PREPARED BY

WEST YOST

City of Lincoln
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2025 URBAN WATER MANAGEMENT PLAN

FINAL PLAN

JUNE
2026

2025 Urban Water Management Plan

Prepared for

City of Lincoln

Project No. 206-60-25-64

Prepared by:
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June 8, 2026
Date

QA/QC Review:
Elizabeth Drayer, PE, RCE #46872

June 8, 2026
Date

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LIST OF ACRONYMS AND ABBREVIATIONS

°F	Fahrenheit
AB	Assembly Bill
Act	Urban Water Management Planning Act
ADWF	Average Dry Weather Flow
AF	Acre-Feet
AFY	Acre-Feet of Water Per Year
AMI	Advanced Metering Infrastructure
ASR	Aquifer Storage and Recovery
AWIA	America's Water Infrastructure Act
BMP	Best Management Practices
BPS	Booster Pump Station
CCR	City's Consumer Confidence Report
CD	Compact Disc
cfs	Cubic Feet Per Second
CII	Commercial, Industrial, and Institutional
CIMIS	California Irrigation Management Information System
City	City of Lincoln
CVP	Central Valley Project
CWC	California Water Code
DIM	Dedicated Irrigation Meter
DMM	Demand Management Measures
DOF	California Department of Finance
DRA	Drought Risk Assessment
DRP	Drought Resilience Plan
DWR	California Department of Water Resources
DWR Guidebook	2025 Urban Water Management Plan Guidebook for Urban Water Suppliers
DWR Methodologies	DWR Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use (2016)
ET	Evapotranspiration
FEMA	Federal Emergency Management Agency
GP	General Plan
GPCD	Gallons Per Capita Per Day
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
IRWMP	Integrated Regional Water Management Planning Program
kWh	Kilowatt Hour
LHMP	Local Hazard Mitigation Plan
LiSWA	Lincoln-Sewer Maintenance District 1 Wastewater Authority
LMC	Lincoln Municipal Code
MFP	Middle Fork Project
MGD	Million Gallons Per Day

msl	Mean Sea Level
NABRDCP	North American Basin Regional Drought Contingency Plan
NAICS	North American Industry Classification System
NASb	North American Subbasin
NID	Nevada Irrigation District
NPDES	National Pollutant Discharge Elimination System
NRW	Non-Revenue Water
PCWA	Placer County Water Agency
PG&E	Pacific Gas & Electric
RHNP	Regional Housing Needs Plan
RRA	Risk and Resilience Assessment
RUWMP	Regional Urban Water Management Plan
RWA	Regional Water Authority
RWQCB	Regional Water Quality Control Board
SACOG	Sacramento Area Council of Governments
SB X7-7	Water Conservation Act of 2009
SGMA	Sustainable Groundwater Management Act
SOI	Sphere of Influence
State Water Board	State Water Resources Control Board
SUD	Special Use District
UWMP	Urban Water Management Plan
UWUO	Urban Water Use Objectives
WEP	Water Efficiency Program
WMPU	Water Master Plan Update
WPCGMP	Western Placer County Groundwater Management Plan
WPGSA	West Placer Groundwater Sustainability Agency
WSA	Water Supply Assessment
WSCP	Water Shortage Contingency Plan
WSS	Watershed Sanitary Survey
WUE	Water Use Efficiency
WWTRF	Wastewater Treatment and Reclamation Facility

INTRODUCTION

An Urban Water Management Plan (UWMP) helps water suppliers assess the availability and reliability of their water supplies and current and projected water use to help ensure reliable water service under different conditions. This water supply planning is especially critical for California currently, as naturally occurring climate variability is resulting in changes in rainfall and snowfall which impact water supply availability and development occurring throughout the State resulting in increased needs for reliable water supplies.

The Urban Water Management Planning Act (Act) requires larger water suppliers that provide water to urban users (whether directly or indirectly) to develop UWMPs every five years. UWMPs evaluate conditions for the next 20 years, so these regular updates ensure continued long-term planning. The City of Lincoln (City) provides water service directly to more than 3,000 connections in its water service area and is therefore required to prepare a UWMP.

This Executive Summary serves as a Lay Description of the City's UWMP, as required by California Water Code (CWC) §10630.5.

CALIFORNIA WATER CODE REQUIREMENTS

The CWC documents specific requirements for California water suppliers. The Act is included in the CWC and specifies the required elements of a UWMP, including discussing an agency's water system and facilities, calculating how much water its customers use (i.e., water demand) and how much it can supply, and detailing how it would respond during a drought or other water supply shortage. Also, a UWMP must describe what specific coordination steps were taken to prepare, review, and adopt the plan.

The Act has been revised over the years. The Water Conservation Act of 2009 (also known as SB X7-7) required retail water agencies to establish water use targets for 2020 that would result in statewide water savings of 20 percent by 2020. In their 2025 UWMPs, retail water agencies (i.e., those distributing water to end users like residences and businesses) are required to report on their compliance with SB X7-7 2020 water use targets.

The 2012-2016 drought led to further revisions to the Act to improve water supply planning for long-term reliability and resilience to drought and climate change. These revisions were formalized in the 2018 Water Conservation Legislation and include:

- **Five Consecutive Dry-Year Water Reliability Assessment**: Analyze water supply reliability for five consecutive dry years over the planning period of this plan (see Chapter 7).
- **Drought Risk Assessment:** Assess water supply reliability from 2021 to 2025 assuming they are dry years (see Chapter 7).
- **Seismic Risk:** Identify the seismic risk to the agency's water facilities and have a plan to address identified risks (see Chapter 8).

- **Water Shortage Contingency Plan (WSCP):** Update the agency's plan to include an annual process for assessing potential gaps between planned water supply and demands; conform with the State's standard water shortage levels (including a shortage level greater than 50 percent) for consistent messaging and reporting; and provide water shortage responses that are locally appropriate (see Chapter 8).
- **Lay Description:** Provide a lay description of the findings of the UWMP; this Executive Summary serves as the lay description for this plan.

Major components and findings of the City's 2025 UWMP are summarized below.

CITY OF LINCOLN WATER SYSTEM

The City of Lincoln is located in Placer County, California, within the Sacramento metropolitan area. The City provides drinking water throughout its incorporated limits, serving residential, commercial, industrial, institutional and governmental, landscape irrigation, and fire service connections.

The existing water distribution system includes seven pressure zones supplied by two Placer County Water Agency (PCWA) metering stations and five groundwater wells. The system also includes three storage tanks, one booster pump station, ten pressure regulating stations, and approximately over 300 miles of transmission and distribution pipelines.

WATER USE BY CITY OF LINCOLN CUSTOMERS

As the City continues to grow, water demands are expected to increase. Thorough accounting of existing and future water use supports the City's long-term planning and its ability to maintain safe and reliable service. To continue delivering safe and reliable drinking water, the City must understand how much water its customers currently use and how much they are expected to use in the future. The City recently completed the 2025 Water Master Plan Update (WMPU) which included water demand projections based on land use in the General Plan 2050.

The City's total potable water demand in 2025 was 10,868 acre-feet (AF), including system losses. Projected future potable water demands are based on land use projections from the City's 2025 WMPU, which included water use projections for 2030 to 2045 and buildout. The 2025 WMPU demand projections were updated for this UWMP to reflect accelerated growth and an increase in residential units in Village 7. Based on the updated land use projections, total potable water demand is projected to increase to approximately 25,419 AF by 2050.

CITY OF LINCOLN WATER SUPPLIES

The City's potable water supply includes treated surface water purchased from PCWA supplemented by production from City owned groundwater wells. The City also has an active water supply agreement with Nevada Irrigation District (NID), which entitles the City to receive NID raw water supply that can be treated and delivered to the City via PCWA facilities. Treated surface water supplies approximately 90 percent of the City's annual demand and groundwater supplies the remaining 10 percent in an average water year.

Groundwater underlying the City is part of the North American Subbasin (NASb), and is managed by the five groundwater sustainability agencies (GSAs) within the basin. The City is a member of the West Placer Groundwater Sustainability Agency (WPGSA), and the five GSAs collaboratively developed the NASb

Groundwater Sustainability Plan, which was approved by the State in July 2023. The subbasin is not in overdraft and has not experienced undesirable results.

In 2022, the City entered a joint powers authority with Placer County to form the Lincoln-Sewer Maintenance District 1 Wastewater Authority (LiSWA). LiSWA operates the wastewater treatment and reclamation facility, which produces tertiary treated effluent meeting Title 22 standards for unrestricted reuse. Recycled water is used for irrigation, agricultural, and other non-potable uses, with excess effluent discharged in accordance with permit requirements.

The City will continue to implement a conjunctive use strategy that maximizes surface water supplies and supplements them with groundwater. Groundwater will support peak demands and resiliency, while recycled and raw surface water will offset potable demand. The City will also evaluate groundwater recharge and aquifer storage and recovery for sustainable basin management and may explore development of new raw water sources to further offset potable demand.

CONSERVATION TARGET COMPLIANCE

In its 2015 UWMP, the City confirmed its baseline per capita water use, and established and adopted its water use target of 193 gallons per capita per day (GPCD) for 2020. In its 2020 UWMP, the City verified that it achieved its 2020 water use target in accordance with SB X7-7. The City's per capita water use in 2020 was 191 GPCD, below the confirmed 2020 water use target of 193 GPCD. This achievement was the result of continued water conservation by the City's customers.

CITY OF LINCOLN WATER SERVICE RELIABILITY

The CWC asks agencies to evaluate their water service reliability by examining the impact of drought on their water supplies and comparing those reduced supplies to water demands. Specifically, agencies should calculate their water supplies during a single dry year and five consecutive dry years using historical records.

The City's base years remain consistent with the hydrologic conditions documented in PCWA's 2025 UWMP, with 1977 representing a single dry year and 1988-1992 representing a five consecutive year drought. Based on consultation with PCWA staff and historical conditions, PCWA is assumed to reliably supply surface water to the City under all hydrologic conditions. Local groundwater pumping and recycled water are also assumed to be reliable through these hydrologic conditions.

The City is well positioned to withstand the effects of a single dry year and a five-consecutive dry year drought for any period between 2025 and 2050, even without additional water conservation measures. The City's drought risk was specifically assessed between 2026 and 2030, assuming that the next five years are dry years. In each case, water supplies comfortably meet water demands. The City is able to reliably provide water service whether the drought occurs in 2026, 2050, or any year between.

WATER SHORTAGE CONTINGENCY PLAN

A WSCP describes an agency's plan for preparing for and responding to water shortages. The City's WSCP has been updated as part of the 2025 UWMP to be consistent with the 2018 Water Conservation Legislation requirements. The WSCP includes the City's process for assessing potential gaps between planned water supply and demands for the current year and the following (assumed dry) year. The City has also updated its water shortage levels to better align with the State's standard stages. The WSCP may

be used for both foreseeable and unforeseeable events. The WSCP is adopted as a separate document concurrently with this plan, by separate resolution, to allow for updates to be made outside of the UWMP preparation process.

UWMP PREPARATION, REVIEW, AND ADOPTION

The City prepared this 2025 UWMP in coordination with PCWA and NID. While preparing this plan, the City also notified other stakeholders (e.g., Placer County and the general public) of its preparation, its availability for review, and the public hearing prior to adoption. The City encouraged community participation in the development of the 2025 UWMP using newspaper advertisements, electronic newsletters, and the City's website. These public notices included the time and place of the public hearing, as well as where the plan would be available for public inspection.

A public hearing was held on May 26, 2026, providing an opportunity for the City's water users and the general public to become familiar with the 2025 UWMP, including the WSCP, and ask questions about the City's plans for continuing to provide reliable, safe, high-quality water and mitigating potential water shortages. Following the public hearing, the City Council adopted the 2025 UWMP and the associated WSCP on May 26, 2026. A copy of the adopted UWMP, including the WSCP, was submitted to the Department of Water Resources and to the California State Library and is available on the City's website: https://www.lincolnca.gov/living-here/water/.

CHAPTER 1
Introduction

This chapter provides an introduction and overview of the City of Lincoln (City) 2025 Urban Water Management Plan (UWMP) including the importance and extent of the City's water management planning efforts, changes since the preparation of the City's 2020 UWMP, and the organization of the City's 2025 UWMP. This 2025 UWMP has been prepared jointly by City staff and West Yost.

1.1 INTRODUCTION

The Urban Water Management Planning Act (Act) was originally established by Assembly Bill (AB) 797 on September 21, 1983. Passage of the Act was recognition by State legislators that water is a limited resource and a declaration that efficient water use and conservation would be actively pursued throughout the State. The primary objective of the Act is to direct "urban water suppliers" to develop a UWMP which provides a framework for long-term water supply planning, and documents how urban water suppliers are carrying out their long-term resource planning responsibilities to ensure adequate water supplies are available to meet existing and future water demands. A copy of the current version of the Act, as incorporated in §10608 and §10610 through 10656 of the California Water Code (CWC), is provided in Appendix A of this plan.

1.2 IMPORTANCE AND EXTENT OF CITY'S WATER MANAGEMENT PLANNING EFFORTS

The purpose of the UWMP is to provide a planning tool for the City for developing and delivering municipal water supplies to the City's water service area. This UWMP provides the City with a water management action plan for guidance as water conditions change and management conditions arise.

