0	0	0	14
2031	8	3	2	0	0	0	14
2032	8	3	2	0	0	0	14
2033	8	3	2	0	0	0	14
2034	8	3	2	0	0	0	14
2035	8	3	2	0	0	0	14
2036	8	4	2	0	0	1	14
2037	8	4	2	0	0	1	14
2038	8	4	2	0	0	1	14
2039	8	4	2	0	0	1	14
2040	8	4	2	0	0	1	14
2041	8	4	2	0	0	1	14
2042	8	4	2	0	0	1	14
2043	8	4	2	0	0	1	14
2044	8	4	2	0	0	1	14
2045	8	4	2	0	0	1	14
2046	8	4	2	0	0	1	14
2047	8	4	2	0	0	1	14
2048	8	4	2	0	0	1	14
2049	8	4	2	0	0	1	14
2050	8	4	2	0	0	1	14

Water Savings

Units: afy

	Total Savings (afy)
2025	0.206562
2026	0.413922
2027	0.621930
2028	0.830581
2029	1.039879
2030	1.043260
2031	1.046484
2032	1.049704
2033	1.052254
2034	1.054128
2035	1.055329
2036	1.055856
2037	1.055709
2038	1.055566
2039	1.055428
2040	1.055289
2041	1.055231
2042	1.055348
2043	1.055641
2044	1.056109
2045	1.056758
2046	1.057509
2047	1.058265
2048	1.059021
2049	1.059776
2050	1.060530



Spray Sprinklers to Low-Precipitation Sprinklers Retrofit

Overview

Name	Spray Sprinklers to Low-Precipitation Sprinklers Retrofit
Abbr	NOZZL
Category	Default
Measure Type	Standard Measure

Time Period

First Year	2025
Last Year	2050
Measure Length	26

Measure Life

Permanent	☐
Years	5
Repeat	☐

Fixture Cost per Device

	Utility	Customer	Fix/Acct
SF	$50.00	$80.00	1
MF	$50.00	$160.00	1
COM	$50.00	$480.00	1
IND	$50.00	$480.00	1
IRR	$50.00	$480.00	1
ADUSF	$50.00	$80.00	1

Administration Costs

Method: Percent

Markup Percentage	25%

Description

Provide rebate for customers to upgrade nozzles to reduce misting, runoff, and allow the water to soak into the ground more easily. Eligible materials include: Rotating or low-precipitation nozzles at 1 gallon per minute (gpm) flow or less. Does not include labor or tax.

Customer Classes

SF	MF	COM	IND	IRR	ADUSF
☑	☑	☑	☑	☑	☑

End Uses

	SF	MF	COM	IND	IRR	ADUSF
Toilets	☐	☐	☐			☐
Urinals			☐			
Lavatory Faucets	☐	☐	☐			☐
Showers	☐	☐	☐			☐
Dishwashers	☐	☐	☐			☐
Clothes Washers	☐	☐	☐			☐
Process			☐			
Kitchen Spray Rinse			☐			
Internal Leakage	☐	☐	☐			☐
Baths	☐	☐				☐
Other	☐	☐	☐			☐
Irrigation	☑	☑	☑	☑	☑	☑
Pools	☐	☐				☐
Wash Down	☐	☐				☐
Car Washing	☐	☐				☐
External Leakage	☑	☑	☑	☑	☑	☑
Outdoor Other			☐	☐		
Non-Lavatory/Kitchen Faucets	☐	☐	☐			☐
Cooling			☐	☐		

Comments

"> Utility Cost: City offers a rebate of up to $50 per participant.
> Customer Cost: Assuming SF and MF customers purchase up to 10 nozzles and other categories purchase up to 30, includes labor costs for installation (approximately the same as purchase costs for nozzles).
> Admin Cost: Estimated staff time required to run this measure is 0.25 hours of the Operations Assistant time, at the fully burdened rate of $49/hour, this is about a 25% markup on the utility cost.
> End Use Savings: Switching to low precipitation sprinklers can save up to 5,600 gallons per year according to the EPA (for the average household). 5,600 gallons is approximately 15 gallons per day. This represents about 2%-30% of water use depending on the customer category (as listed in end uses) and considers that there are multiple units represented per account in MF accounts to not double count savings. Assume additional savings for leak detection while switching nozzles (5% on external leakage). Savings are higher for IND and COM irrigation since these customers are assumed to incur additional costs to set up a larger system and therefore capture savings at scale for their irrigation use.
> Targets: Assume about 15 rebates are awarded annually (based on historical participation data).

Results

Units: AF

Average Water Savings (afy)	
	0.984332
Lifetime Savings - Present Value ($)	
Utility	$18,906
Community	$18,906
Lifetime Costs - Present Value ($)	
Utility	$17,918
Community	$63,555
Benefit to Cost Ratio	
Utility	1.06
Community	0.30
Cost of Savings per Unit Volume ($/af)	
Utility	$700

End Use Savings Per Replacement

Method: Percent

	% Savings/Acct	Avg GPD/Acct
SF Irrigation	20.0%	73.6
MF Irrigation	10.0%	44.9
COM Irrigation	10.0%	128.8
IND Irrigation	5.0%	758.0
SF External Leakage	5.0%	6.2
MF External Leakage	5.0%	3.8
COM External Leakage	5.0%	9.2
IND External Leakage	5.0%	63.2
IRR Irrigation	4.0%	525.3
IRR External Leakage	5.0%	27.6
ADUSF Irrigation	4.0%	101.6
ADUSF External Leakage	5.0%	8.6

Targets

Target Method: Percentage

% of Accts Targeted / yr	0.055%
Only Effects New Accts	☐

Costs

View: Utility Details

	Fixture Costs	Admin Costs	Util Total
2025	$758	$190	$948
2026	$761	$190	$951
2027	$764	$191	$955
2028	$766	$192	$958
2029	$769	$192	$961
2030	$772	$193	$965
2031	$775	$194	$968
2032	$777	$194	$972
2033	$779	$195	$973
2034	$780	$195	$975
2035	$781	$195	$976
2036	$782	$196	$978
2037	$784	$196	$979
2038	$785	$196	$981
2039	$786	$197	$983
2040	$787	$197	$984
2041	$788	$197	$985
2042	$789	$197	$986
2043	$790	$197	$987
2044	$790	$198	$988
2045	$791	$198	$989
2046	$792	$198	$990
2047	$793	$198	$991
2048	$794	$198	$992
2049	$794	$199	$993
2050	$795	$199	$994

Targets

View: Accounts

	SF	MF	COM	IND	IRR	ADUSF	Total
2025	9	4	2	0	0	0	15
2026	9	4	2	0	0	0	15
2027	9	4	2	0	0	0	15
2028	9	4	2	0	0	0	15
2029	9	4	2	0	0	0	15
2030	9	4	2	0	0	0	15
2031	9	4	2	0	0	0	15
2032	9	4	2	0	0	0	16
2033	9	4	2	0	0	0	16
2034	9	4	2	0	0	1	16
2035	9	4	2	0	0	1	16
2036	9	4	2	0	0	1	16
2037	9	4	2	0	0	1	16
2038	9	4	2	0	0	1	16
2039	9	4	2	0	0	1	16
2040	9	4	2	0	0	1	16
2041	9	4	2	0	0	1	16
2042	9	4	2	0	0	1	16
2043	9	4	2	0	0	1	16
2044	9	4	2	0	0	1	16
2045	9	4	2	0	0	1	16
2046	9	4	2	0	0	1	16
2047	9	4	2	0	0	1	16
2048	9	4	2	0	0	1	16
2049	9	4	2	0	0	1	16
2050	9	4	2	0	0	1	16

Water Savings

Units: afy

	Total Savings (afy)
2025	0.211652
2026	0.423699
2027	0.636096
2028	0.848839
2029	1.061930
2030	1.063715
2031	1.065449
2032	1.067179
2033	1.068434
2034	1.069211
2035	1.069513
2036	1.069338
2037	1.068687
2038	1.068036
2039	1.067387
2040	1.066738
2041	1.066254
2042	1.065965
2043	1.065871
2044	1.065973
2045	1.066273
2046	1.066607
2047	1.066944
2048	1.067281
2049	1.067617
2050	1.067952

Leak Repair Rebate

Overview	
Name	Leak Repair Rebate
Abbr	LK_REP
Category	Default
Measure Type	Standard Measure

Time Period	
First Year	2032
Last Year	2050
Measure Length	19

Measure Life	
Permanent	☐
Years	5
Repeat	☐

Fixture Cost per Device

	Utility	Customer	Fix/Acct
SF	$500.00	$300.00	1
MF	$500.00	$300.00	1

Administration Costs

Method:	Percent
Markup Percentage	12%

Description

Customer leaks can go uncorrected at properties where owners are least able to pay costs of repair. This measure will provide a rebate to cover part of the cost, with a higher rebate amount for income-qualified account holders.

Customer Classes

SF	MF	COM	IND	IRR	ADUSF
☑	☑	☐	☐	☐	☐

End Uses

	SF	MF	COM	IND	IRR	ADUSF
Toilets	☐	☐				
Urinals						
Lavatory Faucets	☐	☐				
Showers	☐	☐				
Dishwashers	☐	☐				
Clothes Washers	☐	☐				
Process						
Kitchen Spray Rinse						
Internal Leakage	☑	☑				
Baths	☐	☐				
Other	☐	☐				
Irrigation	☐	☐				
Pools	☐	☐				
Wash Down	☐	☐				
Car Washing	☐	☐				
External Leakage	☑	☑				
Outdoor Other						
Non-Lavatory/Kitchen Faucets	☐	☐				
Cooling						

Comments

> Utility Cost: City is offering a maximum rebate of $500.
> Customer Cost: Income qualifying customers receive up to the maximum rebate. Costs will vary depending on the severity of the leak, assume since targeting high users that customer costs will range from $100-$500 in addition to the rebate awarded. Use an average customer cost of $300.
> Admin Cost: Estimate that 0.5 hours of the Operations Assistant time and 0.4 hours of the Analyst II position are required per rebate to run this measure, at their respective fully burdened rates of $49/hour and $84/hour, this is a cost of $60/rebate, or a 12% markup on the utility cost.
> End Use Savings: Assume target high users where available, to achieve savings on users with 2-3x the average GPDA. Assume savings on leaks is 70% at properties that participate, and therefore ~210% for high user accounts. Although leak fixes are permanent for leaks resolved through this program, other leaks may arise (savings life is ~5 years on these significant leaks for which significant costs are incurred).
> Targets: Assume ~50 rebates awarded per year, approximately, and that approximately 20 of these are for MF.

Results

Units	AF
Average Water Savings (afy)	11.639262
Lifetime Savings - Present Value ($)	
Utility	$199,259
Community	$324,553
Lifetime Costs - Present Value ($)	
Utility	$347,090
Community	$533,031
Benefit to Cost Ratio	
Utility	0.57
Community	0.61
Cost of Savings per Unit Volume ($/af)	
Utility	$1,147

End Use Savings Per Replacement

Method:	Percent	
	% Savings/Acct	Avg GPD/Acct
SF Internal Leakage	210.0%	16.6
SF External Leakage	210.0%	6.2
MF Internal Leakage	210.0%	34.2
MF External Leakage	210.0%	3.8

Targets

Target Method:	Detailed
Enter Annual Targets Below	

Costs

View: Utility Details

	Fixture Costs	Admin Costs	Util Total
2025	$0	$0	$0
2026	$0	$0	$0
2027	$0	$0	$0
2028	$0	$0	$0
2029	$0	$0	$0
2030	$0	$0	$0
2031	$0	$0	$0
2032	$25,207	$3,025	$28,232
2033	$25,247	$3,030	$28,276
2034	$25,286	$3,034	$28,321
2035	$25,826	$3,099	$28,925
2036	$25,866	$3,104	$28,970
2037	$25,906	$3,109	$29,015
2038	$25,946	$3,114	$29,060
2039	$25,987	$3,118	$29,105
2040	$26,027	$3,123	$29,150
2041	$26,041	$3,125	$29,166
2042	$26,055	$3,127	$29,182
2043	$26,069	$3,128	$29,198
2044	$26,084	$3,130	$29,214
2045	$26,098	$3,132	$29,230
2046	$26,112	$3,133	$29,246
2047	$26,126	$3,135	$29,262
2048	$26,141	$3,137	$29,278
2049	$26,155	$3,139	$29,294
2050	$26,169	$3,140	$29,310

Targets

View: Accounts

	SF	MF	Total
2025	0	0	0
2026	0	0	0
2027	0	0	0
2028	0	0	0
2029	0	0	0
2030	0	0	0
2031	0	0	0
2032	29	21	50
2033	29	21	50
2034	29	22	51
2035	30	22	52
2036	30	22	52
2037	30	22	52
2038	30	22	52
2039	30	22	52
2040	30	22	52
2041	30	22	52
2042	30	22	52
2043	30	22	52
2044	30	22	52
2045	30	22	52
2046	30	22	52
2047	30	22	52
2048	30	22	52
2049	30	22	52
2050	30	22	52

Water Savings

Units: afy

	Total Savings (afy)
2025	0.000000
2026	0.000000
2027	0.000000
2028	0.000000
2029	0.000000
2030	0.000000
2031	0.000000
2032	3.468589
2033	6.944253
2034	10.427013
2035	13.970509
2036	17.521139
2037	17.610335
2038	17.699630
2039	17.789024
2040	17.824897
2041	17.856160
2042	17.882798
2043	17.904795
2044	17.922135
2045	17.934802
2046	17.947489
2047	17.960197
2048	17.972926
2049	17.985675
2050	17.998445

Residential Washer Rebate

Overview

Name	Residential Washer Rebate
Abbr	HECW
Category	Default
Measure Type	Standard Measure

Time Period

First Year	2025
Last Year	2029
Measure Length	5

Measure Life

Permanent	☐
Years	12
Repeat	☐

Fixture Cost per Device

	Utility	Customer	Fix/Acct
SF	$190.00	$1,000.00	1
MF	$190.00	$1,000.00	1

Administration Costs

Method: Percent

Markup Percentage	0%

Description

Offer a rebate for a high efficiency clothes washer. Only applicable on eligible models and for replacing an existing high-water using washer (with an integrated water factor of 6.5 or greater).

Customer Classes

SF	MF	COM	IND	IRR	ADUSF
☑	☑	☐	☐	☐	☐

End Uses

	SF	MF	COM	IND	IRR	ADUSF
Toilets	☐	☐				
Urinals						
Lavatory Faucets	☐	☐				
Showers	☐	☐				
Dishwashers	☐	☐				
Clothes Washers	☑	☑				
Process						
Kitchen Spray Rinse						
Internal Leakage	☐	☐				
Baths	☐	☐				
Other	☐	☐				
Irrigation	☐	☐				
Pools	☐	☐				
Wash Down	☐	☐				
Car Washing	☐	☐				
External Leakage	☐	☐				
Outdoor Other						
Non-Lavatory/Kitchen Faucets	☐	☐				
Cooling						

Comments

> Utility Cost: The City administers this rebate through CalWEP, total costs are approximately $190/rebate, and include admin time by CalWEP staff to run this measure.
> Customer Cost: Based on historical data, remaining cost to customer for purchase and installation is approximately $1,000 on average per rebate.
> Admin Cost: No admin time is required from the City, as CalWEP manages the program.
> End Use Savings: Switching from a washing machines with a medium efficiency level (integrated water factor of 9.5 or greater) to a high efficiency washing machine (IWF of 3.7 or less) represents approximately 35% of water savings for this end use. For MF, there are 3 clothes washers per account (per WUDS), savings are divided by 3 to get savings for replacing 1 clothes washer (11% for MF).
> Targets: Based on historical data, targeting approximately 50 accounts per year (offering 1 rebate per account).

Results

Units: AF

Average Water Savings (afy)	
	0.635263
Lifetime Savings - Present Value ($)	
Utility	$14,416
Community	$56,038
Lifetime Costs - Present Value ($)	
Utility	$41,909
Community	$262,484
Benefit to Cost Ratio	
Utility	0.34
Community	0.21
Cost of Savings per Unit Volume ($/af)	
Utility	$2,537

End Use Savings Per Replacement

Method: Percent

	% Savings/Acct	Avg GPD/Acct
SF Clothes Washers	35.0%	17.8
MF Clothes Washers	11.0%	44.4

Targets

Target Method: Percentage

% of Accts Targeted / yr	0.200%
Only Effects New Accts	☐

Costs

View: Utility Details

	Fixture Costs	Admin Costs	Util Total
2025	$8,908	$0	$8,908
2026	$8,897	$0	$8,897
2027	$8,886	$0	$8,886
2028	$8,874	$0	$8,874
2029	$8,863	$0	$8,863
2030	$0	$0	$0
2031	$0	$0	$0
2032	$0	$0	$0
2033	$0	$0	$0
2034	$0	$0	$0
2035	$0	$0	$0
2036	$0	$0	$0
2037	$0	$0	$0
2038	$0	$0	$0
2039	$0	$0	$0
2040	$0	$0	$0
2041	$0	$0	$0
2042	$0	$0	$0
2043	$0	$0	$0
2044	$0	$0	$0
2045	$0	$0	$0
2046	$0	$0	$0
2047	$0	$0	$0
2048	$0	$0	$0
2049	$0	$0	$0
2050	$0	$0	$0

Targets

View: Accounts

	SF	MF	Total
2025	33	13	47
2026	33	14	47
2027	33	14	47
2028	33	14	47
2029	33	14	47
2030	0	0	0
2031	0	0	0
2032	0	0	0
2033	0	0	0
2034	0	0	0
2035	0	0	0
2036	0	0	0
2037	0	0	0
2038	0	0	0
2039	0	0	0
2040	0	0	0
2041	0	0	0
2042	0	0	0
2043	0	0	0
2044	0	0	0
2045	0	0	0
2046	0	0	0
2047	0	0	0
2048	0	0	0
2049	0	0	0
2050	0	0	0

Water Savings

Units: afy

	Total Savings (afy)
2025	0.306587
2026	0.603215
2027	0.890029
2028	1.167160
2029	1.434725
2030	1.413443
2031	1.393804
2032	1.375690
2033	1.358992
2034	1.343607
2035	1.329442
2036	1.316408
2037	1.042730
2038	0.774849
2039	0.512138
2040	0.254027
2041	0.000000
2042	0.000000
2043	0.000000
2044	0.000000
2045	0.000000
2046	0.000000
2047	0.000000
2048	0.000000
2049	0.000000
2050	0.000000

Schools Education

Overview

Name	Schools Education
Abbr	SCHOOL
Category	Default
Measure Type	Standard Measure

Time Period

First Year	2025
Last Year	2050
Measure Length	26

Measure Life

Permanent	☐
Years	3
Repeat	☐

Fixture Cost per Device

	Utility	Customer	Fix/Acct
SF	$21.00	$0.50	1
MF	$21.00	$0.50	1

Administration Costs

Method: Fixed

Annual Admin Costs	$3,660

Description

This measure includes the City's school education initiatives: 1) The LivingWise Program wherein 6th garde students receive a kit containing high-efficiency water and energy fixtures to install within their homes. 2) Musical assemblies for K-6 grade students to promote water efficiency and conservation. 3) In-class presentations to K-6 grade students about where our water comes from and how to conserve it. In addition, this measure includes the WaterWise High School Video Contest

Customer Classes

SF	MF	COM	IND	IRR	ADUSF
☑	☑	☐	☐	☐	☐

End Uses

	SF	MF	COM	IND	IRR	ADUSF
Toilets	☑	☑				
Urinals						
Lavatory Faucets	☑	☑				
Showers	☑	☑				
Dishwashers	☑	☑				
Clothes Washers	☑	☑				
Process						
Kitchen Spray Rinse						
Internal Leakage	☑	☑				
Baths	☑	☑				
Other	☑	☑				
Irrigation	☑	☑				
Pools	☑	☑				
Wash Down	☑	☑				
Car Washing	☑	☑				
External Leakage	☑	☑				
Outdoor Other						
Non-Lavatory/Kitchen Faucets	☑	☑				
Cooling						

Comments

> Utility Cost: Reflects costs per student for in-class presentation, assembly, and LivingWise kit.
> Customer Cost: Minimal customer costs as savings expected to be from behavioral changes an fixture upgrades from fixtures included in the kit (free to the customer).
> Admin Cost: Fixed cost of $3,660, or 40 hours of staff time from the Analyst II position at the fully burdened rate of $84/hour.
> End Use Savings: Assume savings similar to public education, with a focus on savings on end uses with higher user dependance that are more impacted by behavioral changes (2% savings). Assume small additional savings (1%) since school assembly participants might be higher than 6th grade targets for the LivingWise kit and in-class presentations, and since targets for presentations is ~1,000 according to SB. Total savings is ~3%. However, estimate at 1% for MF units since there are 3 dwelling units per account and only targeting 1.
> Targets: 1,800 students per year for all activities.

Results

Units: AF

Average Water Savings (afy)	
29.573106	
Lifetime Savings - Present Value ($)	
Utility	$580,794
Community	$1,146,427
Lifetime Costs - Present Value ($)	
Utility	$764,615
Community	$781,217
Benefit to Cost Ratio	
Utility	0.76
Community	1.47
Cost of Savings per Unit Volume ($/af)	
Utility	$994

End Use Savings Per Replacement

Method: Percent

	% Savings/Acct	Avg GPD/Acct
MF Toilets	1.0%	65.1
MF Lavatory Faucets	1.0%	17.8
MF Showers	1.0%	56.0
MF Dishwashers	1.0%	4.8
MF Clothes Washers	1.0%	44.4
MF Internal Leakage	1.0%	34.2
MF Baths	1.0%	5.9
MF Other	1.0%	8.1
MF Irrigation	1.0%	44.9
MF Pools	1.0%	1.1
MF Wash Down	1.0%	2.2
MF Car Washing	1.0%	2.2
MF External Leakage	1.0%	3.8
MF Non-Lavatory/Kitchen Faucets	1.0%	32.8
SF Toilets	3.0%	20.1
SF Lavatory Faucets	3.0%	7.8
SF Showers	3.0%	27.2
SF Dishwashers	3.0%	2.4
SF Clothes Washers	3.0%	17.8
SF Internal Leakage	3.0%	16.6
SF Baths	3.0%	3.6
SF Other	3.0%	7.6
SF Irrigation	3.0%	73.6
SF Pools	3.0%	1.8
SF Wash Down	3.0%	3.5
SF Car Washing	3.0%	3.5
SF External Leakage	3.0%	6.2
SF Non-Lavatory/Kitchen Faucets	3.0%	15.4

Targets

Target Method: Percentage

% of Accts Targeted / yr	7.800%
Only Effects New Accts	☐

Costs

View: Utility Details

	Fixture Costs	Admin Costs	Util Total
2025	$38,400	$3,660	$42,060
2026	$38,350	$3,660	$42,010
2027	$38,301	$3,660	$41,961
2028	$38,252	$3,660	$41,912
2029	$38,202	$3,660	$41,862
2030	$38,153	$3,660	$41,813
2031	$38,103	$3,660	$41,763
2032	$38,053	$3,660	$41,713
2033	$38,003	$3,660	$41,663
2034	$37,952	$3,660	$41,612
2035	$37,902	$3,660	$41,562
2036	$37,852	$3,660	$41,512
2037	$37,801	$3,660	$41,461
2038	$37,750	$3,660	$41,410
2039	$37,699	$3,660	$41,359
2040	$37,648	$3,660	$41,308
2041	$37,630	$3,660	$41,290
2042	$37,612	$3,660	$41,272
2043	$37,594	$3,660	$41,254
2044	$37,576	$3,660	$41,236
2045	$37,558	$3,660	$41,218
2046	$37,540	$3,660	$41,200
2047	$37,522	$3,660	$41,182
2048	$37,504	$3,660	$41,164
2049	$37,486	$3,660	$41,146
2050	$37,468	$3,660	$41,128

Targets

View: Accounts

	SF	MF	Total
2025	1,304	525	1,829
2026	1,299	527	1,826
2027	1,295	529	1,824
2028	1,291	531	1,822
2029	1,286	533	1,819
2030	1,282	535	1,817
2031	1,278	537	1,814
2032	1,273	539	1,812
2033	1,269	541	1,810
2034	1,264	543	1,807
2035	1,260	545	1,805
2036	1,256	547	1,802
2037	1,251	549	1,800
2038	1,247	551	1,798
2039	1,242	553	1,795
2040	1,238	555	1,793
2041	1,236	556	1,792
2042	1,235	556	1,791
2043	1,233	557	1,790
2044	1,232	558	1,789
2045	1,230	558	1,788
2046	1,228	559	1,788
2047	1,227	560	1,787
2048	1,225	561	1,786
2049	1,224	561	1,785
2050	1,222	562	1,784

Water Savings

Units: afy

	Total Savings (afy)
2025	10.976472
2026	21.801142
2027	32.486388
2028	32.248492
2029	32.020943
2030	31.809535
2031	31.613069
2032	31.430511
2033	31.260995
2034	31.103812
2035	30.958410
2036	30.819966
2037	30.687849
2038	30.553393
2039	30.423678
2040	30.299177
2041	30.182907
2042	30.085752
2043	30.007300
2044	29.932575
2045	29.861259
2046	29.793065
2047	29.727731
2048	29.665018
2049	29.604708
2050	29.546602

CII Water Survey

Overview

Name	CII Water Survey
Abbr	CII_SUR
Category	Default
Measure Type	Standard Measure

Time Period

First Year	2025
Last Year	2050
Measure Length	26

Measure Life

Permanent	☐
Years	7
Repeat	☐

Fixture Cost per Device

	Utility	Customer	Fix/Acct
COM	$250.00	$100.00	1
IND	$250.00	$100.00	1

Administration Costs

Method: Fixed

Annual Admin Costs	$7,000

Description

City staff will conduct a comprehensive water survey of fixtures and appliances and provide recommendations as to how the customer can become more water efficient and save money. Participation in the survey is a requirement for eligibility in the Customized CII Incentive measure.