The Water Shortage Contingency Plan (WSCP) is part of this UWMP and provides a plan for response to various water supply shortage conditions.

The City has had a long history of providing clean and reliable water to its customers. The City's UWMP is a comprehensive guide for planning for a safe and adequate water supply.

1.3 CHANGES FROM 2020 UWMP

The Urban Water Management Planning Act has been modified over the years in response to the State's water shortages, droughts and other factors. A significant amendment was made in 2009, after the 2007 to 2009 drought, and as a result of the Governor's call for a statewide 20 percent reduction in urban water use by the year 2020. This was the Water Conservation Act of 2009, also known as Senate Bill Seven of the Senate's Seventh Extraordinary Session of 2009 (SB X7-7). This Act required agencies to establish water use targets for 2020 that would result in statewide water savings of 20 percent by 2020. The City is required to report compliance with its 2020 water use target in its 2025 UWMP.

The 2014 to 2017 drought has led to further amendments to the CWC to improve on water supply planning for long-term reliability and resilience to drought and climate change. The 2018 Water Conservation Regulation for Making Conservation a California Way of Life (AB 1668 [Friedman] and SB 606 [Hertzberg]) required major additions and changes to the CWC. These changes are associated with managing drought preparedness and water shortage contingency planning for urban water suppliers.

No substantive changes to the requirements have been adopted since the completion of the City's 2020 UWMP. This 2025 UWMP builds on the planning and reporting provided in the City's 2020 UWMP. Key updates include:

1. Water Supply Reliability Assessment – a water supply and demand assessment which compares the total water supply sources available to the City with the long-term total projected water use over the next 25 years (to 2050), in five-year increments, for a normal water year, a single dry water year, and a drought lasting five consecutive water years (CWC §10635(a))
2. Drought Risk Assessment – an assessment of the City's water supply reliability assuming that the Years 2026 to 2030 will be the five dry consecutive years (CWC §10635(b))
3. Water Use Target Compliance – compliance with the City's previously adopted 2020 per capita water use targets in accordance with SB X7-7 (Water Conservation Act of 2009, SB X7-7; CWC §10608.20)
4. Water Loss Quantification – a summary report quantifying the City's system water loss for Years 2020 to 2024, and progress toward compliance with the City's Water Loss Standard as established by the State Water Resources Control Board (State Water Board) (CWC §10631(d)(3)(c))
5. Groundwater Management Compliance – status update on Sustainable Groundwater Management Act (SGMA) compliance activities (i.e., status of Groundwater Sustainability Agency (GSA) activities and Groundwater Sustainability Plan (GSP) implementation) (CWC §10631(b)(4))

Since the completion of the City's 2020 UWMP, the State experienced another multi-year (2021 – 2022) drought event during which the City implemented its WSCP. This UWMP includes refinement and updates to the City's WSCP to incorporate lessons learned from that event and enhancing the WSCP to serve as a more practical document for City staff.

1.4 PLAN ORGANIZATION

This 2025 UWMP contains the appropriate sections and tables required per CWC Division 6, Part 2.6 (Urban Water Management Planning Act), included in Appendix A of this 2025 UWMP, and has been prepared based on guidance provided by the California Department of Water Resources (DWR) in its *2025 Urban Water Management Plan Guidebook for Urban Water Suppliers* (DWR Guidebook).

This 2025 UWMP is organized into the following chapters:

- Chapter 1: Introduction
- Chapter 2: Plan Preparation
- Chapter 3: Service Area Description
- Chapter 4: Water Use Characterization
- Chapter 5: SB X7-7 Baselines, 2020 Targets, and 2025 Reporting
- Chapter 6: Normal-Year Water Supply Characterization
- Chapter 7: Water Service Reliability and Drought Risk Assessment

- Chapter 8: Water Shortage Contingency Plan
- Chapter 9: Demand Management Measures
- Chapter 10: Plan Adoption, Submittal and Implementation

This 2025 UWMP also contains the following appendices of supplemental information and data related to the City's 2025 UWMP:

- Appendix A: Urban Water Management Planning Act Legislative Requirements
- Appendix B: DWR 2025 Urban Water Management Plan Tables
- Appendix C: DWR 2025 Urban Water Management Plan Checklist
- Appendix D: Agency and Public Notices
- Appendix E: Water Supply Agreements
- Appendix F: Water Shortage Contingency Plan
- Appendix G: Water Rate Structure
- Appendix H: UWMP and WSCP Adoption Resolutions

Furthermore, this 2025 UWMP contains all the tables recommended in the DWR Guidebook, both embedded into the UWMP chapters where appropriate and included in Appendix B.

DWR's UWMP Checklist, as provided in the DWR Guidebook, has been completed by West Yost to demonstrate the plan's compliance with applicable requirements. A copy of the completed checklist is included in Appendix C.

CHAPTER 2
Plan Preparation

This chapter describes the preparation of the City's 2025 UWMP and WSCP, including the basis for the preparation of the plan, individual or regional planning, fiscal or calendar year reporting, units of measure, and plan coordination and outreach.

2.1 BASIS FOR PREPARING A PLAN

The Act requires every "urban water supplier" to prepare and adopt a UWMP, to periodically review its UWMP at least once every five years and make any amendments or changes which are indicated by the review. The Act also requires every "urban water supplier" to prepare and periodically update its WSCP. While the WSCP is part of the UWMP, it may be adopted and amended separately from the UWMP. An "urban water supplier" is defined as a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually (AFY).

The City manages Water System CA3110004. As shown in Table 2-1, the City provided water to 23,123 customer connections and supplied 10,868 acre-feet (AF) of potable water in 2025 to its retail customers. Discussion on the City's non-potable water deliveries is discussed in Chapter 4. The City primarily supplies water to retail customers; therefore, the City is required to prepare a UWMP and periodically update its WSCP. The City's last UWMP, the 2020 UWMP, and WSCP were adopted separately by the City Council on June 8, 2021.

Table 2-1. Public Water Systems (DWR Table 2-1 Retail)

Public Water System Number	Public Water System Name	Number of Municipal Connections 2025	Volume of Water Supplied 2025 (AF)
CA3110004	City of Lincoln	23,123	10,868
	Total	23,123	10,868

2.2 INDIVIDUAL OR REGIONAL PLANNING AND COMPLIANCE

This 2025 UWMP has been prepared on an individual reporting basis covering only the City's service area, as shown in Table 2-2. The City did not participate in a regional alliance for the preparation of this 2025 UWMP and, therefore, has not prepared a Regional Urban Water Management Plan (RUWMP). As described in Section 2.4, the City has notified and coordinated planning and compliance with appropriate regional agencies and constituents.

Table 2-2. Plan Identification (DWR Table 2-2)

☑	**Individual UWMP**	
	If Water Supplier is also a member of a SB X7-7 Regional Alliance, select name from the drop-down.	
☐	**Regional Urban Water Management Plan (RUWMP)**	

2.3 FISCAL OR CALENDAR YEAR AND UNITS OF MEASURE

The City is a water retailer.

The City's 2025 UWMP has been prepared on a calendar year basis, with the calendar year starting on January 1 and ending on December 31 of each year. Water use and planning data for the entire calendar year of 2025 has been included.

The water volumes in this 2025 UWMP are reported in units of AF.

The City's reporting methods for this 2025 UWMP are summarized in Table 2-3.

Table 2-3. Supplier Identification (DWR Table 2-3)

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)	
Units of measure used in UWMP (Select from the drop down list).	
Unit	AF

2.4 COORDINATION AND OUTREACH

This section includes a discussion of the City's inter-agency coordination and coordination with the general public. The UWMP Act requires the City to coordinate the preparation of its UWMP and WSCP with other appropriate agencies and all departments within the City, including other water suppliers that share a common source, water management agencies, and relevant public agencies. These agencies, as well as the public, participated in the coordination and preparation of this 2025 UWMP and are summarized in the sections that follow.

2.4.1 Wholesale and Retail Coordination

The City's retail water service area overlaps the service areas of two water supply wholesalers: (1) the PCWA, and (2) the Nevada Irrigation District (NID). PCWA's Zone 6 service area includes the majority of the existing City limits and the City's sphere of influence. The City plans to annex the area not currently in PCWA's Zone 6 service area into PCWA Zone 6 as the land is developed. The City relies upon PCWA for a large portion of its water supply.

The NID service area overlaps a portion of the existing City limits in the northeast quadrant of the City, as well as some of the City's sphere of influence north of the existing City limits. The water supply agreement between NID and the City remains active and entitles the City to receive NID raw water supply, which is treated and delivered to the City via PCWA facilities. The City purchases all NID supply from PCWA.

In accordance with CWC § 10631, the City provided water use projections to PCWA and NID, as shown in Table 2-4. As discussed further in Chapter 6, for the purposes of this UWMP, the City is conservatively assuming that it will not receive supply from NID in the future. However, the City endeavors to retain access to the water supply whether directly or indirectly through PCWA. The City, PCWA, and NID plan to revisit the water supply agreement for an update within the next five years. Therefore, projected City water use within NID's service area was provided to NID for use in its planning efforts. The City provided water demand projections to PCWA and NID in five-year increments, from 2025 to 2050.

Table 2-4. Water Supplier Information Exchange (DWR Table 2-4 Retail)

The retail Supplier has informed the following wholesale supplier(s) of projected water use.
Wholesale Water Supplier Name
Placer County Water Agency
Nevada Irrigation District

2.4.2 Coordination with Other Agencies and the Community

The City actively encourages community participation in water management activities and specific water-related projects. The City's public participation program includes both active and passive means of obtaining input from the community, such as mailings, public meetings, and web-based communication. The City's website describes on-going projects and posts announcements of planned rate increases to fund these water projects.

As part of the 2025 UWMP and WSCP update, the City facilitated a public review period. Public noticing, pursuant to Section 6066 of the Government Code, was conducted prior to commencement of this public comment period. Public hearing notices are included in Appendix D of this plan. During the public comment period, the Draft UWMP and Draft WSCP were made available on the City's website. The City also coordinated the preparation of its UWMP and WSCP with several agencies, including relevant public agencies that utilize the same water supplies. These agencies included the following:

- California American Water District
- City of Roseville
- Lincoln-Sewer Maintenance District 1 Wastewater Authority (LiSWA)
- Nevada Irrigation District
- Placer County Public Works
- Placer County Water Agency
- Sacramento Area Council of Governments
- South Sutter Water District
- West Placer Groundwater Sustainability Agency

The public hearing provided an opportunity for all City water users and the general public to become familiar with the UWMP, including the WSCP, and ask questions about the City's water supply, in addition to the City's continuing plans for providing a reliable, safe, high-quality water supply.

2.4.3 Notice to Cities and Counties

CWC § 10621 (b) requires agencies to notify the cities and counties to which they serve water at least 60 days in advance of the public hearing that the plan is being updated and reviewed. In January 2026, a notice of preparation was sent to the cities and counties and other stakeholders, to inform them of the UWMP update process and schedule, and to solicit input for the 2025 UWMP and WSCP. The notifications to cities and counties, the public hearing notifications, and the public hearing and adoption are discussed in Chapter 10 of this report.

CHAPTER 3
Service Area Description

This chapter provides a description of the City's water system and service area, including the water system facilities, climate, population, and housing within the City's water service area.

3.1 GENERAL DESCRIPTION

The City is located in Placer County, California and is part of the Sacramento metropolitan area. California State Route 65 runs north and south through the City while California State Route 193 runs east and west. The City is bounded by the City of Rocklin to the south, Sierra College Boulevard and primarily low density rural and agricultural land to the east, and agricultural land to the north and west. The Auburn Ravine flows east to west through the City. Ground surface elevations generally range from about 113 feet above mean sea level (msl) on the west side of the City to approximately 595 feet above msl in the southeast corner of the City. The location of the City is shown on Figure 3-1.

The City purchases treated surface water from PCWA and pumps groundwater from local wells for its water supply, as described in further detail in Chapter 6. A portion of the water delivered to the City is purchased from NID which is treated and conveyed by PCWA to the City.