Customer Classes

SF	MF	COM	IND	IRR	ADUSF
☐	☐	☑	☑	☐	☐

End Uses

	SF	MF	COM	IND	IRR	ADUSF
Toilets			☐	☐		
Urinals			☐	☐		
Lavatory Faucets			☑	☑		
Showers			☑	☑		
Dishwashers			☑	☑		
Clothes Washers			☐	☐		
Process			☑	☑		
Kitchen Spray Rinse			☑			
Internal Leakage			☑	☑		
Baths						
Other			☐	☐		
Irrigation			☑	☑		
Pools						
Wash Down						
Car Washing						
External Leakage			☑	☑		
Outdoor Other			☐	☐		
Non-Lavatory/Kitchen Faucets			☑	☑		
Cooling			☐	☐		

Comments

> Utility Cost: Assume $5,000 for MWM support. If there are approximately 20 participants, this is about a $250 cost per participant.
> Customer Cost: Assume costs are for fixture upgrades or to repair small leaks, average at $100.
> Admin Cost: This measure takes about 5 hours of WR Specialist time (including one hour to coordinate with participants), this is approximately $350 at the fully burdened rate of $70/hour. Fixed annual cost is for approximately 20 rebates per year.
> End Use Savings: Assume savings are from small fixture upgrades on average (5%), irrigation savings from identification of wasteful practices (5%), correction of leaks (5%) and that some customers will achieve higher savings from larger fixture upgrades or optimization of their commercial practices (5%). However, assume these are high user accounts with water use 3-5x the average GPDA, therefore savings are ~20% on indoor end uses, 5% savings for irrigation, and 5% savings for process use.
> Targets: Based on historical data, there has not been much participation in this measure, assuming additional efforts are undertaken to identify and recruit participants.

Results

Units: AF

Average Water Savings (afy)	
3.644430	
Lifetime Savings - Present Value ($)	
Utility	$68,174
Community	$215,445
Lifetime Costs - Present Value ($)	
Utility	$180,527
Community	$201,234
Benefit to Cost Ratio	
Utility	0.38
Community	1.07
Cost of Savings per Unit Volume ($/af)	
Utility	$1,905

End Use Savings Per Replacement

Method: Percent

	% Savings/Acct	Avg GPD/Acct
COM Lavatory Faucets	20.0%	20.3
IND Lavatory Faucets	20.0%	124.9
COM Showers	20.0%	36.6
IND Showers	20.0%	49.6
COM Dishwashers	20.0%	24.4
IND Dishwashers	20.0%	66.1
COM Process	5.0%	81.3
IND Process	5.0%	495.6
COM Kitchen Spray Rinse	20.0%	20.3
COM Internal Leakage	20.0%	40.7
IND Internal Leakage	20.0%	165.2
COM Irrigation	5.0%	128.8
IND Irrigation	5.0%	758.0
COM External Leakage	20.0%	9.2
IND External Leakage	20.0%	63.2
COM Non-Lavatory/Kitchen Faucets	20.0%	20.3
IND Non-Lavatory/Kitchen Faucets	20.0%	106.4
IND Kitchen Spray Rinse	20.0%	0.0

Targets

Target Method: Percentage

% of Accts Targeted / yr	0.340%
Only Effects New Accts	☐

Costs

View: Utility Details

	Fixture Costs	Admin Costs	Util Total
2025	$2,377	$7,000	$9,377
2026	$2,440	$7,000	$9,440
2027	$2,503	$7,000	$9,503
2028	$2,566	$7,000	$9,566
2029	$2,629	$7,000	$9,629
2030	$2,692	$7,000	$9,692
2031	$2,755	$7,000	$9,755
2032	$2,818	$7,000	$9,818
2033	$2,834	$7,000	$9,834
2034	$2,850	$7,000	$9,850
2035	$2,866	$7,000	$9,866
2036	$2,882	$7,000	$9,882
2037	$2,898	$7,000	$9,898
2038	$2,915	$7,000	$9,915
2039	$2,932	$7,000	$9,932
2040	$2,948	$7,000	$9,948
2041	$2,965	$7,000	$9,965
2042	$2,981	$7,000	$9,981
2043	$2,999	$7,000	$9,999
2044	$3,016	$7,000	$10,016
2045	$3,033	$7,000	$10,033
2046	$3,050	$7,000	$10,050
2047	$3,067	$7,000	$10,067
2048	$3,084	$7,000	$10,084
2049	$3,101	$7,000	$10,101
2050	$3,118	$7,000	$10,118

Targets

View: Accounts

	COM	IND	Total
2025	9	0	10
2026	10	0	10
2027	10	0	10
2028	10	0	10
2029	10	0	11
2030	11	0	11
2031	11	0	11
2032	11	0	11
2033	11	0	11
2034	11	0	11
2035	11	0	11
2036	11	0	12
2037	11	0	12
2038	11	0	12
2039	12	0	12
2040	12	0	12
2041	12	0	12
2042	12	0	12
2043	12	0	12
2044	12	0	12
2045	12	0	12
2046	12	0	12
2047	12	0	12
2048	12	0	12
2049	12	0	12
2050	12	0	12

Water Savings

Units: afy

	Total Savings (afy)
2025	0.504116
2026	1.019353
2027	1.545953
2028	2.084114
2029	2.634083
2030	3.196065
2031	3.770217
2032	3.858564
2033	3.935050
2034	4.001910
2035	4.059247
2036	4.107027
2037	4.145308
2038	4.174260
2039	4.193841
2040	4.213794
2041	4.233960
2042	4.254499
2043	4.275551
2044	4.297039
2045	4.318856
2046	4.340989
2047	4.363456
2048	4.386215
2049	4.409252
2050	4.432463

Irrigation Evaluation

Overview

Name	Irrigation Evaluation
Abbr	IRR_EVAL
Category	Default
Measure Type	Standard Measure

Time Period	
First Year	2030
Last Year	2050
Measure Length	21

Measure Life	
Permanent	☐
Years	7
Repeat	☐

Fixture Cost per Device

	Utility	Customer	Fix/Acct
SF	$800.00	$250.00	1
MF	$800.00	$250.00	1
COM	$800.00	$250.00	1
IND	$800.00	$250.00	1
IRR	$800.00	$250.00	1

Administration Costs

Method:	Fixed
Annual Admin Costs	$2,555

Description

All public and private irrigators of large landscapes would be eligible for free landscape water surveys upon request. Normally those with high water use would be targeted and provided a customized report.

Customer Classes

SF	MF	COM	IND	IRR	ADUSF
☑	☑	☑	☑	☑	☐

End Uses

	SF	MF	COM	IND	IRR	ADUSF
Toilets	☐	☐	☐	☐		
Urinals	☐	☐	☐	☐		
Lavatory Faucets	☐	☐	☐	☐		
Showers	☐	☐	☐	☐		
Dishwashers	☐	☐	☐	☐		
Clothes Washers	☐	☐	☐	☐		
Process			☐	☐		
Kitchen Spray Rinse			☐			
Internal Leakage	☐	☐	☐	☐		
Baths	☐	☐				
Other	☐	☐	☐	☐		
Irrigation	☑	☑	☑	☑	☑	
Pools	☐	☐				
Wash Down	☐	☐				
Car Washing	☐	☐				
External Leakage	☑	☑	☑	☑	☑	
Outdoor Other			☐	☐		
Non-Lavatory/Kitchen Faucets	☐	☐	☐	☐		
Cooling			☐	☐		

Comments

> Utility Cost: Costs assume program is contracted through a regional partner and includes costs for inspection and administrative time to run the measure (charged by the contractor).
> Admin Cost: Admin costs to run the measure are included in the Utility cost. This admin cost represents the estimate of overall supervisory/management time for the Analyst II position (~20 hours per year at the fully burdened rate of $84/hour) in addition to 0.25 hours/survey from the WR Specialist position (at the fully burdened rate of $70/hour)
> End Use Savings: Assume savings are for irrigation and leak corrections, savings range for irrigation upgrades, i.e. for nozzle rebate and drip irrigation rebate are ~15%, with 5% savings for leak corrections. However, assume accounts targeted have water use 3-5x the average GPDA, so savings are ~45% on irrigation and ~15% on leaks.
> Targets: Assume target approximately 50 accounts per year.

Results

Units	AF
Average Water Savings (afy)	
	11.053243
Lifetime Savings - Present Value ($)	
Utility	$192,939
Community	$192,939
Lifetime Costs - Present Value ($)	
Utility	$574,646
Community	$743,302
Benefit to Cost Ratio	
Utility	0.34
Community	0.26
Cost of Savings per Unit Volume ($/af)	
Utility	$2,000

End Use Savings Per Replacement

Method:	Percent	
	% Savings/Acct	Avg GPD/Acct
SF Irrigation	45.0%	73.6
MF Irrigation	45.0%	44.9
COM Irrigation	45.0%	128.8
IND Irrigation	45.0%	758.0
IRR Irrigation	45.0%	525.3
SF External Leakage	15.0%	6.2
MF External Leakage	15.0%	3.8
COM External Leakage	15.0%	9.2
IND External Leakage	15.0%	63.2
IRR External Leakage	15.0%	27.6

Targets

Target Method:	Percentage
% of Accts Targeted / yr	0.180%
Only Effects New Accts	☐

Costs

View: Utility Details

	Fixture Costs	Admin Costs	Util Total
2025	$0	$0	$0
2026	$0	$0	$0
2027	$0	$0	$0
2028	$0	$0	$0
2029	$0	$0	$0
2030	$39,402	$2,555	$41,957
2031	$39,465	$2,555	$42,020
2032	$39,528	$2,555	$42,083
2033	$39,511	$2,555	$42,066
2034	$39,494	$2,555	$42,049
2035	$39,477	$2,555	$42,032
2036	$39,460	$2,555	$42,015
2037	$39,443	$2,555	$41,998
2038	$39,426	$2,555	$41,981
2039	$39,410	$2,555	$41,965
2040	$39,393	$2,555	$41,948
2041	$39,402	$2,555	$41,957
2042	$39,414	$2,555	$41,969
2043	$39,428	$2,555	$41,983
2044	$39,441	$2,555	$41,996
2045	$39,454	$2,555	$42,009
2046	$39,467	$2,555	$42,022
2047	$39,480	$2,555	$42,035
2048	$39,493	$2,555	$42,048
2049	$39,506	$2,555	$42,061
2050	$39,519	$2,555	$42,074

Targets

View: Accounts

	SF	MF	COM	IND	IRR	Total
2025	0	0	0	0	0	0
2026	0	0	0	0	0	0
2027	0	0	0	0	0	0
2028	0	0	0	0	0	0
2029	0	0	0	0	0	0
2030	30	12	6	0	2	49
2031	29	12	6	0	2	49
2032	29	12	6	0	2	49
2033	29	12	6	0	2	49
2034	29	13	6	0	2	49
2035	29	13	6	0	2	49
2036	29	13	6	0	2	49
2037	29	13	6	0	2	49
2038	29	13	6	0	2	49
2039	29	13	6	0	2	49
2040	29	13	6	0	2	49
2041	29	13	6	0	2	49
2042	28	13	6	0	2	49
2043	28	13	6	0	2	49
2044	28	13	6	0	2	49
2045	28	13	6	0	2	49
2046	28	13	6	0	2	49
2047	28	13	6	0	2	49
2048	28	13	6	0	2	49
2049	28	13	6	0	2	49
2050	28	13	6	0	2	49

Water Savings

Units: afy

	Total Savings (afy)
2025	0.000000
2026	0.000000
2027	0.000000
2028	0.000000
2029	0.000000
2030	2.267382
2031	4.541693
2032	6.822958
2033	9.103935
2034	11.384585
2035	13.664932
2036	15.944934
2037	15.957237
2038	15.962353
2039	15.960247
2040	15.958120
2041	15.956848
2042	15.957449
2043	15.960031
2044	15.964566
2045	15.970995
2046	15.979323
2047	15.989590
2048	16.000960
2049	16.012387
2050	16.023803

Customized CII Incentive

Overview

Name	Customized CII Incentive
Abbr	CII_IN
Category	Default
Measure Type	Standard Measure

Time Period

First Year	2025
Last Year	2050
Measure Length	26

Measure Life

Permanent	☐
Years	15
Repeat	☐

Fixture Cost per Device

	Utility	Customer	Fix/Acct
COM	$11,000.00	$22,000.00	1
IND	$11,000.00	$22,000.00	1

Administration Costs

Method: Percent

Markup Percentage	1%

Description

This measure models an incentive program for CII users that will be conducted after analyzing the recommendations on the findings report that is provided through the CII Water Survey measure. The City will review the survey report and determine if the site qualifies for a rebate. Financial incentives will be provided after analyzing the cost benefit ratio of each proposed project. Rebates are tailored to each individual site as each site has varying water savings potential.