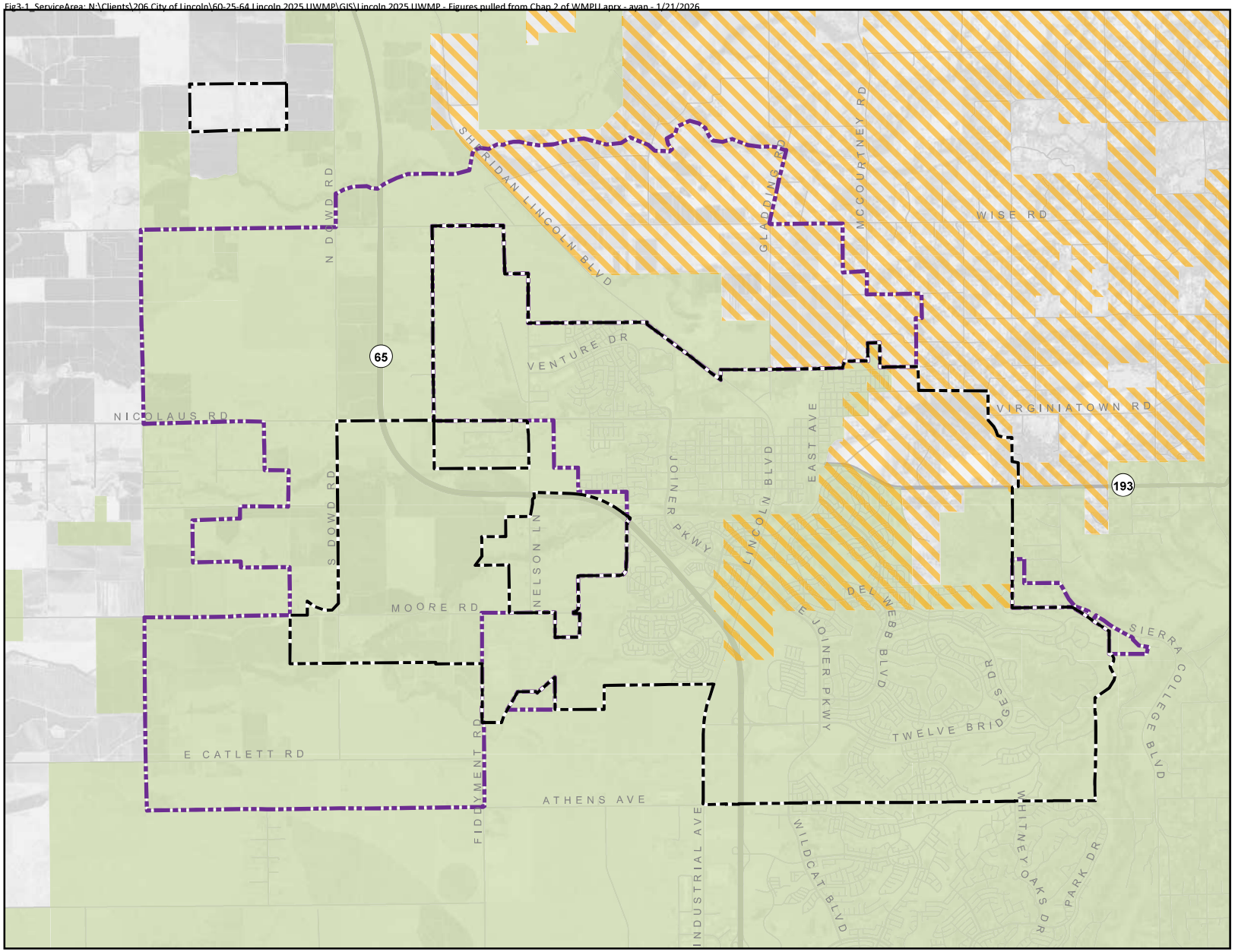
The City's existing water distribution system contains seven pressure zones. The distribution system consists of two PCWA metering stations, five groundwater wells, three storage tanks, one booster pump station (BPS), ten pressure regulating stations, and approximately over 300 miles of distribution and transmission pipelines. Figure 3-2 shows the locations of the major facilities of the City's existing water system.

3.2 SERVICE AREA BOUNDARY

The City's water service area is generally coterminous with the City limits and encompasses approximately 29 square miles (18,454 acres). The service area includes residential, commercial, industrial, institutional and governmental, landscape, and fire service connections. City limits also include a storm water retention basin north of Waltz Road which is not contiguous with the rest of the City limits. This property is outside of the City's water service area and is not expected to receive water service from the City in the future; however, recycled water service may be considered in the future for groundwater recharge purposes.

The City's water service area overlaps the service areas of the PCWA and NID. Figure 3-1 shows the relationship between City, PCWA, and NID service area boundaries, as well as the City's sphere of influence (SOI). The City's SOI includes the area not currently within the City limits which the City plans to annex and extend water service to in the future as development proposals are approved. PCWA's Zone 6 service area includes the majority of the existing City limits and the City's SOI. The NID service area overlaps a portion of the existing City limits in the northeast quadrant of the City, as well as some of the City's SOI north of the existing City limits.

Fig3-1_ServiceArea: N:\Clients\206 City of Lincoln\60-25-64 Lincoln 2025 UWMP\GIS\Lincoln 2025 UWMP - Figures pulled from Chap 2 of WMPU.aprx - ayan - 1/21/2026



City Limit

Sphere Of Influence

Nevada Irrigation District Service Area

Placer County Water Agency Zone 6 Service Area

Notes:

1. City boundaries shown based on GIS data provided by the City in May 2025.
2. PCWA boundary shown based on GIS data provided by PCWA, last updated in May 2024.
3. NID boundary shown based on GIS data last updated in 2021 from West Yost's existing mapping files for the City.

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N

0 4,000 8,000 Feet

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City of Lincoln

2025 Urban Water Management Plan

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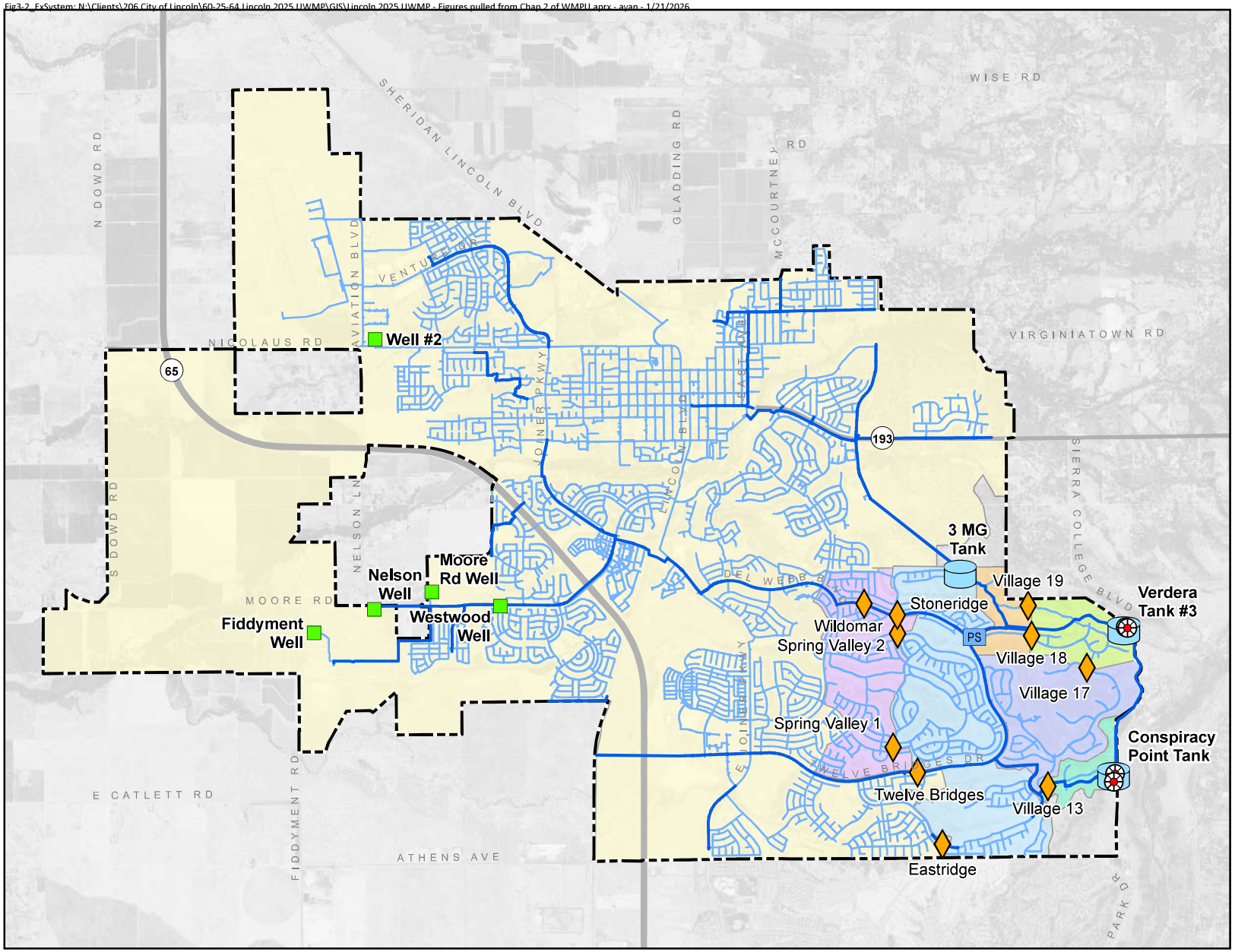
City of Lincoln Water Service Area

Figure 3-1

Fig3-2_ExSystem: N:\Clients\206 City of Lincoln\60-25-64 Lincoln 2025 UWMP\GIS\Lincoln 2025 UWMP - Figures pulled from Chap 2 of WMPU.aprx - ayap - 1/21/2026



Existing System Facilities

- Placer County Water Agency Turnout
- Groundwater Well
- Catta Verdera Pump Station (PS)
- Pressure Regulating Station
- Storage Tank
- Distribution Pipeline (<18-inch)
- Transmission Pipeline (≥18-inch)

Pressure Zones

- 375 Zone
- 475 Zone
- 575 Zone
- 610 Zone
- 650 Zone
- 750 Zone
- 775 Zone

Boundary

- City Limit

Notes:
1. Facilities shown based on GIS data provided by the City in April 2024.

Prepared by: WEST YOST

N

0 3,000 6,000 Feet

Prepared for:

City of Lincoln
2025 Urban Water Management Plan

City of Lincoln
Existing Water System
Figure 3-2

3.3 SERVICE AREA CLIMATE

The City has a Mediterranean climate characterized by hot, dry summers and cool, wet winters, with an annual average precipitation of approximately 21 inches. Summer temperatures occasionally exceed 90 degrees Fahrenheit (°F) and are typically accompanied by low humidity, while winter temperatures can drop into the low 40°F range. Based on historical data, the City's average monthly temperatures range from approximately 40°F to 94°F.

Water use within the City's service area is dependent on various climate factors such as temperature, precipitation, and evapotranspiration (ET). Climate data, including temperature and precipitation estimates, were obtained for the City from the Western Regional Climate Center and the California Irrigation Management Information System (CIMIS).

ET describes the combined water lost through evaporation from the soil and surface water bodies and plant transpiration. In general, the ET is given for turf grass and then corrected for a specific crop type. Local ET data was obtained from the CIMIS monitoring station within the City (Station #131). The historical climate characteristics affecting water management in the City's water service area is shown in Table 3-1.

Table 3-1. Monthly Average Climate Data Summary[(a)]

Month	Standard Monthly Average ET, inches[(a)]	Average Total Rainfall, inches	Average Temperature, degrees Fahrenheit	
			Maximum	Minimum
Fair Oaks (CIMIS Station No. 131)				
January	1.19	3.51	57.6	39.5
February	1.83	3.83	61.7	40.9
March	3.23	2.79	66.3	43.8
April	4.49	1.67	72.1	46.6
May	6.45	0.87	80.3	51.2
June	7.48	0.14	88.5	56.8
July	8.00	0.05	94.1	60.0
August	7.06	0.03	92.7	59.5
September	5.18	0.15	88.6	57.2
October	3.44	1.28	78.3	50.1
November	1.64	2.30	65.2	43.3
December	1.06	4.15	57.2	39.0
Total	**51.04**	**20.76**	-	-

Source: California Irrigation Management Information System.

(a) California Irrigation Management Information System (https://cimis.water.ca.gov/) for Station #131. Period of record is 1979 to 2025. Data accessed 12/23/2025.

These climate characteristics highly influence the City's water use. As described in Chapter 4, the City's water use in the summer months is significantly higher than that in the winter, reflecting increased water use for irrigation purposes during the hot, dry summers.

3.4 SERVICE AREA POPULATION AND DEMOGRAPHICS

3.4.1 Service Area Population

Because the City's water service area aligns with current City limits, the City's water service area population for 2025 was estimated using population data published by the California Department of Finance (DOF), which was benchmarked based on the 2020 Census.[1] The City's 2025 service area population was approximately 54,520.

Population projections for the City were calculated based on annual population projections estimated by the California DOF for Placer County. The County's projected population growth rate for each 5-year increment between 2030 to 2050 was applied to the City's 2025 population to project the City's population for 2030 to 2050. The City's current and projected populations for its water service area are shown in Table 3-2.

Table 3-2. Population – Current and Projected (DWR Table 3-1 Retail)

Population Served	2025	2030	2035	2040	2045	2050(opt)
	54,520	56,648	59,400	62,290	64,978	67,454

NOTES:
(a) Population is from California Department of Finance Estimates, benchmarked to the 2020 Census. Population projections are based on DOF Report P-2A and projections for Placer County, applied to the City of Lincoln's 2025 population.

3.4.2 Other Social, Economic, and Demographic Factors

The State requires the inclusion of service area socioeconomic information as part of the system description in UWMPs. However, differences in household water use across sociodemographic groups in the City have not been studied. Therefore, the following social, economic, and demographic information is being provided to comply with the new regulation. The information was derived from the US Census Bureau's profile of Lincoln for 2020-2024.[2]

- The average number of people per household in the five-year period analyzed was 2.63.
- The median household income in the City of Lincoln was $111,990, while 6.9 percent of all individuals lived in poverty.
- The average unemployment rate is not directly reported by the Census Bureau; however, approximately 54.7 percent of the population age 16 years and over participated in the civilian labor force.

[1] State of California Department of Finance (DOF). 2025. *E-4 Population Estimates for Cities, Counties, and the State, 2021-2025 with 2020 Census Benchmark*. Accessed at https://dof.ca.gov/forecasting/demographics/estimates/e-4-population-estimates-for-cities-counties-and-the-state-2021-2025-with-2020-census-benchmark/ on 12/11/2025.

[2] United States Census Bureau. *American Community Survey, 2025: ACS 5-Year Estimates Data Profiles for Lincon City, California.* Accessed at https://www.census.gov/quickfacts/fact/table/lincolncitycalifornia/PST045225 on 03/24/2026

- The owner-occupied housing unit rate was 83.9 percent.
- The median gross rent was $2,090 per month.
- The median age is not directly reported; however, approximately 27.0 percent of the population is 65 years or older. Of persons 25 years or older, 94.5 percent had earned at least a high school diploma or equivalent and 40.1 percent had earned a bachelor's degree or higher.
- Of persons under 65 years of age, 7.9 percent had a disability, and 3.1 percent did not have health insurance.
- 98.8 percent of households had one or more types of computer, and 93.4 percent had a broadband internet subscription.
- By race, 67.3 percent of people were White, 2.6 percent were Black, 0.8 percent were American Indian or Alaska Native, 8.1 percent were Asian, 0.2 percent were Hawaiian Native or Pacific Islander, 15.3 percent were two or more races, and 5.7 percent were identified as some other race; by ethnicity, 19.2 percent were Hispanic or Latino.
- Approximately 11.8 percent of residents were foreign born, and 15.5 percent of people ages five years and older spoke a language other than English at home.

3.5 LAND USES WITHIN SERVICE AREA

This section describes the City's current and projected land uses in its water service area. Information for this section is based on the General Plan (GP) 2050 and 2025 Water Master Plan Update (WMPU). These documents provide the established land use designations within the City limits and SOI, as well as the anticipated development patterns that guide long-term planning for water service. The City will expand water service within the SOI as areas are annexed and development proceeds in accordance with the GP 2050 and approved specific plans.

3.5.1 Current Land Uses

As detailed in the 2025 WMPU, the City's existing land use consists mostly of low-density single family residential developments in addition to commercial, office, industrial, parks, and schools. Residential uses are located throughout the City's service area. Generally, the eastern portion of the existing city has several traditional single family residential communities along Twelve Bridges Drive and Del Webb Boulevard. Along the most eastern edge of City Limits, the developments are low density/country estates which tend to include large multi-story homes on large lots with extensive landscaping.

The City's commercial and mixed uses are found throughout the City with a concentrated commercial corridor along Lincoln Boulevard which includes the historic downtown part of the City. The City also includes a significant industrial land use in the northern and northwestern part of the City. The industrial users include Sierra Pacific Industries, Gladding McBean Manufacturer, and the Lincoln Regional Airport.

3.5.2 Projected Land Uses

The City's anticipated service area will expand within the SOI as development occurs in accordance with the GP 2050. The GP 2050 serves as a long-term policy guide for the City's growth and is the basis for the future growth projections used in the 2025 WMPU. Projected land uses for this UWMP are based on the land use designations and development timing applied in the 2025 WMPU, which assigned future residential and non-residential development in 5-year increments (i.e., 5-year, 10-year, 15-year, and

20-year) up to buildout. For purposes of this UWMP, the 5-year increments from the 2025 WMPU are defined as 2030, 2035, 2040, and 2045. Projected demands for 2050 are detailed in Chapter 4.

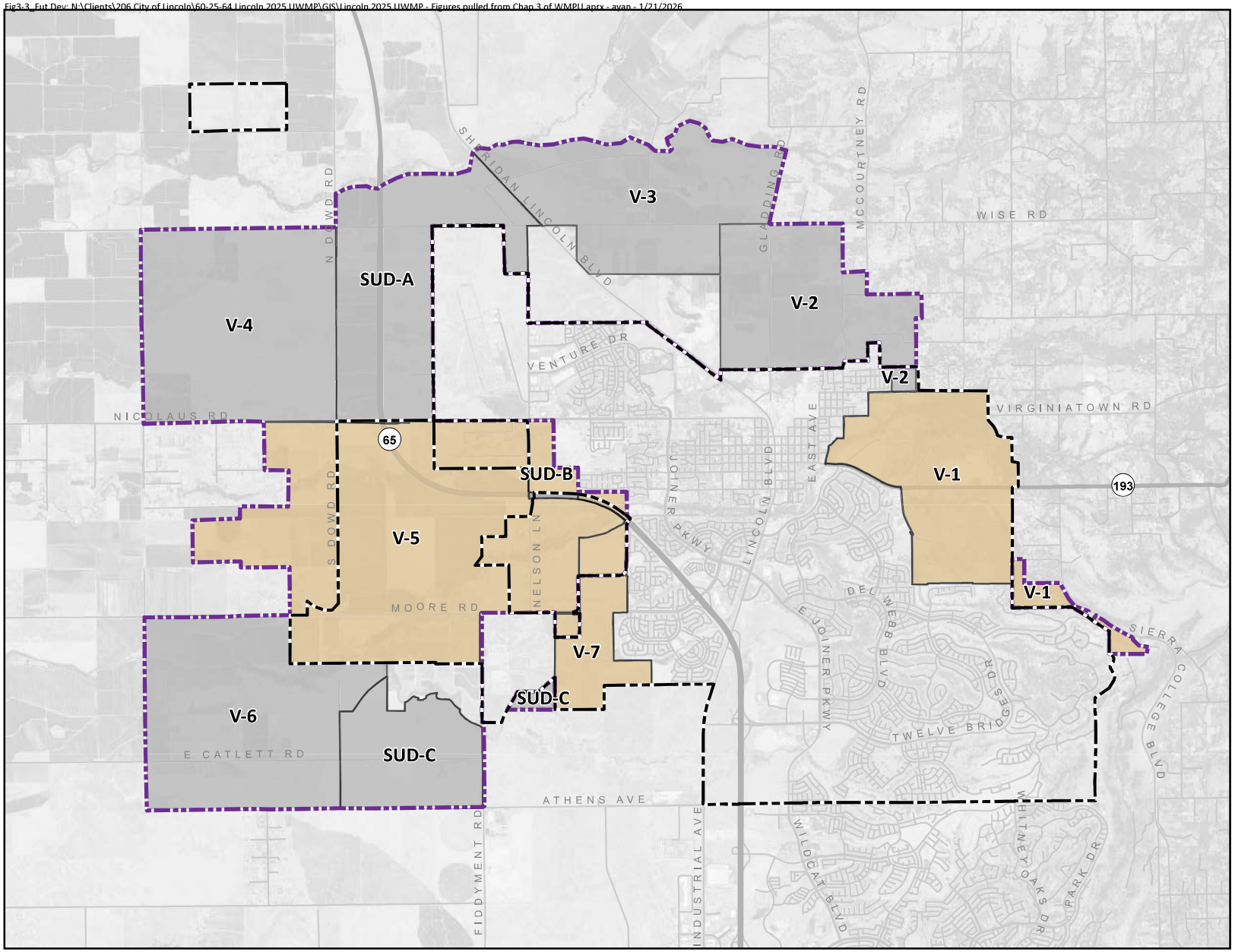
Infill is expected to occur on vacant parcels within the City's existing City Limit boundary at a constant rate. Additionally, the GP 2050 categorized larger undeveloped areas into two designations: Village or Special Use District (SUD) which are described below and shown on Figure 3-3.

The GP 2050 designated seven areas as a Village (identified as V-1 through V-7). The village concept encompasses major new development areas which include a mix of housing types and a village center. In addition, each village will be characterized by extensive bicycle and pedestrian trails and open space to interconnect the village areas along with the developed portions of the City.

The GP 2050 designated three areas as SUDs (identified as SUD-A, SUD-B, and SUD-C). Land uses within the SUDs are limited by restrictions established by the County of Placer's Airport Land Use Compatibility Plan and the proximity of the State Route 65 Bypass.

Based on the timing in the 2025 WMPU, Villages 1, 5, 7 and SUD-B are anticipated to be fully developed within the UWMP time frame. However, anticipated timing for development of Village 7 has been accelerated since completion of the 2025 WMPU. Village 7 is still expected to be mostly built out within 15 years, but current assumptions show that more of the development will occur in the first 10 years (i.e., year 2030 and 2035 in the 2025 UWMP). This change resulted in a slight increase in projected demands for 2030 and 2035 in the UWMP compared to the 5- and 10-year projections presented in the 2025 WMPU. The demand projections in Chapter 4 reflect the accelerated development of Village 7. As shown on Figure 3-3, additional developments are expected to develop beyond the time frame evaluated under this UWMP and are excluded from this UWMP.

Fig3-3_Fut Dev: N:\Clients\206 City of Lincoln\60-25-64 Lincoln 2025 UWMP\GIS\Lincoln 2025 UWMP - Figures pulled from Chap 3 of WMPU aprx - ayan - 1/21/2026



City Limit

Sphere Of Influence

Future Development Areas

Within 2025 UWMP Time Frame

Beyond 2025 UWMP Time Frame

Notes:
1. Village and Special Use District shapefiles provided by the City of Lincoln in 2025.

Prepared by:

WEST YOST

N

0 4,000 8,000 Feet

Prepared for:

City of Lincoln
2025 Urban Water Management Plan

Lincoln Live. Life. Lincoln

Future Development Areas

Figure 3-3

CHAPTER 4
Water Use Characterization

This chapter describes and quantifies the City's historical, current, and projected water uses. Water demand projections are based on the projected growth within the City's water service area.

4.1 NON-POTABLE VERSUS POTABLE WATER USE

Potable water is water that is safe to drink and has had various levels of treatment and/or disinfection. The City provides treated potable water to customers within its water service area from City owned and operated groundwater wells and treated surface water purchased from PCWA.

Recycled water, also referred to as reclaimed water in this UWMP, is municipal wastewater that has been treated to a specified quality for beneficial reuse. As discussed in Chapter 6 of this plan, wastewater flows from the City are treated at the LiSWA wastewater treatment and reclamation facility (WWTRF). The WWTRF produces Title 22 recycled water that is used for agricultural use at reclamation areas outside the existing City limits and for irrigation and industrial use within the City's limits.

Raw water is non-potable, untreated water that is used in its natural state or with minimal treatment. PCWA and NID deliver raw water directly to a few locations within the City's service area. Because the City is not involved in metering or payment obligations for these raw water deliveries, raw water use is not included in the City demand totals presented in this UWMP. While not evaluated in this UWMP, the City may explore the use of raw water for landscape irrigation in the future to help offset potable water demand for irrigation. Raw water use may be most appropriate in areas furthest from the WWTRF.

Potable water demands are discussed in the following section.

4.2 WATER USE BY SECTOR

This section describes the City's past, current, and projected water use by water use sector, as listed in CWC §10631(d) and defined in the DWR Guidebook. These classifications were used to analyze current consumption patterns among the various types of City water customers. Each water use sector is listed and defined below.

- **Single Family Residential:** A single-family dwelling unit. A lot with a free-standing building containing one dwelling unit that may include a detached secondary dwelling.
- **Multi-Family Residential:** Multiple dwelling units contained within one building or several buildings within one complex.
- **Commercial:** A water user that provides or distributes a product or service (CWC § 10608.12(d)).
- **Industrial:** A water user that is primarily a manufacturer or processor of materials as defined by the North American Industry Classification System (NAICS) Code Sectors 31 to 33, inclusive, or an entity that is a water user primarily engaged in research and development (CWC § 10608.12(h)).
- **Institutional/Governmental:** A water user dedicated to public service. This type of user includes, among other users, higher education institutions, schools, courts, churches, hospitals, government facilities, and nonprofit research institutions (CWC§ 10608.12(i)).

- **Landscape:** Water connections supplying water solely for landscape irrigation. Such landscapes may be associated with multi-family, commercial, industrial, or institutional/governmental sites, but are considered a separate water use sector if the connection is solely for landscape irrigation.
- **Other:** Any other water demand that is not adequately described by the water sectors defined above, including fire flows and construction water. System water losses are not to be reported in the "Other" category.

4.2.1 Historical Potable Water Use

Historical potable water production, metered consumption, and non-revenue water (NRW) for 2020 through 2024 are shown in Table 4-1. Historical data for 2020 to 2024 is from production and consumption data provided by the City and is consistent with the data reported in the City's 2025 WMPU. NRW is the difference between the quantity of water produced and the quantity of water consumed and/or metered. The City was fully metered for the years shown in Table 4-1.

Table 4-1. Historical Potable Water Production, Demand, and Losses, AF[a,b]

Year	Annual Production	Annual Metered Consumption	Annual Water Losses
2020	10,580	9,358	1,222
2021	10,625	9,536	1,089
2022	10,664	9,748	916
2023	10,094	9,439	655
2024[c]	11,429	10,095	1,334

(a) Historical 2020 to 2024 data is from production and consumption data provided by the City and is consistent with the data reported in the City's 2025 Water Master Plan Update (WMPU).

(b) Data reported in this table may differ slightly from what was reported in the AWWA Water Loss Audits as data is further refined for the Water Loss Audits (e.g., inclusion of metered hydrant water use which was excluded in the 2025 WMPU).

(c) 2024 data shown has been corrected for meter calibration issues. The City identified meter reporting discrepancies after required State reporting was submitted; therefore, 2024 data may differ from those previously reported to the State. The City is working to resolve these discrepancies in its State reporting.