Customer Classes

SF	MF	COM	IND	IRR	ADJSF
☐	☐	☑	☑	☐	☐

End Uses

	SF	MF	COM	IND	IRR	ADJSF
Toilets			☑	☑		
Urinals			☑	☑		
Lavatory Faucets			☑	☑		
Showers			☑	☑		
Dishwashers			☑	☑		
Clothes Washers			☑	☑		
Process			☑	☑		
Kitchen Spray Rinse			☑			
Internal Leakage			☑	☑		
Baths						
Other			☐	☐		
Irrigation			☑	☑		
Pools						
Wash Down						
Car Washing						
External Leakage			☑	☑		
Outdoor Other			☐	☐		
Non-Lavatory/Kitchen Faucets			☑	☑		
Cooling			☐	☐		

Comments

> Utility Cost: Assume average rebate amount is $11,000 (maximum rebate is $15,000).
> Admin Cost: Estimate staff time to run this measure is 1.5 hours of WR Specialist time (at the fully burdned rate of $70/hour). This is approximately 0.6% of the utility cost.
> End Use Savings: Assume conservative savings on process use (10%) and 10% savings on other end uses (faucets, irrigation, toilets, urinals, dishwashers). However, assume rebate is only available to very high users with water use 5-10x the average GPDA (such as SB College). Savings are multiplied by 8 to reflect savings for high users.
> Targets: Assume target approximately 3-5 accounts per year.

Results

Units: AF

Average Water Savings (afy)	
14.923864	
Lifetime Savings - Present Value ($)	
Utility	$266,431
Community	$665,563
Lifetime Costs - Present Value ($)	
Utility	$673,947
Community	$2,013,801
Benefit to Cost Ratio	
Utility	0.40
Community	0.33
Cost of Savings per Unit Volume ($/af)	
Utility	$1,737

End Use Savings Per Replacement

Method: Percent

	% Savings/Acct	Avg GPD/Acct
COM Toilets	80.0%	61.0
IND Toilets	80.0%	247.8
COM Urinals	80.0%	16.3
IND Urinals	80.0%	99.1
COM Lavatory Faucets	80.0%	20.3
IND Lavatory Faucets	80.0%	124.9
COM Showers	80.0%	36.6
IND Showers	80.0%	49.6
COM Dishwashers	80.0%	24.4
IND Dishwashers	80.0%	66.1
COM Clothes Washers	80.0%	61.0
IND Clothes Washers	80.0%	132.1
COM Process	10.0%	81.3
IND Process	10.0%	495.6
COM Kitchen Spray Rinse	80.0%	20.3
COM Internal Leakage	80.0%	40.7
IND Internal Leakage	80.0%	165.2
COM Irrigation	80.0%	128.8
IND Irrigation	80.0%	758.0
COM External Leakage	80.0%	9.2
IND External Leakage	80.0%	63.2
COM Non-Lavatory/Kitchen Faucets	80.0%	20.3
IND Non-Lavatory/Kitchen Faucets	80.0%	106.4

Targets

Target Method: Percentage

% of Accts Targeted / yr	0.100%
Only Effects New Accts	☐

Costs

View: Utility Details

	Fixture Costs	Admin Costs	Util Total
2025	$30,756	$185	$30,941
2026	$31,572	$189	$31,761
2027	$32,388	$194	$32,582
2028	$33,204	$199	$33,403
2029	$34,020	$204	$34,224
2030	$34,836	$209	$35,045
2031	$35,651	$214	$35,865
2032	$36,467	$219	$36,686
2033	$36,676	$220	$36,896
2034	$36,884	$221	$37,106
2035	$37,093	$223	$37,316
2036	$37,301	$224	$37,525
2037	$37,510	$225	$37,735
2038	$37,725	$226	$37,951
2039	$37,940	$228	$38,167
2040	$38,154	$229	$38,383
2041	$38,369	$230	$38,599
2042	$38,584	$232	$38,815
2043	$38,805	$233	$39,038
2044	$39,026	$234	$39,260
2045	$39,247	$235	$39,482
2046	$39,468	$237	$39,705
2047	$39,689	$238	$39,927
2048	$39,910	$239	$40,150
2049	$40,132	$241	$40,372
2050	$40,353	$242	$40,595

Targets

View: Accounts

	COM	IND	Total
2025	3	0	3
2026	3	0	3
2027	3	0	3
2028	3	0	3
2029	3	0	3
2030	3	0	3
2031	3	0	3
2032	3	0	3
2033	3	0	3
2034	3	0	3
2035	3	0	3
2036	3	0	3
2037	3	0	3
2038	3	0	3
2039	3	0	3
2040	3	0	3
2041	3	0	3
2042	3	0	4
2043	3	0	4
2044	3	0	4
2045	4	0	4
2046	4	0	4
2047	4	0	4
2048	4	0	4
2049	4	0	4
2050	4	0	4

Water Savings

Units: afy

	Total Savings (afy)
2025	1.191291
2026	2.408930
2027	3.653553
2028	4.925339
2029	6.224515
2030	7.551482
2031	8.906442
2032	10.289745
2033	11.674684
2034	13.057340
2035	14.440407
2036	15.827328
2037	17.218665
2038	18.615324
2039	20.017407
2040	20.265927
2041	20.490237
2042	20.693161
2043	20.875413
2044	21.036606
2045	21.176771
2046	21.296010
2047	21.394256
2048	21.494248
2049	21.596003
2050	21.699382

Restaurant Spray Nozzles

Overview	
Name	Restaurant Spray Nozzles
Abbr	SPRY_NOZ
Category	Default
Measure Type	Standard Measure

Time Period	
First Year	2032
Last Year	2050
Measure Length	19

Measure Life	
Permanent	☐
Years	5
Repeat	☐

Fixture Cost per Device

	Utility	Customer	Fix/Acct
COM	$20.00	$5.00	2

Administration Costs	
Method:	Fixed
Annual Admin Costs	$2,930

Description

Rebate 1.15 gpm (or lower) spray nozzles for the rinse and clean operation in restaurants and other commercial kitchens. Stack with existing SoCalGas rebate
https://www.socalgas.com/business/savings/equipment-rebates

Customer Classes	SF	MF	COM	IND	IRR	ADUSF
	☐	☐	☑	☐	☐	☐

End Uses	SF	MF	COM	IND	IRR	ADUSF
Toilets			☐			
Urinals			☐			
Lavatory Faucets			☐			
Showers			☐			
Dishwashers			☐			
Clothes Washers			☐			
Process			☐			
Kitchen Spray Rinse			☑			
Internal Leakage			☐			
Baths						
Other			☐			
Irrigation			☐			
Pools						
Wash Down						
Car Washing						
External Leakage			☐			
Outdoor Other			☐			
Non-Lavatory/Kitchen Faucets			☐			
Cooling			☐			

Comments

> Utility Cost: City plans to provide $20 rebate in addition to the Socalgas rebate.
> Admin Cost: Admin cost is approximately $12.5/rebate at the fully burdened rate of $49/hour. An additional $17/rebate are from overall staff time required from the Analyst II position to oversee the design and implementation of the program. Total costs are ~$2,930 for the targets.
> End Use Savings: Assume replacing 1.6gpm or greater spray valve with 1.15gpm or lower spray valve.
> Targets: Target approximately ~100 accounts per year.

Results

Units	MG
Average Water Savings (mgd)	0.002039
Lifetime Savings - Present Value ($)	
Utility	$39,024
Community	$301,506
Lifetime Costs - Present Value ($)	
Utility	$84,090
Community	$96,337
Benefit to Cost Ratio	
Utility	0.46
Community	3.13
Cost of Savings per Unit Volume ($/mg)	
Utility	$4,344

End Use Savings Per Replacement

Method:	Percent	
	% Savings/Acct	Avg GPD/Acct
COM Kitchen Spray Rinse	30.0%	20.3

Targets

Target Method:	Percentage
% of Accts Targeted / yr	3.000%
Only Effects New Accts	☐

Costs — View: Summary

	Utility	Customer	Total
2025	$0	$0	$0
2026	$0	$0	$0
2027	$0	$0	$0
2028	$0	$0	$0
2029	$0	$0	$0
2030	$0	$0	$0
2031	$0	$0	$0
2032	$6,835	$976	$7,811
2033	$6,857	$982	$7,839
2034	$6,880	$987	$7,867
2035	$6,902	$993	$7,895
2036	$6,924	$999	$7,923
2037	$6,947	$1,004	$7,951
2038	$6,970	$1,010	$7,979
2039	$6,992	$1,016	$8,008
2040	$7,015	$1,021	$8,037
2041	$7,038	$1,027	$8,066
2042	$7,061	$1,033	$8,094
2043	$7,085	$1,039	$8,124
2044	$7,109	$1,045	$8,153
2045	$7,132	$1,051	$8,183
2046	$7,156	$1,057	$8,213
2047	$7,180	$1,062	$8,242
2048	$7,203	$1,068	$8,272
2049	$7,227	$1,074	$8,301
2050	$7,251	$1,080	$8,331

Targets — View: Accounts

	COM	Total
2025	0	0
2026	0	0
2027	0	0
2028	0	0
2029	0	0
2030	0	0
2031	0	0
2032	98	98
2033	98	98
2034	99	99
2035	99	99
2036	100	100
2037	100	100
2038	101	101
2039	102	102
2040	102	102
2041	103	103
2042	103	103
2043	104	104
2044	104	104
2045	105	105
2046	106	106
2047	106	106
2048	107	107
2049	107	107
2050	108	108

Water Savings — Units: mgd

	Total Savings (mgd)
2025	0.000000
2026	0.000000
2027	0.000000
2028	0.000000
2029	0.000000
2030	0.000000
2031	0.000000
2032	0.000596
2033	0.001195
2034	0.001797
2035	0.002403
2036	0.003012
2037	0.003029
2038	0.003046
2039	0.003063
2040	0.003081
2041	0.003098
2042	0.003116
2043	0.003133
2044	0.003151
2045	0.003169
2046	0.003187
2047	0.003205
2048	0.003223
2049	0.003241
2050	0.003259

Regulation Requirements

Overview

Name	Regulation Requirements
Abbr	REQ
Category	Default
Measure Type	Standard Measure

Time Period

First Year	2025
Last Year	2050
Measure Length	26

Measure Life

Permanent	☐
Years	1
Repeat	☐

Fixture Cost per Device

	Utility	Customer	Fix/Acct
SF	$84.00	$0.00	1

Administration Costs

Method: Percent

Markup Percentage	0%

Description

This measure captures the staff time requirements to comply with reporting and administration of the Making Conservation a California Way of Life Regulation, SAFER reporting, and AB 1572. No savings are assumed for this measure. Targets reflect staff time hours estimated to complete compliance work on an annual basis.