4.2.2 Current Water Use

Potable and non-potable water demands by sector for the year 2025 are reported in Table 4-2. As shown, all potable water deliveries were treated to potable water standards, and all non-potable water deliveries were treated to Title 22 recycled water standards. The City did not supply water to wholesale customers in 2025 and has no plans to do so in the future. Additionally, the City does not have any current plans to use water for saline water intrusion barriers, agricultural irrigation, wetlands, or wildlife habitat. However, the City plans to perform field investigation and testing to further evaluate whether implementation of groundwater recharge is viable, further discussed in Chapter 6.

The total water demand for 2025 was 11,757 AF, consisting of 10,868 AF of potable demand (including system losses) and 889 AF of non-potable demand.

Table 4-2. Total Uses for Potable and Non-Potable Water – 2025 (DWR Table 4-1 Retail)

Use Type	Additional Description (as needed)	2025 Actual Water Use[(a)]	
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		**Potable or Non-Potable** (OPTIONAL) Drop down list	Volume (AF)
Single Family		Potable	7,758
Multi-Family		Potable	200
Commercial		Potable	497
Industrial		Potable	54
Institutional/Governmental		Potable	71
Landscape		Potable	1,124
Distribution System Water Loss		Potable	1,069
Other (optional)	Hydrant water	Potable	95
Industrial	Sierra Pacific Industries	Non-Potable	100
Landscape	Irrigation of City parks and landscaping	Non-Potable	12
Agricultural	Irrigation of farmland near WWTRF (outside of City limits)	Non-Potable	777
		Subtotal Potable	10,868
		Subtotal Non-Potable	889
		Total	11,757

NOTES:
(a) Does not include raw water delivered by PCWA or NID to customers within the City's water service area.

4.2.3 Projected Water Use

The City's potable and non-potable water demand projections for 2030 through 2050 (i.e., a 25-year planning horizon) are reported in Table 4-3. Projected future potable water demands are based on land use projections from the City's 2025 WMPU, which included water use projections for 2030 to 2045 and buildout. The 2025 WMPU demand projections have been updated for this UWMP to reflect accelerated growth and an increase in residential units in Village 7, with the majority of development now anticipated to occur by 2030 rather than 2035 as assumed in the WMPU. The anticipated annual growth rates based on the adjusted land use timing are approximately 5 percent for 2025–2030, 5 percent for 2030–2035, 4 percent for 2035–2040, and 2 percent for 2040–2045.

To account for the varying pace of development within the City over the 25-year planning horizon and for purposes of this UWMP, 2050 water demands were projected with the assumption that the City is anticipated to grow at an annual growth rate of approximately 3 percent from 2045 to 2050, reflecting the average of the growth rates for 2035–2040 and 2040–2045. The total 2050 projected potable water demand is 25,419 AF.

Non-potable water demand projections are based on the City's Reclamation Master Plan and are generally consistent with the projections reported in the City's 2020 UWMP, with updates based on City staff input. The City plans to update the Reclamation Master Plan in the next couple of years. Refer to Chapter 6 for a discussion of the City's recycled water system and associated non-potable water demand projections.

Table 4-3. Total Uses for Potable and Non-Potable Water – Projected (DWR Table 4-2 Retail)

Use Type	Additional Description (as needed)	Projected Water Use[a] (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		**Potable or Non-Potable** (OPTIONAL) Drop down list	**2030 (AF)**	**2035 (AF)**	**2040 (AF)**	**2045 (AF)**	**2050 opt (AF)**
Single Family	Country Estates, Low Density Residential, Medium Density Residential	Potable	9,603	11,212	13,157	14,569	16,801
Multi-Family	High Density Residential	Potable	226	412	563	687	792
Commercial	Commercial, Business Professional, and Mixed Use	Potable	552	1,035	1,388	1,541	1,777
Industrial		Potable	101	166	213	260	300
Institutional/Governmental	Public	Potable	101	132	195	314	362
Landscape	Parks and Recreation	Potable	1,378	1,861	2,251	2,363	2,725
Other (optional)	Hydrant water[b]	Potable	100	105	110	116	122
Distribution System Water Loss	See note c	Potable	1,320	1,675	1,947	2,203	2,540
Industrial	Sierra Pacific Industries[d]	Non-Potable	116	172	172	172	172
Landscape	Irrigation of City parks and landscaping	Non-Potable	190	240	280	610	880
Agricultural	Irrigation of farmland near WWTRF (outside of City limits)[e]	Non-Potable	2,840	2,840	2,840	2,840	2,840
		Subtotal Potable	13,381	16,598	19,824	22,053	25,419
		Subtotal Non-Potable	3,146	3,252	3,292	3,622	3,892
		Total	16,527	19,850	23,116	25,675	29,311

NOTES:
(a) Projected potable water demands includes existing use plus land use projections in the City's 2025 Water Master Plan Update that were updated for this UWMP to reflect accelerated growth and an increase in residential units in Village 7 in 2030. Projected non-potable water demands are based on the City's Reclamation Master Plan and are generally consistent with the non-potable water demands in the City's 2020 Urban Water Management Plan, with updates based on City staff input.
(b) Hydrant water use includes flushing, street sweeping, and construction and is anticipated to increase at an annual growth rate of 1 percent.
(c) Equal to 2025 water loss plus assumed unaccounted for water use of 10 percent for future developments.
(d) Based on current discussions between the City and Sierra Pacific Industries, recycled water use is projected to increase by approximately 100,000 gpd (112 AFY), from the previously projected 60 AFY in the 2020 UWMP to approximately 172 AFY by 2035, with incremental increases beginning in 2030 and remaining constant thereafter.
(e) Although agricultural water use outside City limits has recently declined significantly, this UWMP conservatively assumes agricultural water use will remain constant over the planning horizon.

4.2.4 Characteristic Five-Year Water Use

Water Code § 10635(b) requires urban suppliers to include a five year drought risk assessment (DRA) in their UWMPs. A key component of the DRA is estimating water demands for the next five years (2026-2030) without drought conditions (i.e., unconstrained demand). Chapter 7 details the DRA, but the five-year demand projections are summarized in Table 4-4. Projected water demands for 2026 through 2029 were estimated as a linear interpolation with an annual growth rate of 4 percent between the actual 2025 consumption by use type, reported in Table 4-2, and the 2030 projected water use, reported in Table 4-3.

Table 4-4. Projected Five-Year Water Use for Retail Customers, AF[(a)]

Water Use Sector	2026	2027	2028	2029	2030
Single-Family	8,127	8,496	8,865	9,234	9,603
Multi-Family	205	210	216	221	226
Commercial	508	519	530	541	552
Industrial	63	73	82	92	101
Institutional/Governmental	77	83	89	95	101
Landscape	1,175	1,226	1,276	1,327	1,378
Other (Hydrant Water)	96	97	98	99	100
Losses	1,119	1,169	1,220	1,270	1,320
Total	**11,370**	**11,873**	**12,376**	**12,879**	**13,381**

(a) Projected water demands for 2026 through 2029 were estimated as a linear interpolation with an annual growth rate of 4 percent between the actual 2025 consumption by use type (Table 4-2), and the 2030 projected water use (Table 4-3).

4.2.5 Estimating Future Water Savings

The water use projections presented in Table 4-4 are based on land use projections within the City's water service area. In accordance with the City's WSCP, water conservation is encouraged within the City. Urban water suppliers may consider the passive savings from codes, standards, ordinances, or transportation and land use plans. Such water savings decrease the water use projections for new and future customers compared to historical customers. As indicated in Table 4-5, these potential passive savings have not been included in the City's water demand projections to be conservative.

Table 4-5. Inclusion in Water Use Projections (DWR Table 4-3 Retail)

Are Future Water Savings Included in Projections? **Drop down list (y/n)**	No
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.	
Are Lower Income Residential Demands Included In Projections? **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.	

4.2.6 Water Use for Lower Income Households

This UWMP considers current adopted codes, plans, and other policies or laws to estimate water savings projections. As indicated in Table 4-5, projected water use for lower income households in the City's water service area are included.

A lower income household is considered to be a household with an income below 80 percent of an area median income, adjusted for family size. Projected water demands for low income, single family, and multi-family residential water uses are included in the total water demands described in Section 4.2.3.

The City is a member of the Sacramento Area Council of Governments (SACOG) and participated in the Regional Housing Needs Plan (RHNP) which allocated participating cities and counties their "fair share" of the region's projected housing needs. The RHNP is updated every five years and provides the housing units that a city or county must plan for within a 7.5-year time period. The SACOG 2021-2029 RHNP was adopted March 2020. This information is used by cities and counties to update their General Plan Housing Elements.

The SACOG 2021-2029 RHNP includes the number of existing lower income households in the City. The Housing Element indicated approximately 33 percent of the City's households are Low Income (14 percent), Very-Low Income (9 percent), or Extremely Low Income (10 percent)[1]. The City assumes that gross per capita water demand is equal for all residential housing units regardless of income. Therefore, an estimated 2,626 AF (33 percent) of the City's residential water deliveries in 2025 (7,958 AF) were to lower income households. The City assumes that lower income households will continue to represent approximately 33 percent of the City's total residential customers through 2050. These projected low-income water demands projections are included in Table 4-3 and 4-4.

[1] Sacramento County of Governments (SACOG). March 2020. *2021-2029 Regional Housing Needs Plan.* Accessed at https://www.sacog.org/planning/land-use/housing/regional-housing-needs-allocation-rhna on February 18, 2021.

4.3 DISTRIBUTION SYSTEM WATER LOSSES

System losses are the difference between the actual volume of water treated and delivered into the distribution system and the actual metered consumption. Such apparent losses are always present in a water system due to pipe leaks, unauthorized connections or use, faulty meters, unmetered services such as fire protection and training, and system and street flushing.

The City uses the AWWA Water Audits and Loss Control Programs method to annually evaluate its distribution system losses. The water audit is an accounting exercise that tracks all sources and uses of water within a water system over a calendar year.

Table 4-6 summarizes the City's status in submitting its AWWA water audits for the last five years starting in January 2020. Copies of the City's water audit worksheets for the last five years are available online at https://wuedata.water.ca.gov/awwa_plans.

Table 4-6. Last Five Years of Water Loss Audit Reporting (DWR Table 4-5 Retail)

Public Water System ID # Reported in Table 2-1 R	Reporting Period	Submitted to DWR Water Loss Audit Program (yes/no)
Report submittal status for all five years for each Public Water System as available. Add rows as needed		
CA3110004	**2020**	Yes
	2021	Yes
	2022	Yes
	2023	Yes
	2024	Yes

In November 2022, DWR and the State Water Board adopted water loss standards for urban retail water suppliers. The new regulation provides suppliers with volumetric standards that establish cost effective levels of achievable water loss based on each supplier's water system characteristics and budgets. Beginning in January 2028, suppliers must meet their individual volumetric real loss standards based on a three-year compliance period of the Years 2025, 2026, and 2027. Individual apparent water loss standards must also be met at the same 2028 compliance date. Table 4-7 summarizes the real and apparent water losses for 2024 compared to the City's 2028 water loss standard. As the 2025 water audit has not yet been completed, the 2024 audit data was used to prepare Table 4-7. The City's apparent water loss is below its standard, while its real water loss is slightly above the standard, likely due to unmetered flushing. However, 2024 appears to be an outlier, as the City met the water loss standards in 2022 and 2023. The City will continue to make progress towards meeting the standard by the 2028 deadline.

The City's programs to assess and manage water loss are discussed further in Chapter 9

Table 4-7. Progress Towards 2028 Water Loss Standard (DWR Table 4-6 Retail)

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				
		State Water Board Standard		Most Recent AWWA Water Loss			State Water Board Standard		Most Recent AWWA Water Loss		
		2028 Real Water Loss Standard per Unit per day	Units for Real Water Loss Drop down list	Number of Units (Connections or Miles corresponding with units selected)	Volume of Total Real Loss (from AWWA Water Loss Audit) (AF)	Real Water Loss Per Unit per Day	2028 Apparent Water Loss Standard per Unit per Day	Units for Apparent Water Loss	Number of Connections	Volume of Total Apparent Loss (from AWWA Water Loss Audit) (AF)	Apparent Water Loss Per Unit per Day
CA3110004	Yes	33.4	Gallons per Service Connection per Day (GPSCD)	22,851	939.5	36.7	10.6	Gallons per Service Connection per Day (GPSCD)	22,851	259.2	10.1
Water Board's Calculated Water Loss Standards											

NOTES:
(a) Data from the City's 2024 AWWA Water Loss Audit. As the 2025 water audit has not yet been completed, the 2024 audit data was used to prepare Table 4-7. However, 2024 appears to be an outlier for water loss as the City met the water loss standards in 2022 and 2023. The increase in water loss for 2024 is likely due to unmetered flushing.

4.4 CLIMATE CHANGE CONSIDERATIONS

Climate change has the potential to alter local climatic patterns and meteorology. The City, along with the other Regional Water Authority (RWA) member agencies, participated in the North American Basin Regional Drought Contingency Plan (NABRDCP) adopted in October 2017 and the Regional Water Reliability Plan adopted in May 2019, to work on coordinated planning to improve regional water supply reliability and to increase the resiliency of the region's water resources in the face of future climate and drought conditions.