Customer Classes

SF	MF	COM	IND	IRR	ADUSF
☑	☐	☐	☐	☐	☐

End Uses

	SF	MF	COM	IND	IRR	ADUSF
Toilets	☐					
Urinals						
Lavatory Faucets	☐					
Showers	☐					
Dishwashers	☐					
Clothes Washers	☐					
Process						
Kitchen Spray Rinse						
Internal Leakage	☐					
Baths	☐					
Other	☑					
Irrigation	☐					
Pools	☐					
Wash Down	☐					
Car Washing	☐					
External Leakage	☐					
Outdoor Other						
Non-Lavatory/Kitchen Faucets	☐					
Cooling						

Comments

> Utility cost: this cost reflects the fully burdened rate of the Analyst position, as it is expected this position will be completing the compliance activities captured in this measure.

> Targets: these estimates reflect the total hours annually for compliance activities (as needed for reporting and administration).

Results

Units: MG

Average Water Savings (mgd)	
	0.000000
Lifetime Savings - Present Value ($)	
Utility	$0
Community	$0
Lifetime Costs - Present Value ($)	
Utility	$444,988
Community	$444,988
Benefit to Cost Ratio	
Utility	0.00
Community	0.00
Cost of Savings per Unit Volume ($/mg)	
Utility	$0

End Use Savings Per Replacement

Method: Percent

	% Savings/Acct	Avg GPD/Acct
SF Other	0.0%	7.6

Targets

Target Method: Detailed

Enter Annual Targets Below

Costs

View: Summary

	Utility	Customer	Total
2025	$23,688	$0	$23,688
2026	$29,568	$0	$29,568
2027	$24,696	$0	$24,696
2028	$23,856	$0	$23,856
2029	$23,856	$0	$23,856
2030	$23,856	$0	$23,856
2031	$23,856	$0	$23,856
2032	$23,856	$0	$23,856
2033	$23,856	$0	$23,856
2034	$23,856	$0	$23,856
2035	$23,856	$0	$23,856
2036	$23,856	$0	$23,856
2037	$23,856	$0	$23,856
2038	$23,856	$0	$23,856
2039	$23,856	$0	$23,856
2040	$23,856	$0	$23,856
2041	$23,856	$0	$23,856
2042	$23,856	$0	$23,856
2043	$23,856	$0	$23,856
2044	$23,856	$0	$23,856
2045	$23,856	$0	$23,856
2046	$23,856	$0	$23,856
2047	$23,856	$0	$23,856
2048	$23,856	$0	$23,856
2049	$23,856	$0	$23,856
2050	$23,856	$0	$23,856

Targets

View: Accounts

	SF	Total
2025	282	282
2026	352	352
2027	294	294
2028	284	284
2029	284	284
2030	284	284
2031	284	284
2032	284	284
2033	284	284
2034	284	284
2035	284	284
2036	284	284
2037	284	284
2038	284	284
2039	284	284
2040	284	284
2041	284	284
2042	284	284
2043	284	284
2044	284	284
2045	284	284
2046	284	284
2047	284	284
2048	284	284
2049	284	284
2050	284	284

Water Savings

Units: mgd

	Total Savings (mgd)
2025	0.000000
2026	0.000000
2027	0.000000
2028	0.000000
2029	0.000000
2030	0.000000
2031	0.000000
2032	0.000000
2033	0.000000
2034	0.000000
2035	0.000000
2036	0.000000
2037	0.000000
2038	0.000000
2039	0.000000
2040	0.000000
2041	0.000000
2042	0.000000
2043	0.000000
2044	0.000000
2045	0.000000
2046	0.000000
2047	0.000000
2048	0.000000
2049	0.000000
2050	0.000000

Appendix F – Conservation Analysis Results

This appendix presents benefit and cost analysis results for individual conservation measure and overall conservation programs. Table F-1 presents how much water the measures will save through 2050, how much they will cost, and the cost of saved water per unit volume *if the measures were to be implemented on a stand-alone basis (i.e., without interaction or overlap from other measures that might address the same end use or uses).* Savings from measures which address the same end use(s) are not additive; the model uses impact factors to avoid double counting in estimating the water savings from programs of measures.[1] This is why a measure like Public Education may show a distorted cost in comparison to water saved. Most, if not all, measures rely on public awareness. However, it is important to note that water savings are more directly attributable to an "active" measure, like a toilet rebate, than the less "active" public education/awareness measure that informs the community of the active measure.

Since interaction between measures has not been accounted for in Table F-1, it is not appropriate to include totals at the bottom of the table. However, the table is useful to give a close approximation of the cost effectiveness of each measure.

Cost categories are defined as follows:

- **Utility Costs** – Costs the City will incur, as a water utility, to operate measure, including administrative costs.
- **Utility Benefits** – The avoided cost of producing water at the identified rate $1,078/AF. More information about the source of this value can be found in Section 4.3.
- **Customer (Community) Costs** – Those costs customers will incur to implement a measure in the City's conservation program and maintain its effectiveness over the life of the measure.
- **Customer (Community) Benefits** – The additional savings, such as energy savings resulting from reduced use of hot water. These savings are additional as customers also would have reduced water bills (since the Utility Costs and Benefits transfer to the customers).
- **Community Costs** – Includes Utility Costs plus Customer Costs.
- **Community Benefits** – Includes Utility Benefits plus Customer Benefits.

The column headings in Table F-1 are defined as follows:

- **Present Value (PV) of Utility and Community Costs and Benefits ($)** – the present value of the 31-year time stream of annual costs or benefits, discounted to the base year.
- **Utility Benefit to Cost Ratio** – PV of Utility Costs divided by PV of Utility Benefits over 26 years.
- **Community Benefit to Cost Ratio** – (PV of Utility Benefits plus PV of customer energy savings) divided by (PV of Utility Costs plus PV of Customer Costs), over 26 years.
- **Five Years of Water Utility Costs ($)** – sum of annual Utility Costs for 2026-2030. Measures start in the years as specified for each measure shown in Appendix E. Utility costs include administrative costs and staff labor.
- **Water Savings in 2030 (AFY)** – water saved in acre-feet per year.
- **Cost of Savings per Unit Volume ($/AF)** – PV of Utility Costs over 26 years divided by the 26-year water savings. The analysis period is 2025–2050. This value is compared to the utility's avoided cost of water as one indicator of the cost effectiveness of conservation efforts. Note that this value somewhat minimizes the cost of savings because program costs are discounted to present value, but water benefits are not.

1 For example, if two measures are planned to address the same end use and both save 10% of the prior water use, then the net effect is not the simple sum of 20%. Rather, it is the cumulative impact of the first measure reducing the use to 90% of what it was originally, without the first measure in place. Then, the revised use of 90% is reduced by another 10% (10% x 90% = 9%) to result in the use being 81% (90% - 9% = 81%). In this example, the net savings is 19%, not 20%. Using impact factors, the model computes the reduction as follows, 0.9 x 0.9 = 0.81 or 19% water savings.

Table F-1. *Estimated Conservation Measure Costs and Savings*

Measure Name	Present Value of Water Utility Benefits	Present Value of Community Benefits	Present Value of Water Utility Costs	Present Value of Community Costs	Water Utility Benefit to Cost Ratio	Community Benefit to Cost Ratio	Five Years of Water Utility Costs (2026-2030)	Water Savings in 2030 (AFY)	Cost of Savings per Unit Volume ($/AF)
Commercial									
CII Water Survey	$68,174	$215,445	$180,527	$201,234	0.38	1.07	$47,829	3.20	$1,905
Customized CII Incentive	$266,431	$665,563	$673,947	$2,013,801	0.40	0.33	$167,015	7.55	$1,737
Restaurant Spray Nozzles Rebate	$39,024	$301,506	$84,090	$96,337	0.46	3.13	0	0.00	$1,415
Irrigation									
Irrigation Evaluation	$192,939	$192,939	$574,646	$743,302	0.34	0.26	$41,957	2.27	$2,000
Sprinkler to Drip Irrigation Retrofit	$18,646	$18,646	$32,579	$110,768	0.57	0.17	$8,710	1.04	$1,289
Sustainable Lawn Replacement Rebate	$320,237	$320,237	$571,765	$2,612,430	0.56	0.12	$276,501	13.56	$1,249
Spray Sprinklers to Low-Precipitation Sprinklers Retrofit	$18,906	$18,906	$17,918	$63,555	1.06	0.30	$4,790	1.06	$700
Smart Sprinkler Timer Rebate	$50,633	$50,633	$43,056	$131,670	1.18	0.38	$11,511	2.84	$628
Water Efficient Landscape Standards	$282,278	$282,278	$54,046	$64,993	5.22	4.34	$14,449	7.08	$128
Mulch Delivery Rebate	$16,413	$16,413	$86,746	$116,867	0.19	0.14	$23,204	0.82	$4,013
Residential									
Residential Rebates for HECW	$14,416	$56,038	$41,909	$262,484	0.34	0.21	$35,519	1.41	$2,537
Plumber Initiated High Efficiency Toilet Retrofit Program[E]	$35,534	$35,534	$163,124	$163,124	0.22	0.22	$19,985	0.33	$3,019

Measure Name	Present Value of Water Utility Benefits	Present Value of Community Benefits	Present Value of Water Utility Costs	Present Value of Community Costs	Water Utility Benefit to Cost Ratio	Community Benefit to Cost Ratio	Five Years of Water Utility Costs (2026-2030)	Water Savings in 2030 (AFY)	Cost of Savings per Unit Volume ($/AF)
Community & Education									
School Education	$580,794	$1,146,427	$764,615	$781,217	0.76	1.47	$209,558	31.81	$994
General Public Education	$258,840	$258,840	$2,675,630	$2,975,012	0.10	0.09	$715,317	12.97	$7,868
Green Gardener Program	$285,017	$285,017	$44,146	$239,619	6.46	1.19	$12,000	14.55	$117
Leak Assistance									
AMI Customer Portal and Leak Alerts	$6,202,262	$8,356,308	$2,347,215	$32,450,004	2.64	0.26	$627,517	305.66	$286
Leak Detection Device Rebate	$129,739	$179,718	$118,847	$264,800	1.09	0.68	$31,773	7.14	$674
Leak Repair Rebate[E]	$199,259	$324,553	$347,090	$533,031	0.57	0.61	$0	0.00	$1,147

Additional information about the water reduction methodology, perspectives on benefits and costs, and assumptions about present value parameters and measure costs/savings can be found earlier in this Plan in Appendix D.

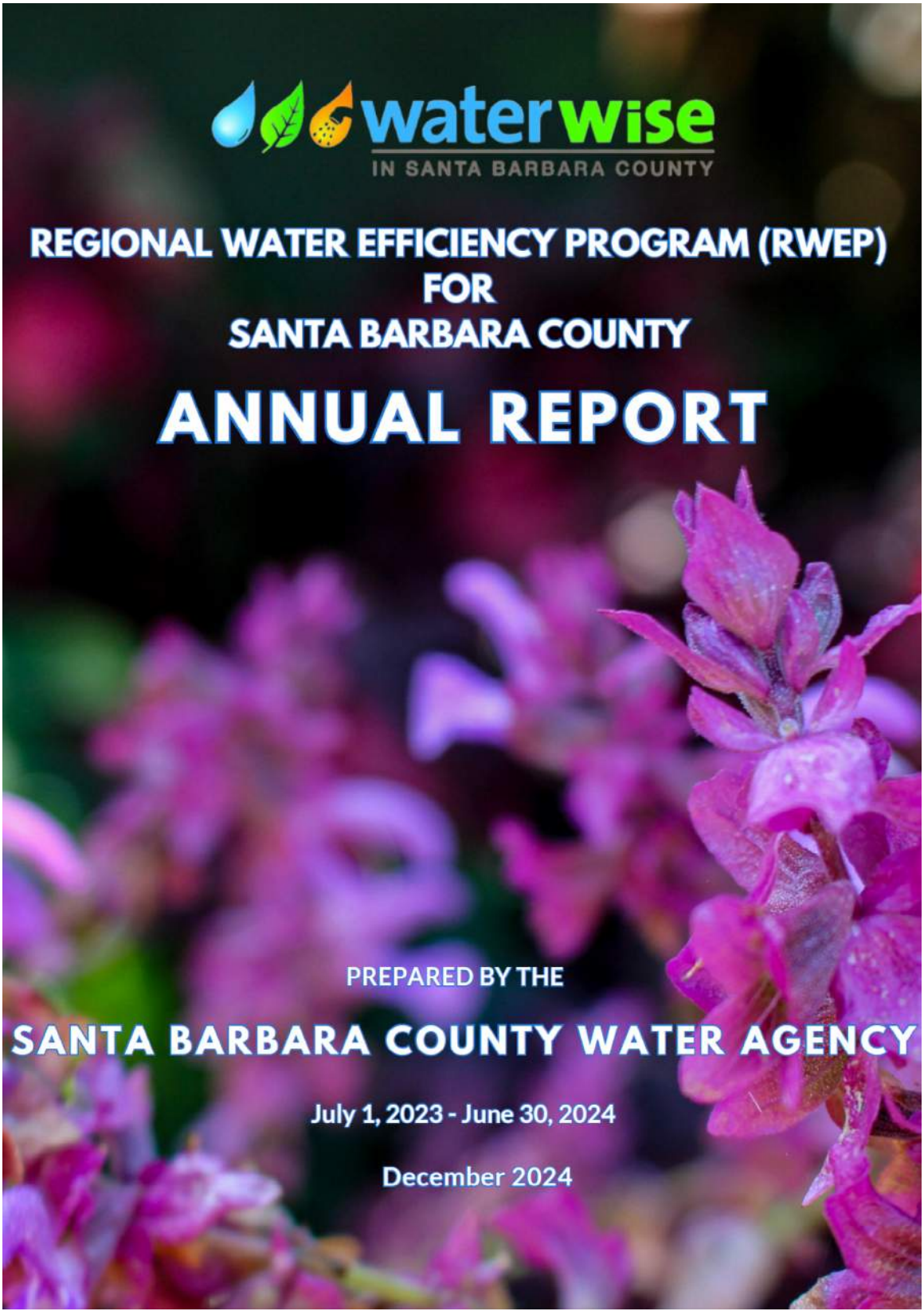
The following table shows each conservation program's present value of water savings and utility costs, as well as cost of water saved. See Appendix D for a more detailed explanation of present value.