The City's future water demand and use patterns may be impacted by changing climate conditions. For example, warmer temperatures may increase landscape irrigation demand, and these conditions may also increase the frequency and intensity of wildfires, potentially increasing water demands for firefighting. The water demand projections included in this 2025 UWMP reflect anticipated increases in demands. Current and ongoing water use efficiencies and water conservation by the City's water customers, discussed in Chapter 9, and expanded use of recycled water, discussed in Chapter 6, could mitigate the effects of changing climate conditions on water demands.

The City continues to evaluate available methods to better understand the relationship between changing climate conditions and water demands within its service area and will incorporate impacts of changing climate conditions on demands in future UWMPs. These potential impacts on the City's water supplies are described in Chapter 6.

CHAPTER 5
SB X7-7 Baselines, 2020 Target, and 2025 Reporting

In November 2009, SB X7-7, the Water Conservation Act of 2009, was signed into law as part of a comprehensive water legislation package. The Water Conservation Act addressed both urban and agricultural water conservation. The legislation set a goal of achieving a 20 percent statewide reduction in urban per capita water use by December 31, 2020 (i.e., "20 by 2020"). In order to meet the urban water use target requirement, each retail supplier was required to determine its baseline water use, as well as its target water use for the year 2020. Water use is measured in gallons per capita per day.

This chapter provides a review of the calculation of the City's 2020 Urban Water Use Target and demonstrates that the City achieved its 2020 target reduction.

In this UWMP, the City is required to report its compliance with the 2020 urban water use target as of 2020. The 2020 urban water use target has since been superseded by the establishment of Urban Water Use Objectives as part of the Making Conservation a California Way of Life regulation adopted on July 3, 2024. Starting in 2024, the City's Urban Water Use Objective is calculated and reported annually through a separate process, and therefore, the City does not compare its 2025 water use with its 2020 target. Additional information on the City's water conservation practices and objectives is included in Chapter 9.

5.1 OVERVIEW AND BACKGROUND

The City's compliance with SB X7-7 was first addressed in the City's 2010 UWMP. The City's baseline per capita water use was determined, and urban water use targets for 2015 and 2020 were established and adopted. Actual water use data and population estimates were used to calculate per capita water use.

SB X7-7 required each urban water retailer to determine its baseline daily per capita water use over a 10-year or 15-year baseline period. In its 2020 UWMP, the 10-year baseline period that the City selected was 2000 through 2009. The City calculated its baselines and water use targets on an individual reporting basis in accordance with SB X7-7 legislation requirements and *DWR Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use* (2016) (DWR Methodologies). Details of the specific methodology used to calculate the City's 2020 water use target are documented in its 2020 UWMP.

5.2 2020 DAILY PER CAPITA WATER USE COMPLIANCE

In its 2020 UWMP, the City calculated its actual 2020 water use for the 2020 Calendar Year in accordance with the DWR Methodologies document. As shown in Table 5-1, urban per capita water use in 2020 was 191 GPCD, which was below the confirmed 2020 water use target of 193 GPCD. Therefore, the City met its 2020 final water use target. Water use in 2020 in the City's service area was reduced as compared to baseline years as a result of increased water conservation efforts by the City and its customers.

Table 5-1. SB X7-7 2020 Target Progress (DWR Table 5-1 Retail)

Was Supplier part of a merger or consolidation since 2020?	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 See DWR NOTES below.	
					Actual 2025 GPCD (From SB X7-7 Compliance Form)	Did Supplier meet the 2020 Target in 2025?
No	Individual Target	193	191	Yes		NA

5.3 REGIONAL ALLIANCE

The City chose to comply with the requirements of SB X7-7 on an individual basis. The City elected not to participate in a regional alliance.

CHAPTER 6
Normal-Year Water Supply Characterization

This chapter describes the City's water supply portfolio. Currently available water supplies, as well as future anticipated water supplies, are described and quantified. The management of each supply in correlation with other supplies is discussed. Potential effects of climate change and regulations are also discussed. The energy intensity required to treat and distribute the City's water supply is provided.

The City obtains its retail water supply from a combination of treated surface water, groundwater, and recycled water sources. These sources, along with other projected future supplies, are described in this chapter. Water supply information from the City's prior UWMPs and other relevant agency planning documents have been incorporated into this chapter; however, some sections have been updated to incorporate the most recent information available.

6.1 WATER SUPPLY ANALYSIS OVERVIEW

The City utilizes a portfolio approach to its water supplies. Water sources used to serve City customers include treated surface water, groundwater, and recycled water. Table 6-1 summarizes the City's available water supplies.

Table 6-1. City Water Supplies

Water Supply Type	Water Supply Source
Treated Surface Water	• Placer County Water Agency (PCWA) wholesale supply • Nevada Irrigation District (NID) wholesale supply conveyed through PCWA facilities
Groundwater	• City retail supply from City owned wells overlying the North American Groundwater Subbasin
Recycled Water	• City retail recycled water delivered from the Lincoln-Sewer Maintenance District 1 Wastewater Authority (LiSWA) wastewater treatment and reclamation facility (WWTRF)

In addition to water supplied by the City to its customers, PCWA and NID have historically delivered untreated surface water directly to certain customers within the City's service area. These deliveries occur under contracts between the supplier (PCWA or NID) and the end user. This untreated surface water does not enter the City's distribution system, and the City does not meter or bill these customers for this use.

In this section, the management of each supply in correlation with other supplies are discussed, along with the measures the City has taken to acquire and develop planned sources of water. Anticipated availability of the City's water supplies under a normal water year is provided in this chapter. The availability of the City's water supplied under a single dry year and a drought lasting five years, as well as more frequent and severe periods of drought, are discussed in detail in Chapter 7 of this UWMP, along with the basis of those estimates.

6.1.1 Regional Water Authority

The City is a member of the RWA. The RWA is a joint powers authority representing a coalition of water providers in the greater Sacramento, Placer, El Dorado, and Yolo County region. RWA members include the City, PCWA, and the City of Roseville, among others.

RWA's primary mission is to help its members protect and enhance the reliability, availability, affordability and quality of water resources. RWA has launched significant programs and services on a regional scale, including: (1) a water efficiency program designed to help local purveyors implement best management practices on a regional basis; (2) implementation of the American River Basin Regional Conjunctive Use Program to build and upgrade water facilities throughout the region to better manage surface and groundwater resources; and (3) development of an Integrated Regional Water Management Planning Program (IRWMP) to continually identify the regional projects and partnerships that will help the region best meet its future water needs. As part of the IRWMP effort, RWA is also implementing the Watersheds Resilience Pilot Project[1] to support watershed health and long-term water supply reliability. RWA has provided grant funding to the City for water-related improvements, including wastewater treatment and groundwater supply projects.

6.2 PURCHASED OR IMPORTED WATER

The City purchases treated surface water from PCWA and NID. Figure 3-1 in Chapter 3 shows the location of the City's existing limits and SOI in relation to PCWA's and NID's service area boundaries.

6.2.1 Placer County Water Agency

PCWA was created in 1957 by a special act of the California Legislature and is the primary water resource agency for Placer County. The boundaries of PCWA are coterminous with the boundaries of Placer County. PCWA provides retail treated water service within its service area and provides wholesale water (treated and/or untreated) to Cal Am, the Cities of Lincoln and Roseville, San Juan Water District, and several smaller historical community systems. It also provides raw water supply to private customers for irrigation and other non-potable uses.

PCWA's water supplies are primarily delivered to customers within its Western Water System. The Western Water System was comprised of four distinct administrative zones: Zones 1, 2, 3 and 5. In 2017, Zone 6 was formed to consolidate all preexisting zones in the Western Water System service area and includes the majority of the City's existing limits and SOI (refer to Figure 3-1).

Water supply agreements with PCWA are summarized below and are included in Appendix E. In 2012, the City entered a water supply contract with PCWA for delivery of treated surface water. The contract entitles the City to a maximum delivery entitlement of 18.5 MGD of treated water supply. Completion of the City's Phase 3 Pipeline and Metering Station project in March 2021 increased the City's PCWA maximum delivery entitlement to 18.9 MGD per Facilities Agreement No. 2521 with PCWA (Appendix E).

In 2023, the City adopted Resolution 2023-109 approving a funding agreement between the City and PCWA for construction of the Ophir Water Treatment Plant and additional treated water capacity (Appendix E). The first phase of the Ophir Water Treatment Plant will provide an additional 10 MGD of treatment capacity to PCWA's Western Water System. Under the agreement, the City's additional purchased capacity from PCWA is planned to be initiated in 2030 and may increase incrementally, not to exceed 5 MGD, subject to the terms of the agreement and reaching full capacity in approximately 10 years. As described in Chapter 4 of the City's 2025 WMPU, any additional capacity would be made available upon the completion of Phase 2 of the Ophir Water Treatment Plant, which is estimated for another 10 MGD.

[1] Jacobs, Valley Vision, and Khadam Consulting. March 2026. *Regional Water Authority Watersheds Resilience Plan Public Release Draft.*

For planning purposes of this UWMP, future PCWA supply assumptions are based on the existing agreements in effect at the time of preparation.

In addition to the treated surface water deliveries discussed above, PCWA delivers untreated surface water to some customers within the City's service area via the Caperton Canal and the Auburn Ravine Creek. This raw water is used for irrigation resulting in an offset of potable water use within the City. Other customers, such as the Catta Verdera Golf Course, receive raw water deliveries directly from PCWA. The City is not involved in metering or payment obligations for these raw water deliveries within its service area. Therefore, raw PCWA water use is not included in the City demand or supply totals presented in this UWMP.

The reliability of the water supply delivery to the City is grounded in the underlying water rights and contracts held by PCWA. These water rights and contracts for PCWA's surface water supplies include the following:

- Middle Fork Project (MFP) Water – Water stored in the Middle Fork Project along the North Fork American River under water rights permits 13856 and 13858;
- Central Valley Project (CVP) Water – CVP water supply from the American River under CVP Contract 14-060200-5082A with the United States Bureau of Reclamation;
- Pacific Gas & Electric (PG&E) Water – Water purchased from PG&E from the Yuba River and Bear River under the 1982 Zone 3 Contract Purchase Agreement and the Water Supply Agreement, signed in February 2015; and
- Pre-1914 Appropriations Water – Water diverted from various small creeks and their tributaries in western Placer County, for the purpose of irrigation, under appropriative water rights S000959, S000967, S010397, and S010398.Terms associated with water supply permits and contracts dictate the volume of supplies and applicable place of use.

Terms associated with water supply permits and contracts dictate the volume of supplies and applicable place of use. Table 6-2 outlines the allotted maximum supply from each surface water source. These supplies are more fully described in PCWA's 2025 UWMP.

Table 6-2. PCWA Surface Water Supply Summary[(a)]

Supply	Source	Water Right or Contracted Volume
Middle Fork Project	American River	120,000 AFY
Central Valley Project Contract	American River	35,000 AFY
PG&E Agreements	Yuba and Bear Rivers	125,400 AFY
Pre-1914 Appropriative Rights	Various tributaries and creeks in West Placer County	S000959 – 40 cubic feet per second (cfs). All other pre-1914 rights not currently exercised. Total estimated yield of 3,400 AFY

6.2.2 Nevada Irrigation District

NID is a California special district providing treated water and raw/irrigation water to customers within portions of Nevada, Placer and Yuba counties. NID was created in 1921 by authorization of the Nevada

County Board of Supervisors under the California Irrigation District Act of 1897. NID's service area covers approximately 287,000 acres and includes agricultural, environmental, recreational, and municipal uses. NID's Draft 2025 Agricultural Water Management Plan indicates that agricultural water use accounts for approximately 80 percent of the total demand on NID's water supply. NID's service area is shown on Figure 3-1.

In 2004, the City entered into a Temporary Water Sales Agreement between the City, PCWA, and NID for treatment and delivery of NID surface water to City customers within NID's service area. Under the Temporary Water Sales Agreement, the City purchases NID supply from PCWA, which is treated and delivered through PCWA facilities. However, the agreement does not specify an amount of water to be supplied by NID to the City. The City recognizes the value of the pre-1914 water rights and endeavors to retain access to the water supply whether directly or indirectly through PCWA. The City, PCWA, and NID plan to revisit the Temporary Agreement for an update within the next five years. The Temporary Agreement is included in Appendix E.

NID delivers untreated surface water directly to certain customers within the City's service area, including the Turkey Creek Golf Course and the Lincoln Crossing Home Owner's Association, for irrigation purposes. This water does not enter the City's potable distribution system, and the City does not meter or bill these deliveries. Raw NID water use is therefore not included in the City's demand or supply totals.

As discussed further below, it is conservatively assumed that the City will not rely on NID supply in projected future water supply planning for purposes of this UWMP. Accordingly, NID water supply reliability is not included in the City's reliability evaluation presented in Chapter 7.

6.2.3 Actual and Projected Water Supplies from Purchased or Imported Water Supplies

Actual water supplies from PCWA and NID for 2025 are provided in Table 6-3. In 2025, the City received approximately 10,372 AF of treated surface water from PCWA, which includes 1,440 AF of NID supply treated and delivered by PCWA. The City's projected normal year water supplies from these sources are shown in Table 6-4 in five-year increments from 2030 to 2050. Because the Temporary Agreement does not specify the amount of NID supply the City is entitled to, and negotiations to amend the agreement are ongoing, it is conservatively assumed that the City will not receive NID supply after 2025 for the purposes of this UWMP. The City anticipates that PCWA's supplies, including additional treated water capacity associated with the Ophir Water Treatment Plant beginning in 2030, will be sufficient to meet its projected surface water supply needs under normal year conditions.

Table 6-3. Purchased or Imported Water Supplies in 2025

Water District	Existing (2025) Water Supply Volume, AF[(a)]
PCWA[(b)]	8,932
NID[(c)]	1,440

(a) Does not include retail raw water supplies delivered by PCWA or NID to customers within the City water service area.
(b) PCWA supply is equal to total potable supply delivered via PCWA facilities to the City less NID supply.
(c) NID supply data provided by City staff based on discussion with NID and PCWA staff.

Table 6-4. Projected Purchased or Imported Water Supplies[a,b]

Water District	Projected Water Supply Volume, AF				
	2030	2035	2040	2045	2050
PCWA	12,043	14,938	17,842	19,848	22,877
NID	0	0	0	0	0

(a) The City plans to meet 90 percent of projected potable water demands with purchased surface water supplies.
(b) Projections rounded to nearest ten AF.

6.3 GROUNDWATER

The City has five groundwater wells located in the western portion of the City. The City uses these wells in conjunction with its surface water supplies during normal and wet years to meet peak summer demands and provide supply resiliency. Use of the groundwater wells may increase during dry years when available surface water supplies may be limited. This section describes the history and management strategies of the groundwater subbasin underlying the City as well as the volume of groundwater pumped by the City.

6.3.1 Groundwater Basin Description

The groundwater basin underlying the City is the Sacramento Valley Groundwater Basin, North American Subbasin (NASb). The NASb lies in the southeastern portion of the Sacramento Valley Groundwater Basin and consists predominantly of unconsolidated to semi-consolidated Quaternary alluvial deposits and Tertiary nonmarine sedimentary deposits.[2] The NASb is bounded on the north by the Bear River and the Yuba–Placer County line; on the east by granitic, metamorphic, and marine sedimentary rocks along the Sierra Nevada foothills; on the south by the American River; and on the west by Sacramento County, Sutter County, and the Feather River (5-021.64, NASb). Groundwater in the NASb occurs within alluvial sediments and deeper geologic formations that yield water for municipal, agricultural, and industrial uses. The extent of the NASb is shown on Figure 6-1.

The NASb is not listed as critically overdrafted by DWR in the 2019 Basin Prioritization. Furthermore, the subbasin has not been described in overdraft in DWR Bulletin 118.

6.3.2 Groundwater Management

The management of NASb groundwater resources is discussed below. The NASb is not an adjudicated basin.

6.3.2.1 Western Placer County Groundwater Management Plan

In 2007, the City adopted the Western Placer County Groundwater Management Plan (WPCGMP). The WPCGMP was developed to assist the City of Roseville, the City of Lincoln, PCWA, and Cal Am in maintaining a safe, sustainable, and high-quality groundwater resource within a portion of the NASb. The WPCGMP provided a framework to coordinate groundwater management activities through a set of basin

[2] California Department of Water Resources (DWR), 2018. *California's Groundwater Basins – Sacramento Valley – North American Subbasin (5-021.64) Basin Boundary Description (Bulletin 118).*

management objectives and specific implementation actions. The recommended sustainable yield for the entire NASb is 400,000 AFY, 95,000 AFY of which was assigned to Placer County in the WPCGMP.

6.3.2.2 Sustainable Groundwater Management Act

In September 2014, the California Legislature passed the SGMA, a three-bill legislative package composed of AB 1739 (Dickinson), SB 1168 (Pavley), and SB 1319 (Pavley). The legislation provides a framework for sustainable management of groundwater supplies by local authorities, with a limited role for state intervention when necessary to protect the resource.

SGMA applies to basins or subbasins designated by DWR as high or medium priority basins. The ranking for the NASb of the Sacramento Valley Groundwater Basin is shown in Table 6-5. As shown, the NASb has been ranked as a high priority basin.

Table 6-5. Groundwater Basin Prioritization for Sustainable Groundwater Management Act[(a)]

Basin Number	Basin Name	Overall Basin Ranking Score	Overall Basin Priority
5-21.64	Sacramento Valley – North American Subbasin	25.5	High

(a) Department of Water Resources, May 2020, Sustainable Groundwater Management Act 2019 Basin Prioritization.

The SGMA implementation steps, deadlines, and status are shown in Table 6-6.

Table 6-6. Sustainable Groundwater Management Act Implementation Steps and Deadlines

Implementation Step	Implementation Measure	Deadlines	Status
Step One	• Local agencies must form local GSAs within two years	• June 30, 2017	• Five GSAs formed for the North American Subbasin • The City is a member of West Placer Groundwater Sustainability Agency
Step Two	• Agencies in basins deemed high or medium priority must adopt GSPs within five to seven years, depending on whether a basin is in critical overdraft	• January 31, 2020 for critically overdrafted basins • January 31, 2022 for high- and medium-priority basins not currently in overdraft	• North American Subbasin GSP was adopted and approved by State in July 2023
Step Three	• Once plans are in place, local agencies have 20 years to fully implement them and achieve the sustainability goal	• January 31, 2040 for critically overdrafted basins • January 31, 2042 for high- and medium-priority basins not currently in overdraft	• GSAs, including West Placer Groundwater Sustainability Agency, are currently implementing the GSP

6.3.2.3 West Placer Groundwater Sustainability Agency

Following adoption of SGMA, groundwater management of the NASb transitioned to governance under the GSAs formed within the basin. The NASb underlies portions of three counties (Placer, Sacramento, and Sutter). Management of the basin is a collaborative effort of the following five GSAs:

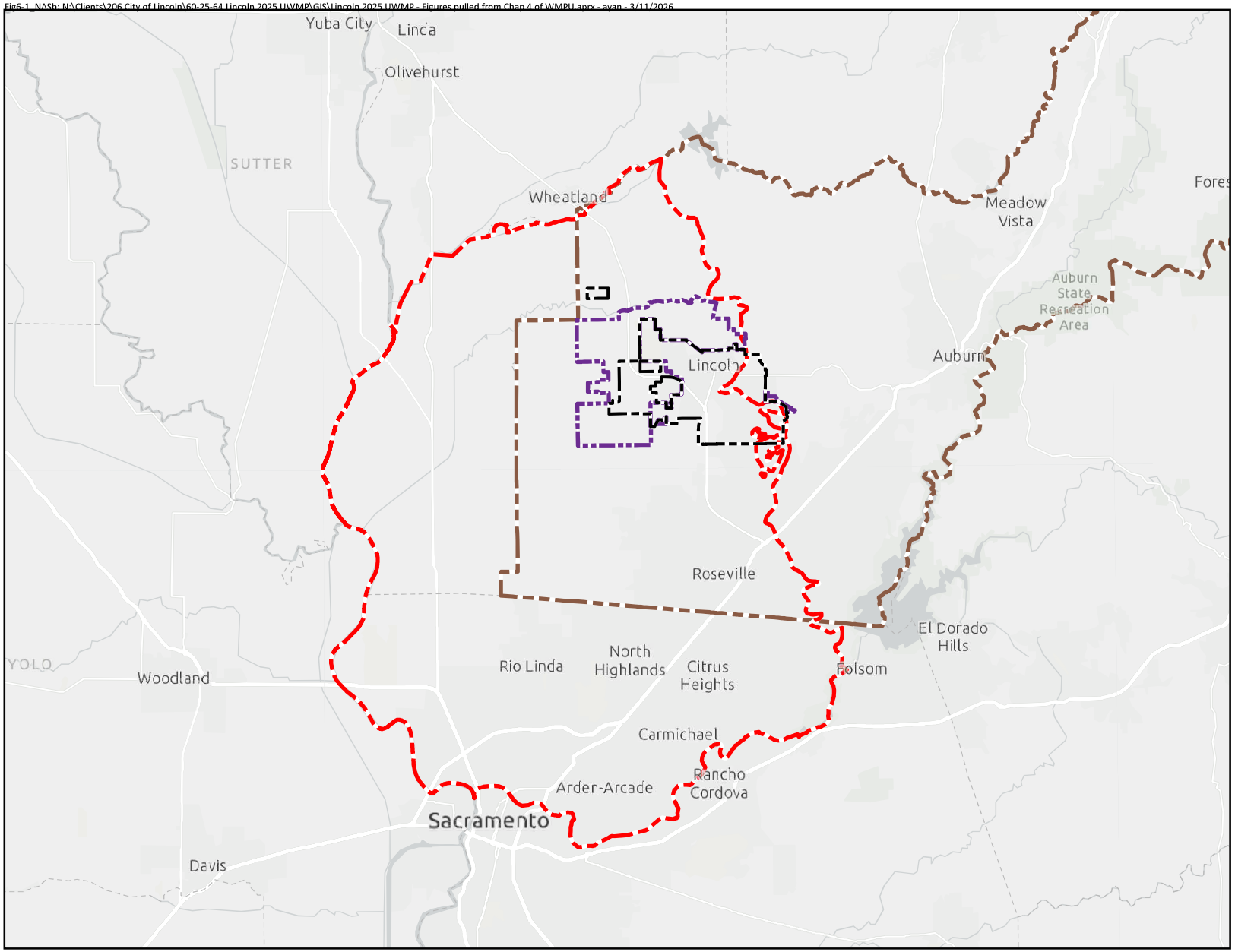
- Reclamation District 1001 GSA
- Sacramento Groundwater Authority GSA
- South Sutter Water District GSA
- Sutter County GSA
- West Placer GSA

The City is a member of West Placer Groundwater Sustainability Agency (WPGSA), which also includes the City of Roseville, Placer County, PCWA, NID, and Cal Am. In compliance with the SGMA, the five GSAs collaborated to develop the NASb GSP which was completed in December 2021 and approved by the State in July 2023. The NASb GSP is currently being implemented to achieve sustainable groundwater management within the basin. Additional information on the NASb can be accessed at http://nasbgroundwater.org.

In compliance with SGMA, the five GSAs collaborate to prepare annual GSP Annual Reports to submit to DWR. The most recent 2024 NASb GSP Annual Report was submitted in March 2025 with no occurrences of undesirable results as defined in the NASb GSP.[3]

[3] Woodard & Curran, Inc. March 2025. *North American Subbasin Groundwater Sustainability Plan Water Year 2024 Annual Report.* Assessed at https://sgma.water.ca.gov/portal/gspar/preview/416 on March 12, 2026.

Fig6-1_NASb: N:\Clients\206 City of Lincoln\60-25-64 Lincoln 2025 UWMP\GIS\Lincoln 2025 UWMP - Figures pulled from Chap 4 of WMPU.aprx - ayan - 3/11/2026



North American Subbasin
Placer County
City Limit
Sphere Of Influence

Notes:
1. City boundaries shown based on GIS data provided by the City in 2025.

Prepared by:

WEST YOST

N

0 3.5 7
Miles

Prepared for:

City of Lincoln
2025 Urban Water Management Plan

Sacramento Valley Groundwater Basin
North American Subbasin
Figure 6-1

6.3.3 Groundwater Use – Past Five Years

The City uses groundwater during periods when treated surface water through PCWA's system is less available, and to manage summer maximum day and peak hour water demands. As discussed in Chapter 4 of the City's 2025 WMPU, availability of surface water supplies from PCWA will continue to be utilized as the City's primary water supply for the foreseeable future, and the City will continue to invest in its groundwater supplies to increase water supply resiliency while continuing to explore water supply alternatives.

Currently, City groundwater use accounts for less than 10 percent of its potable water supplies. In 2025, the City produced approximately 496 AF of groundwater, representing approximately 5 percent of total potable water production. In normal and wet years, the City primarily uses groundwater to supplement PCWA surface water supply during peak demand periods. In dry years, City groundwater use may increase to offset reductions in available surface water supply. The City's groundwater production wells are all located within the City limits, on the western side of the City's potable water service area.

Table 6-7. Groundwater Pumped in Last Five Years (DWR Table 6-1 Retail)

Groundwater Type **Drop Down List** May use each category multiple times	Potable or Non-Potable (OPTIONAL) **Drop down list**	Location or Basin Name	2021 (AF)	2022 (AF)	2023 (AF)	2024 (AF)	2025 (AF)
Alluvial Basin	Potable	North American Subbasin (5-21.64)	255	200	138	469	496
		Total	255	200	138	469	496

6.3.4 Groundwater Use – Projected

In the future, the City may increase or decrease groundwater use (above or below 10 percent) through conjunctive use strategies to optimize system performance while protecting the aquifer. For purposes of this UWMP, the City anticipates meeting approximately 10 percent of projected potable water demands with local groundwater supplies, consistent with its conjunctive use strategy. The City's projected normal year water supplies from groundwater are shown in Table 6-8 in five-year increments from 2030 to 2050.

If needed, the City will construct new groundwater wells and increase its groundwater supply capacity to support projected growth and maintain supply resiliency.

Table 6-8. Projected Groundwater Supplies

Groundwater Type	Location or Basin Name	Projected Water Supply Volume, AF[a,b]				
		2030	2035	2040	2045	2050
Alluvial Basin	North American Subbasin (5-21.64)	1,338	1,660	1,982	2,205	2,542

(a) The City anticipates meeting approximately 10 percent of projected potable water demands with groundwater supplies, consistent with its conjunctive use strategy.