Table F-2. *Comparison of Program Estimated Costs and Water Savings*

Conservation Program	Water Utility Present Value of Water Savings	Water Utility Present Value of Utility Costs	Water Utility Cost of Water Saved ($/AF)
Program A with Plumbing Code	$8,293,612	$7,652,947	$691
Program B with Plumbing Code	$8,479,360	$8,163,161	$719
Program C with Plumbing Code	$8,695,636	$8,821,897	$756

Note: *Costs presented in the table above are directly attributable to the City's conservation program only. Present value costs and savings are rounded to the nearest $1,000.*

Appendix G – Regional Water Efficiency Program (RWEP) Annual Report FY2023-2024



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REGIONAL WATER EFFICIENCY PROGRAM OVERVIEW

The Santa Barbara County Water Agency established the Regional Water Efficiency Program (RWEP) of Santa Barbara County in December 1990 in partnership with local water purveyors. RWEP promotes the countywide efficient use of urban and agricultural water supplies, and provides information and assistance to the eighteen local water purveyors within the county, as listed on page 3. Through the RWEP, the Santa Barbara County Water Agency coordinates a collaborative water conservation partnership among purveyors, co-funds projects and programs, acts as a clearing house for information on water use efficiency, manages specific projects and programs, and monitors local, state, and national legislation related to efficient water use.

This annual report provides information on the accomplishments of the RWEP as coordinated by the County. This report does not capture all water conservation activities or accomplishments of each individual water purveyor across the County.

Some local water purveyors, along with the County Water Agency, are required to implement certain Best Management Practices (BMPs) identified by the U.S. Bureau of Reclamation (USBR). This report identifies which RWEP accomplishments relate to specific BMPs that satisfy the USBR's requirement for the County Water Agency, as USBR master contractor for the Cachuma Project, to have a regional water conservation plan as a supplement to individual water purveyors' water conservation and supply plans.

For information on water conservation in Santa Barbara County, please visit the RWEP's website at www.WaterWiseSB.org.

WATER PURVEYORS IN SANTA BARBARA COUNTY

Below is a list of the 18 water purveyors in Santa Barbara County:

BUELLTON, CITY OF
CARPINTERIA VALLEY WATER DISTRICT
CASMALIA COMMUNITY SERVICES DISTRICT*
CUYAMA COMMUNITY SERVICES DISTRICT
GOLETA WATER DISTRICT
GOLDEN STATE WATER COMPANY, ORCUTT
GUADALUPE, CITY OF*
LA CUMBRE MUTUAL WATER COMPANY
LOMPOC, CITY OF*
LOS ALAMOS COMMUNITY SERVICES DISTRICT
MISSION HILLS COMMUNITY SERVICES DISTRICT*
MONTECITO WATER DISTRICT
SANTA BARBARA, CITY OF
SANTA MARIA, CITY OF
SANTA YNEZ RIVER CONSERVATION DISTRICT, ID # 1
SOLVANG, CITY OF
VANDENBERG AIR FORCE BASE*
VANDENBERG VILLAGE COMMUNITY SERVIES DISTRICT

*Not a FY2023-24 RWEP Member

PUBLIC INFORMATION PROGRAMS

Supporting USBR's Public Information Program BMP #2.1

Continued to promote the WaterWiseSB brand and logo

- Seasonal media campaigns featured our brand (WaterWise in Santa Barbara County), our logo (see cover of this report), and our tagline (Let's Save Together).
- Included the brand/logo on items such as water bottles given to students participating in the High School Video Contest, clipboards and hats given to graduates of the Green Gardener Program, and on all outreach material available to the public.

Informed the Public Through Marketing Campaigns

- WA placed advertisements through TV, digital (including Facebook), streaming, and radio.
- Seasonal Media Campaigns and Ad Placements (both English and Spanish metrics):
  - Summer 2023 media campaign consisted of:
    - TV: "2023 HSVC Winners"
      - June 2023 – September 2023: 7 Stations; 1795 spots
    - Digital and Streaming: "2023 HSVC Winners"
      - July 2023 – September 2023: 1,464 Spots; 58,952 impressions
    - Theatres: "2023 HSVC Winners"
      - August 2023 - September 2023: 7 theatres; 49 screens; 229,985 impressions
  - Fall 2023 - Winter 2024 media campaign consisted of:
    - TV: "Fall Baby Plants"
      - October 2023 – December 2023: 7 Stations; 1565 Spots.
    - Digital and Streaming: "Fall Baby Plants"
      - November 2023 - December 2023: 7 spots; 1,017,862 Impressions
    - Theater: "Fall Baby Plants"
      - December 2023 – January 2024: 9 theaters; 25 screens; 114,504 Impressions
    - Radio: "Fall Baby Plants"
      - November 2023 - December 2023: 3 stations; 244 spots
  - Spring 2024 media campaign consisted of:
    - TV: "It's 4am"
      - May 2024 - June 2024: 6 Stations; 1894 Spots.
    - Digital & Streaming: "It's 4am"
      - May 2024 – June 2024: 1,546 Spots; 87,006 impressions.
    - Radio: "It's 4am"
      - May 2024 – June 2024: 3 Stations; 137 Spots.

PUBLIC INFORMATION PROGRAMS

- Green Gardener Program Ad Placements:
  - 862 Green Gardener radio ads were placed across 6 radio stations in English and Spanish to advertise 4 classes in fall, spring, and summer. Said radio ads also included advertisements that promote the Public List of certified Green Gardeners on GreenGardener.org.
  - A $150 Facebook ad was also included that had 142 link clicks.
- Media ads were co-funded by most water providers across the County. See list of funding agencies at the end of this report.

A media campaign sample.

Informed Public Through Water Conservation Website: WaterWiseSB.org

- County staff maintained the website to be current and used as a resource to help promote and expand outreach for member agencies. Continually, staff posted needed changes and updates, countywide calendar events, new information, resources, and links.
- Unfortunately, the analytics for the website have still not been working since the GA4 transition. However, there have been several major updates to the website including:
  - A new Videos and Brochures page where all resource materials on the website can be found. Many lead back to a Google Drive that serves as a central place to store materials.
  - (Separate) Consolidation of information on the Sustainable Landscape, Water Facts, Water Supply, and Home Water Efficiency subpages into one page with tabs for easier access to information.
  - Updates to the demonstration garden, field trip, and CRCD pages. Updated the Water % Adjust formula to account for a more accurate county-wide calculation.
  - Creation of a Local Programs and Rebates page and a Water Wise Landscape Transformation Rebate page.
  - Updates to the home page are in progress.

PUBLIC INFORMATION PROGRAMS

Participated in Public Events

- The Santa Barbara Earth Day Festival in Alameda Park in April 2024. The County Water Agency had a booth with resources on WaterWiseSB with a groundwater demonstration, and a native plant/rain barrel raffle.
- In support of Water Awareness Month in May, SBCWA prepared a resolution that the County Board of Supervisors passed on May 2, 2023. Annually, the County WA coordinates a public display in North and South County. This year, the North County location was Joseph Centeno Betteravia Government Administrative Building. The South County display was at the County's Admin Building.
- Provided educational water conservation brochures and handouts for free.
- Provided materials for members to distribute at local community events year-round.

Updated Water Conservation Outreach Material and Brochures

- Distributed brochures and other materials to RWEP partners for distribution to their retail customers.
- New mood pencils, tote bags, and water bottles have been purchased to replace the declining supply.

PUBLIC INFORMATION PROGRAMS

Issued Press Releases

- Periodically issued 5 press releases (5 of the 5 also had Spanish translations) County-wide for RWEP program announcements:
  - "Carpinteria Resident Wins the WaterWise Garden Recognition Contest" (September 13, 2024).
  - "Video Contest Challenges County High School Students" (December 05, 2023).
  - "Applications are open for 2024 WaterWise Garden Recognition Contest" (March 7, 2024).
  - "Your Vote Counts in the WaterWise High School Video Contest " (April 19, 2024).
  - "Dos Pueblos High School Wins the 2024 WaterWise High School Video Contest" (May 22, 2024).

Poster board display for Earth Day

LANDSCAPE WATER USE PROGRAMS

Supporting USBR's Landscape BMP #5; and Residential BMP #3.2 for Landscape Water Survey.

Administered USBR Water and Energy Efficiency Grant Project for Regional Landscape Rebate Program

- The SBCWA, on behalf of 7 participating RWEP members, applied for and was awarded a grant from the USBR for a "WaterWise Landscape Rebate Program" in April 2023.
- WA is the lead administrator of the 2-year USBR grant-funded Water-Wise Landscape Rebate program with support from participating RWEP members.
- The project will increase funding to offer rebates to participating water customers who meet eligibility requirements for successful landscape transformations that improve water efficiency and sustainability.
- The SBCWA submitted the first USBR report for the July 2022 - March 2024. This report also included rebates from the application period (July 2022) to when the funds were awarded.

Table 1. Overview of Rebates from July 2022 - March 2024

Districts/ Agency	Number of Rebates	Irrigation Retrofit	Lawn Replacement Sq Ft	Water Wise Plants
Montecito	8	5	20,852	7
Solvang	21	9	46,198	12
Goleta	22	16	29,968	19

LANDSCAPE WATER USE PROGRAMS

Supporting USBR's Landscape BMP #5; and Residential BMP #3.2 for Landscape Water Survey.

A sample of the previous Water-wise Landscape Rebate Program with before and after photos

LANDSCAPE WATER USE PROGRAMS

Garden Recognition Contest

- Six agencies participated in the program this year, including the Montecito Water District, Carpinteria Valley Water District, Santa Ynez River Water, Conservation Improvement District #1, Vandenberg Village Community Services District, and the Cities of Santa Barbara and Buellton.
- WA received a total of 12 applications. One winner from each district was selected. One County winner was selected out of the district winners. The winners for the contest this year were:
  - Natasha Lohmus, Carpinteria Valley Water District, who was awarded the Countywide Grand Prize Winner
  - Barbara and Victor Bartolome, City of Santa Barbara
  - Dale Zurawski, Montecito Water District
  - Len Fleckenstein, City of Buellton
- Winners were presented with an engraved Garden Award boulder to showcase in their garden.
- The County WA promoted the program by creating and distributing a flyer to participating agencies and at public events.
- A Press Release to announce the winners was issued in September 2024.

Countywide Garden Recognition Contest winner Natasha Lohmus

LANDSCAPE WATER USE PROGRAMS

Water Wise Landscape Maintenance Guidebook

- The County WA in coordination with RWEP members established a contract with CalWEP as the Project Manager of the Guidebook. WA helped CalWEP select a design consultant to complete the project and coordinated printing shipments to RWEP members.
- The development and printing of the Guidebook was funded by previous FY Landscape Education program funds already paid by members.
- County WA is working with CalWEP to make a digital copy available online on the website. CalWEP will revisit this topic in early 2025.

Green Gardener Certification Program

- Students received training and certification in sustainable landscaping by completing a 50-hour course at Santa Barbara City College (SBCC) or Allan Hancock College (AHC).
- At SBCC, basic classes in English and Spanish were held during fall, spring, and summer sessions. The Advanced class was held in spring. A vocational ESL class was offered for students to develop English communication skills. In total, there were 63 graduates (8 were advanced graduates).
- The County WA is still working with AHC and local RWEP members to secure an instructor to teach the class at ACH.
- The Green Gardener Public List of Santa Barbara County was updated and published in September 2023, February 2024, and June 2024 on GreenGardener.org. Each updated list was shared with RWEP members.
- County WA finalized a new and updated curriculum for the Basic and Advanced Student Manuals in English and Spanish. Coordinated peer review of curriculum updates with interested RWEP members, and related public agencies and industry professionals.
- Presented at Green Gardener class graduations. Organized and delivered student materials and graduation swag.
- WA updated the general flyer design and created four class flyers to share with RWEP for outreach. They were posted on the website, social media channels, and at local nurseries and irrigation stores.
- Secured an additional $2,500 from 8 private partner sponsorships from non-RWEP member sponsors, including the Santa Barbara County Resource Recovery & Waste Management Division, Santa Barbara County Air Pollution Control District, City of Santa Barbara Creeks Division, and Ewing Irrigation.

Green Gardener
SANTA BARBARA COUNTY

LANDSCAPE WATER USE PROGRAMS

Produced and Aired Additional Episodes for Garden Wise TV Show

- 1 new episode aired during FY23-24.
  - Episode 28: A Fresh Approach to Front Yards
- Santa Barbara City TV filmed all shows; Aired on County GATV20, SB City TV18, Comcast 23, and Santa Maria public access TV. Episodes are also available for viewing online at WaterWiseSB's YouTube page.
- Co-funded by County, City of Santa Barbara, Goleta WD, and other water providers.

Video still from Garden Wise Episode: "A Fresh Approach to Front Yards"

Website for "*Water Wise Gardening for Santa Barbara County*"

- Similar to the WaterWiseSB.org website, the data from the WaterWise Gardening Website is limited because of the transition to GA4. Google Analytics transitioned their software to GA4 to capture analytics from real people only and crack down on "robots, spiders, etc.", but the software has had several issues with accurately separating analytics for specific pages.
- Website received 36,477 sessions. The average page views per session was 5 pages, which shows that people are taking time to read through the website. 5 page views per session is considered very good by modern website standards.

Updated Weekly Watering % Adjust

- County WA staff updated the website weekly using data from five out of nine California Irrigation Management Information System (CIMIS) stations across SB County. Due to drought conditions, several CIMIS stations have stopped collecting data over the last few years.
- The Watering % Adjust was updated to be off after significant (>0.25" in 24 hours) rain

LANDSCAPE WATER USE PROGRAMS

Bilingual Landscaper Text Alerts Program

- Sent weekly messages in English and Spanish including the Watering % Adjust, upcoming events, and other landscaping-related alerts via short message service (SMS) to subscribers.
- Maintained a list of 318 subscribers (228 English and 90 Spanish) and sent 17,960 messages.

Large Landscape Evaluations

- The County WA provided $100,000 in funding to the Cachuma Resource Conservation District (CRCD) for their Mobile Irrigation Lab Program, which offers free irrigation system audits to local farmers and turf irrigators.
- This year, CRCD conducted 13 irrigation system evaluations covering 218 irrigated acres. Areas impacted by irrigation evaluations include Buellton, Cuyama, Lompoc, Los Alamos, Los Olivos, Santa Maria, Sisquoc, and Solvang.
- DU values ranged from 0.64 (below average for agricultural systems) to 0.95 (above average for agricultural systems); the average DU was 0.83 with the industry standard of 0.85.
- Performed field visits for over 155 hours of field visits and 78 hours of irrigation auditing. individual growers for one-on-one training with an emphasis on nitrate leaching and the importance of irrigation management. One-on-one trainings were conducted in Spanish. The CRCD gave a radio interview on irrigation management on a Spanish-language radio station.
- Implemented improvements could have potentially saved 47.85 ac-in/ac annually with an average percent water saving of 12.6%.

A sample flyer for the CRCD Mobile Irrigation Lab services

LANDSCAPE WATER USE PROGRAMS

A Summary of Agricultural Irrigation Evaluations Conducted in Santa Barbara County July 1, 2023 through June 30, 2024			
Area	**Crop**	**DU - System**	**Acres**
Buellton	Vineyard	0.75.0.85,0.85 - drip	29
Lompoc	Vineyard	0.92,0.0.72 - drip	53
Santa Ynez	Vineyard	0.74 - drip	8
Buellton	Vineyard	0.88,0.79,0.90 - drip	18
Santa Maria	Peppers	0.81 - drip	4.5
Santa Maria	Strawberries	0.83 - drip	2
Los Alamos	Vineyard	0.78 - drip	13
Santa Maria	Vineyard	0.93, 0.95 - drip	5.5
Santa Maria	Vineyard	0.77 - drip	20
Sisquoc	Vineyard	0.91 - drip	22
Cuyama	Vineyard	0.83 - drip	24.54
Solvang	Vineyard	0.74 - drip	1.5
Santa Maria	Sweet Peas	0.64 - drip	17

YOUTH EDUCATION PROGRAMS

School Assembly Presentations on Water Conservation

- The County WA partnered with local water purveyors to co-fund water education assembly-style presentations at elementary schools.
- The County WA issued a contract (with *"Shows That Teach"*) for an engaging musical-comedy-educational show about the value of water & water conservation. Both virtual and in-person performances are available.
- In total, 6 water purveyors participated in Shows That Teach performances. Performances were given at 13 schools and reached 3262 students.
- The County WA also coordinated a weekend Earth Day Festival performance sponsored by the County WA, Goleta Water District, City of Santa Barbara, and Montecito Water District.

Shot from "H20, Where Did You Go?" Performance

High Schools Competed in the *2023 WaterWise High School Video Contest*

- The County WA updated the contest flyer, emailed flyers to schools, and digitized student contest materials that were posted on the website.
- The contest received 14 video submissions by 32 students from 4 different schools countywide for potential use as 30-second Public Service Announcements on water conservation.
- The County WA secured $1,900 of in-kind donations from 5 sponsors for student prizes. The featured prizes donated by the private sector companies were provided to the student-winning teams:
  - First Place, "*An Animated Journey for a WaterWise Garden*" by Dos Pueblos High School. The school received $1,000, students won a $500 prize provided by Carollo Engineers.
  - First Place (Spanish), "*Ahorra el Agua en tu Jardín*" by San Marcos High School. The school received $1,000, and the students won a $500 prize provided by La Buena - 105.1 FM.

YOUTH EDUCATION PROGRAMS

- Second Place, *"3 Tips for a Water Wise Garden"* by Santa Barbara Senior High School. The school received $500, and the students received a $250 prize provided by Geosyntec consultants.
- Third Place, *"Corra the Cactus"* by Santa Ynez Valley Union High School. The school received $300, and students received a $150 prize provided by Ewing Irrigation.
- People's Choice Award: *"Be a Water Wise Gardener"* by Dos Pueblos High School received 180 likes on the WaterWiseSB YouTube channel. The school received $500, and the students received a $500 prize provided by Dudek.

- Students and schools received awarded trophies and certificates. The schools included: Dos Pueblos High School, Santa Barbara Senior High School, Santa Ynez Valley Union High School, and San Marcos High School.
- The student video submissions were posted on the WaterWiseSB YouTube Channel and on www.WaterWiseSB.org.
- The Teacher Questionnaire was updated and sent out to teachers who participated in this contest and to teachers who participated previously.

Video still from 2024 High School Video Contest
First Place video "An Animated Journey for a WaterWise Garden"

YOUTH EDUCATION PROGRAMS

Photo collage of video stills from 2024 High School Video Contest Submissions

COMMERCIAL AND INSTITUTIONAL PROGRAMS

Supporting USBR's Commercial, Industrial, and Institutional BMP #4

Participated in the County's Green Business Program

- The County WA served as a representative on the GBP Steering Committee and attended 6 bi-monthly meetings.
- Though the staff usually assists with the program' Green Business Network Celebration, due to a loss of state funding, the GBP program was on hiatus for part of FY23-24 and the networking event did not happen. The event and program are expected to continue uninterrupted in future years.
- For FY23-24, there was a total of 33 certified Green Businesses, 22 new certifications, 9 recertified, and 4 businesses at the Innovator level.
- County WA and RRWMD are currently recertified, both reaching innovator status. County WA is also assisting with efforts to certify additional county buildings.

County WA Table stationed at the Green Business Program Celebration Event

INFORMATION ON UTILITY OPERATIONS

Supporting USBR's Utility Operations BMP #1.3 for metering rates; and BMP #1.4 for retail conservation pricing

Reported on Regional Water Rates

- The County WA compiled water rate information from 18 local water purveyors across Santa Barbara County and produced a *2024 Water Rates Summary Report.*
- The report was shared amongst purveyors countywide and posted online under "About Us" at www.WaterWiseSB.org.
- All local purveyors cooperated; staffed and created by County WA.

Compiled Regional Water Production Data

- The County WA compiled local water purveyors' annual water production data for 2023 and produced a *2023 Water Use in Santa Barbara County Report.*
- The Report was shared amongst purveyors countywide and posted online under "About Us" at www.WaterWiseSB.org.
- All local purveyors cooperated; staffed and managed by County WA.
- County WA recently included energy tracking within the survey to collect information on local water system intensity for regional climate sustainability planning and future grant opportunities.

Water Use in Santa Barbara County 2023 Report

Agency	Population Served*	Types of Metered Water Deliveries				Per-Capita Water Use*** Gallons/Person/Day		Number of Connections by Type						
		Agriculture (AFY)	Recycled Water (AFY)	Wholesale (AFY)	M&I** Water (AFY)	(a) Based on Total M&I	(b) Based only on Residential Water	Single Family	Multi-Residential	Commercial Institutional	Industrial	Landscape	Agriculture	Other (ie. Fire, Hydrant Meters, Recycled Water, etc.)
City of Buellton	5,140	0	0	0	955	166	94	1,162	412	187	47	24	0	0
Carpinteria Valley WD	15,996	1,622	0	21	1,616	90	62	3,275	359	289	58	67	383	134
Casmalia CSD	150	0	0	0	9	53	45	52	0	4	0	0	0	0
Cuyama CSD	763	0	0	0	143	168	100	212	0	22	0	20	0	0
Golden State Water Co.	34,102	0	0	0	4,693	123	101	11,402	150	352	4	74	0	82
Goleta Water District	84,462	1,822	620	189	6,866	73	50	13,359	1,875	962	0	307	166	435
City of Guadalupe	8,897	0	0	0	853	86	48	2,285	11	112	0	44	0	7
La Cumbre Mutual WC	4,900	0	0	0	871	159	159	1,429	30	0	0	0	0	10
City of Lompoc	40,473	0	0	0	3,348	74	52	8,222	753	720	5	142	0	46
Los Alamos CSD	1,464	0	0	0	238	145	110	466	88	32	0	17	0	12
Mission Hills CSD	3,600	0	0	0	447	111	100	1,299	0	11	0	2	0	0
Montecito Water Dist	11,962	205	0	0	3,193	238	198	4,282	66	263	0	0	42	0
City of Santa Barbara	98,872	81	627	1,409	8,444	76	55	16,732	7,121	2,733	51	830	68	124
City of Santa Maria	109,910	0	0	1,138	10,818	88	55	19,207	870	1,858	95	634	0	324
Santa Ynez RWCD-ID#1	7,022	1,211	0	0	1,853	236	188	1,983	0	177	0	0	379	207
City of Solvang	6,126	0	0	0	1,088	159	107	1,732	76	202	19	77	0	0
Vandenberg SFB	18,000	0	0	0	2,472	123	18	1,006	0	53	0	5	0	0
Vandenberg Village CSD	7,308	0	0	0	1,031	126	98	2,430	55	68	0	17	0	9

AFY= Acre-feet per year

* Population as reported by water purveyor

** M&I (Municipal, Commercial, Institutional & Industrial) refers to all urban use, not including recycled water, agricultural irrigation or wholesale sales.

1 acre-foot=325,851 gallons.

*** Per Capita Use is shown as (a) total M&I water divided by population and (b) Single & Multi-Family Residential use divided by population. Lot size and landscape water usage are major factors affecting Gallons/Person/Day

COORDINATION OF REGIONAL WATER EFFICIENCY PROGRAM

Supporting USBR's Utility Operations BMP #1.1 for a Water Conservation Coordinator

Coordinated Bi-Monthly RWEP Meetings

- For program coordination, information sharing, vetting ideas, etc.
- The County WA scheduled and facilitated all meetings, including preparing agenda drafts for feedback, meeting materials, and circulating meeting notes. The County WA also maintained a video conferencing contract to hold virtual meetings.
- The County WA coordinated and conducted 5 meetings, one of which was in person at the City of Santa Barbara.

Coordinated Quarterly RWEP Sub-Committee Meetings: Website & Education

- For program coordination, planning, and discussion of education and website specific programs. Vet ideas through sub-committee members to present to monthly RWEP meetings.
- Coordinated additional meetings with interested RWEP members for the HSVC group judging session, Green Gardener curriculum developments and general program updates, WEGG grant project, etc.
- The WA coordinated 4 education website committee meetings each for a total of 8 committee meetings. The WA is also coordinating the formal formation of a landscaping committee for FY24-25.

Coordinated Joint-Meetings with Outside Water Conservation Agencies

- Meetings useful for program coordination, information sharing, networking, vetting ideas, etc.
- Due to scheduling conflicts, there were no joint-RWEP meetings with either SLO or Ventura this fiscal year. However, a Ventura meeting is planned for October 2024.

REGIONAL PROGRAMS AND PROJECTS CO-FUNDED BY LOCAL WATER PROVIDERS FY2023-24*

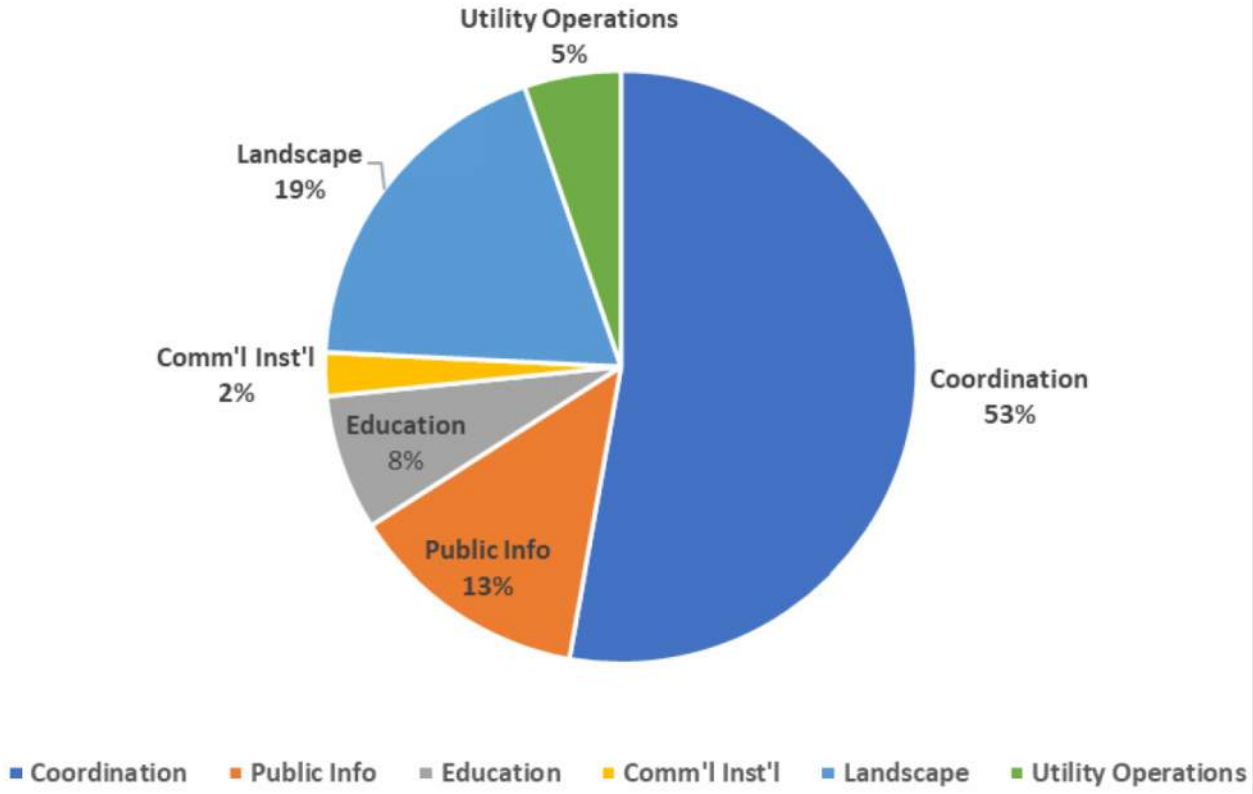
	Media	Youth Education	Websites	Green Gardener	Garden Wise Show
Buellton	✓	✓	✓	✓	✓
Carpinteria Valley Water Disctrict	✓	✓	✓	✓	✓
Cuyama CSD	✓	✓	✓		
Golden State Water Company	✓	✓	✓	✓	✓
Goleta Water District**	✓	✓	✓	✓	✓
La Cumbre Mutual Water Company	✓	✓	✓	✓	✓
Los Alamos CSD	✓	✓	✓		
Mission Hills CSD	✓	✓	✓		
Montecito Water District	✓	✓	✓	✓	✓
City of Santa Barbara**	✓	✓	✓	✓	✓
City of Santa Maria	✓	✓	✓	✓	✓
Santa Ynez River WCD ID #1	✓	✓	✓	✓	✓
City of Solvang	✓	✓	✓	✓	✓
Vandenberg Village CSD	✓	✓	✓		✓

Many water purveyors have water conservation programs separate from regional projects listed here

***The City of Santa Barbara and Goleta Water District help to co-fund the GardenWise TV Show outside of RWEP funds. The City of Santa Barbara also provides additional staff time and supplemental materials for the Green Gardener program.*

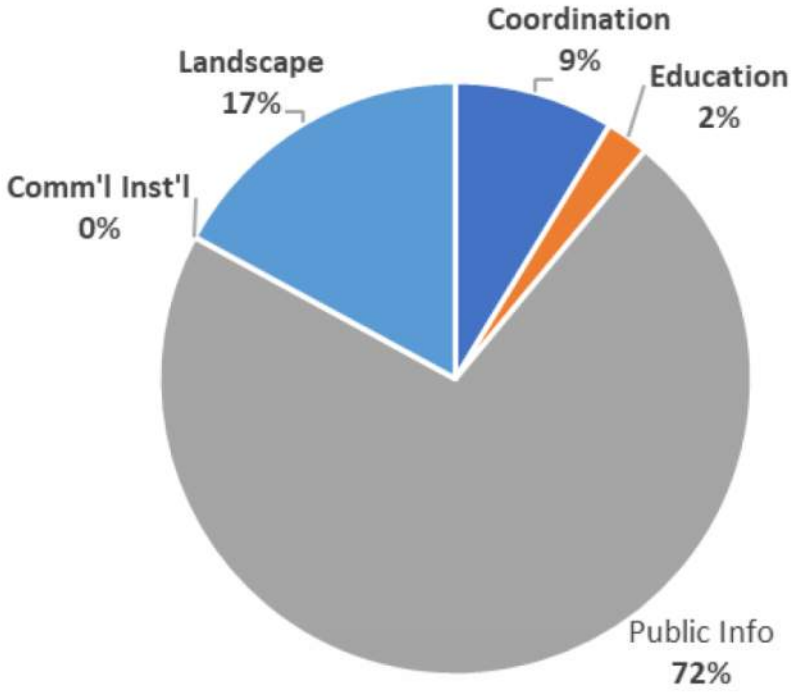
ALLOCATION OF WATER AGENCY STAFF TIME FOR RWEP IN FY2023-24

Below lists the total labor hours worked by County Water Agency staff on RWEP.



ALLOCATION OF RWEP FUNDS IN FY2023-24

Below lists the percentage of total funds spent on RWEP programs and projects by category. The total includes County Water Agency funds and the contributions from RWEP members for FY2023-24. Total funds used excludes County staff time.



Appendix H – Outreach Examples

H.1 Social Media Examples

"Let the rain do the work!" Landscape Campaign

H.2 Online Example

City of Santa Barbara's Water Wise Landscaping "Tree Watering" Web Page

How to **Water Trees**

*A BRIEF GUIDE TO **PROTECTING TREES** THROUGH **RESPONSIBLE WATER USE***

Trees in climates like Santa Barbara's should be watered occasionally even in years when we're getting enough rain—but during times of low rainfall, they need our help more than ever.

Tips for Tree Watering

WATER AT THE BEST TIME OF DAY
Water in the evening or very early morning. This allows water to soak into the soil before the daytime sun speeds evaporation.

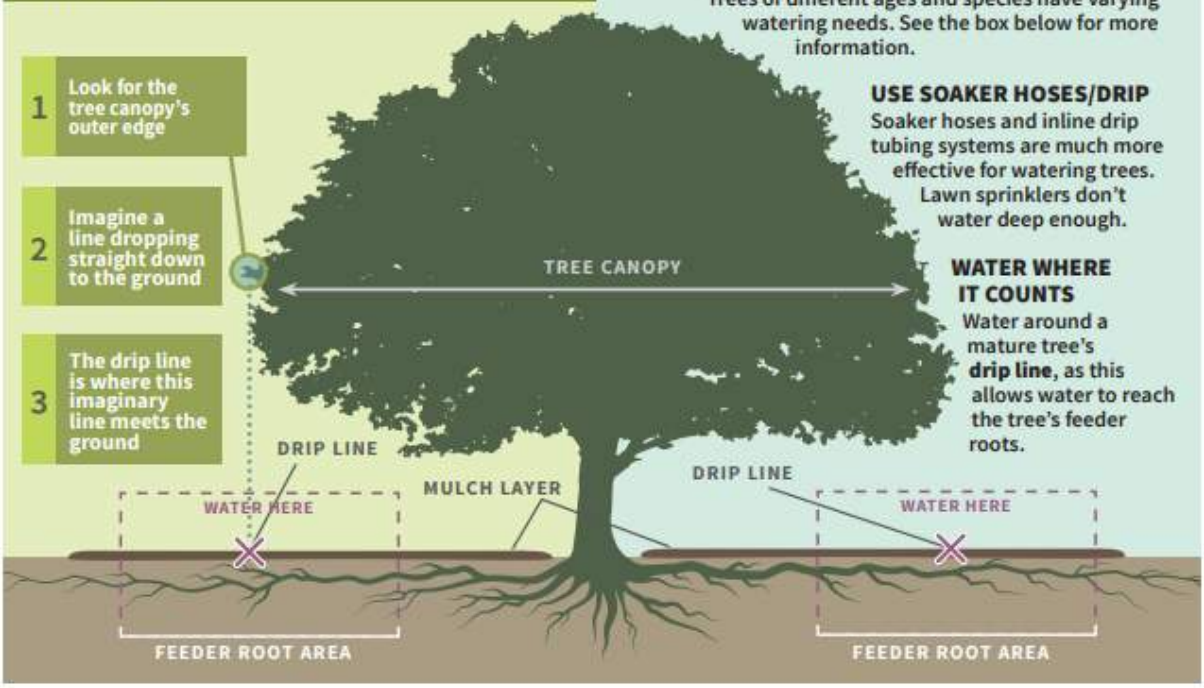
USE MULCH TO KEEP WATER IN THE SOIL
Adding a layer of mulch insulates and feeds the tree's roots. Make the layer 4–6 inches thick, and extend it out as far as the tree's drip line—but keep it 2 inches away from the trunk to prevent rot.

ACCOUNT FOR AGE/SPECIES
Trees of different ages and species have varying watering needs. See the box below for more information.

USE SOAKER HOSES/DRIP
Soaker hoses and inline drip tubing systems are much more effective for watering trees. Lawn sprinklers don't water deep enough.

WATER WHERE IT COUNTS
Water around a mature tree's **drip line**, as this allows water to reach the tree's feeder roots.

How to find a tree's drip line



A tree's age makes a difference!

MATURE TREES

1. Water once a month.
2. Water enough to soak the ground to 18 inches deep.
3. Use a pressure regulated soaker hose or drip tubing with a timer to water. See SantaBarbaraCA.gov/TreeWatering for more information.

***YOUNG TREES** (UP TO 3 YEARS)*

1. Water once a week.
2. Use about 15–20 gallons each time you water.
3. Make a basin with a 3–5 inch ring-shaped mound in the ground around the tree; use a hose to fill the basin slowly.

Source: City of Santa Barbara Tree Watering web page.

H.3 Print Ad Examples