6.4 SURFACE WATER

The City does not use any self-supplied surface water. All surface water used by the City is purchased from PCWA and NID as described in Section 6.2 above. The City will continue to explore opportunities to utilize raw water resources for landscape irrigation to offset potable water use whenever feasible.

6.5 STORMWATER

The City does not currently divert stormwater for beneficial use.

6.6 WASTEWATER AND RECYCLED WATER

In 2022, the City entered a joint powers authority with Placer County to form the LiSWA. LiSWA owns and operates the WWTRF, which was previously owned and operated by the City prior to the formation of LiSWA. LiSWA is responsible for the collection, treatment and disposal of wastewater within City limits and portions of western Placer County.

The WWTRF produces Title 22 treated tertiary wastewater (recycled water) suitable for unrestricted use and reclamation. The recycled water is permitted for discharge of surface water into the Auburn Ravine Creek and for land application to onsite reclamation areas surrounding the WWTRF and off-site reclamation areas. Information within this section is largely from the City's Wastewater Collection System Master Plan and the City's Reclamation Master Plan.[4]

6.6.1 Wastewater Collection, Treatment, and Disposal

In this section, LiSWA's collection system, treatment, and disposal services are described.

6.6.1.1 Wastewater Collected Within Service Area

LiSWA collects and treats wastewater within City limits, as well as regional wastewater flow from Placer County's Sewer Maintenance District No. 1 (SMD1), which the City receives via the Mid-Western Placer Regional Sewer Pipeline under a Joint Exercise of Powers Agreement. The City's wastewater collection system consists of approximately over 300 miles of sanitary sewers, including local sewers, trunk sewers, and force mains, and seven sewage pump stations. Regional wastewater flow from SMD1 is pumped through a 13.5-mile force main from western Placer County before discharging into the City's collection system near the intersection of Highway 193 and Sierra College Boulevard. In the future, LiSWA may also

[4] Stantec, December 2019. *City of Lincoln – Reclamation Master Plan.*

receive and treat wastewater from the City of Auburn and Bickford Ranch via the Mid-Western Placer Regional Sewer Pipeline.

Collected wastewater consists of base sanitary flow, groundwater infiltration, and rainfall inflow and infiltration. In 2025, the City collected approximately 4,686 AF of wastewater.

A summary of the wastewater collected in the City's service area is provided in Table 6-9.

Table 6-9. Wastewater Collected Within Service Area in 2025 (DWR Table 6-2 Retail)

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 2025 (AF)[(a)]	Name of Wastewater Treatment Plant (WWTP) and Place ID Number **Drop down list**	Is WWTP Located Within UWMP Area? **Drop Down List**
Lincoln-Sewer Maintenance District 1 Wastewater Authority (LiSWA)	Metered	4,686	Other (provide name and ID in "NOTES" field)	Yes
Total Wastewater Received from UWMP Service Area in 2025:		4,686		

NOTES:
(a) Wastewater collected within UWMP Service Area is equal to the total wastewater influent to the WWTF less wastewater flow from Placer County's Sewer Maintenance District No. 1.
(b) LiSWA owns and operates the wastewater treatment plant: LiSWA WWTRF, Place ID 238365, which was previously named "Lincoln City" prior to the formation of LiSWA in 2022.

6.6.1.2 Wastewater Treatment and Discharge Within Service Area

The WWTRF, located in the southwest part of the City off Fiddyment Road, treats collected wastewater using conventional secondary and tertiary wastewater treatment processes, including biological treatment in oxidation ditches with nitrification and denitrification, secondary clarification, granular media filtration, and UV disinfection. LiSWA is intending to improve the WWTRF through its WWTRF Phase 1 Improvement Project. The WWTRF currently has a permitted average dry weather flow (ADWF) capacity of 5.9 MGD with peak hour flow capacity of up to 35 MGD. The Phase 1 Improvement Project will upgrade the WWTRF to increase treatment capacity up to 6.0 MGD ADWF and handle peak hour flows of up to 50 MGD. Future plant expansion projects are expected to increase treatment capacity up to 8 MGD.

Final tertiary effluent is either used to supply the City's recycled water distribution system, sent to tertiary storage basins for later use, or discharged to Auburn Ravine Creek. Effluent discharged to Auburn Ravine Creek is subject to Order No. R5-2018-0081 (NPDES No. CA0084476) adopted by the Central Valley Regional Water Quality Control Board (RWQCB). In addition to the ADWF limit, LiSWA's National Pollutant Discharge Elimination System (NPDES) permit requires the effluent discharge to Auburn Ravine Creek to comply with various effluent and receiving water quality limitations, including receiving water limits for temperature, pH, and dissolved oxygen concentration. Historically, the receiving water temperature limits have been the most limiting constraint for effluent management. The WWTRF's tertiary storage facilities can be used to store treated effluent until it meets the temperature requirements or until there is sufficient recycled water demand for its beneficial use.

Before entering the recycled water distribution system, effluent sent to storage can be re-treated using a dissolved air flotation tank system, which removes algae and other contaminants that may have been introduced during storage, and through the filtration and disinfection processes described above. Additionally, inline filtration will be located as needed at City parks equipped to receive recycled water to improve water quality and reduce operation activities and maintenance. The City also plans to install large-scale inline filters and disinfection along the primary recycled water transmission main serving the City potentially as part of the WWTRF Expansion Project.

A summary of the treated and surface discharged effluent or recycled water in 2025 is provided in Table 6-10.

6.6.2 Recycled Water System Description

LiSWA's WWTRF can produce tertiary treated recycled water that meets DDW Title 22 requirements for unrestricted reuse. Treated effluent not discharged to Auburn Ravine Creek can be applied for beneficial use at on-site or off-site reclamation areas. Recycled water is delivered to off-site reclamation areas via the City's recycled water distribution system. The City's distribution system is supplied by the LiSWA 7.9 MGD Reclamation Booster Pump Station, located on-site at the WWTRF and 12 miles of transmission pipelines.

LiSWA's on-site reclamation area consists of approximately 180 acres of land at the WWTRF used for conservation and agriculture. LiSWA also delivers recycled water for agricultural use to an off-site reclamation area outside the existing City limits (192 acres of County Leased Reclamation Area).

Within the City limits, recycled water is used for the irrigation of Foskett Regional Park, Joiner Park, Lincoln at Liberty Clubhouse, some landscaped medians, and industrial use at Sierra Pacific Industries.

6.6.3 Potential, Current, and Projected Recycled Water Uses

The City plans to supply recycled water to areas within the City's SOI at elevations of approximately 160 feet above sea level or lower. Supplying recycled water to higher elevations would require additional pump stations and may not be cost effective. The planned future recycled water service area is generally bounded by Lincoln Boulevard on the east and the City's SOI boundary to the west.

Irrigation demands outside the recycled water service area will continue to be supplied by the City's potable water distribution system or by other non-potable supplies from PCWA or NID. However, the City is interested in expanding the municipal use of recycled water and is planning to update the 2019 Reclamation Master Plan in the next couple of years to further evaluate the feasibility of recycled water expansion and identify potential uses, customers, and implementation timing.

Table 6-11 summarizes the current direct beneficial uses of recycled water within the City's service area and projected recycled water use through 2050, consistent with DWR reporting requirements.

Table 6-10. Wastewater Treatment and Outcomes Within Service Area in 2025 (DWR Table 6-3 Retail)

Wastewater Treatment Plant Name and Place ID Number[a] 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) (AF)	Total 2025 Volume of Water Treated (AF)	2025 Outcomes of Treated Wastewater										
				Water Recycled Within UWMP Service Area (enter data as applicable)		**Water Recycled Outside of UWMP Service Area** (enter data as applicable)		**Effluent Discharge that is not a Permitted Recycled Water Use** (enter data as applicable)		**Required Discharge for Instream Flow** (enter data as applicable)		**Delivered to Another Entity for Additional Treatment** (enter data as applicable)		
				Treatment Level Drop down list	Volume (AF)	Treatment Level Drop down list	Volume (AF)	Treatment Level Drop down list	Volume (AF)	Treatment Level Drop down list	Volume (AF)	Treatment Level Drop down list	Volume (AF)	Name of other entity
Other (provide name and ID in "NOTES" field)	Yes	4,686	6,375	Tertiary	112	Tertiary	777	Tertiary	5,156		0		0	
Total		4,686	6,375		112		777		5,156		0		0	

NOTES:
(a) Lincoln-Sewer Maintenance District 1 Wastewater Authority (LiSWA) owns and operates the wastewater treatment plant: LiSWA WWTRF, Place ID 238365, which was previously named "Lincoln City" prior to the formation of LiSWA in 2022.

Table 6-11. Current and Projected Recycled Water Direct Beneficial Uses Within Service Area (DWR Table 6-4 Retail)

Name(s) of Facility/ies Producing (Treating) the Recycled Water (OPTIONAL) :			Lincoln-Sewer Maintenance District 1 Wastewater Authority Wastewater Treatment and Reclamation Facility (WWTRF)							
Name of Supplier Operating the Recycled Water Distribution System (OPTIONAL) :			City of Lincoln							
Volume of Supplemental Water Added in 2025 (OPTIONAL) :										
Source of 2025 Supplemental Water (OPTIONAL) :										
Use Type **Drop down list**	**Potable or Non-Potable** (after treatment if treated) (OPTIONAL) Drop down list	Additional Information (as needed)	2025 (AF)	2030 (AF)	2035 (AF)	2040 (AF)	2045 (AF)	2050 (AF)	**Potential Recycled Water Use** Volume	**Potential Recycled Water Use** Narrative page number (OPTIONAL)
Industrial	Non-Potable	Sierra Pacific Industries[a,b]	100	116	172	172	172	172		
Landscape	Non-Potable	Irrigation of City parks and landscaping[a,c]	12	190	240	280	610	880		
Agricultural	Non-Potable	Irrigation of farmland near WWTRF (outside of City limits)[a,d]	777	2,840	2,840	2,840	2,840	2,840		
		Subtotal Potable	0	0	0	0	0	0	0	
		Subtotal Non-Potable	889	3,146	3,252	3,292	3,622	3,892	0	
		Total	889	3,146	3,252	3,292	3,622	3,892	0	0

NOTES:

(a) Projected recycled water demands are based on the City's Reclamation Master Plan and remain generally consistent with projections reported in the City's 2020 Urban Water Management Plan, with updates based on City staff input.

(b) Based on current discussions between the City and Sierra Pacific Industries, recycled water use is projected to increase by approximately 100,000 gpd (112 AFY), from the previously projected 60 AFY in the 2020 UWMP to approximately 172 AFY by 2035, with incremental increases beginning in 2030 and remaining constant thereafter.

(c) Projected recycled water use for 2040 is based on the projections for the Near-Term Development scenario presented in Table 6-10 of the City's Reclamation Master Plan. Landscape Irrigation projections for 2030 and 2035 are a linear progression between the 2020 and 2040 development scenarios. Landscape Irrigation projection for 2050 is based on a linear progression between the 2045 projection and the Long-Term Development scenario presented in Table 6-10 of the City's Reclamation Master Plan, assuming that the Long-Term Development scenario represents 2065 conditions.

(d) Although agricultural water use outside City limits has recently declined significantly, this UWMP conservatively assumes agricultural water use will remain constant over the planning horizon.

Table 6-12 compares recycled water use projected in the 2020 UWMP to actual recycled water use in 2025. Total recycled water use in 2025 (889 AF) was lower than the total volume projected in 2020 (3,050 AF), while actual recycled water use for industrial use was slightly higher than the projection. The City previously delivered recycled water to Machado Farms outside of existing City limits for agricultural use. However, since the 2020 UWMP, Machado Farm has been sold and has not been actively using recycled water. Additionally, many developments within the City over the past five years have not been located adjacent to existing recycled water infrastructure, limiting opportunities for connection. In late 2025, two large developments, Liberty at Lincoln and Joiner Ranch East, connected to the recycled water system for landscape irrigation.

Table 6-12. 2020 Recycled Water Use Projection Compared to 2025 Actual (DWR Table 6-5 Retail)

Use Type Drop Down list	2020 Projection for 2025 (AF)	2025 Actual Use (AF)
Industrial use	60	100
Landscape irrigation (exc golf courses)[(a)]	150	12
Agricultural irrigation[(b)]	2,840	777
Total	3,050	889

NOTES:
(a) Recent development has not occurred adjacent to existing recycled water infrastructure, limiting connection opportunities.
(b) Since the 2020 UWMP, Machado Farm was sold and no longer receives recycled water deliveries.

The City's Reclamation Master Plan indicates significant infrastructure will need to be constructed to expand the delivery of recycled water. Since 2000, the City has been requiring the installation of recycled water distribution mains within the new developments to allow for the use of recycled water. As part of the City's Phase II Reclamation Project, recycled water service has been extended to Joiner Park. Future expansion of the Phase II Reclamation project will include Machado Park and Peter Singer Park. Other existing irrigation customers that may convert to recycled water in the future include cemeteries, schools, parks, public facilities, streetscapes, and other City-owned properties with non-potable water demand. Recycled water use will also be extended to planned development areas such as the Villages and SUDs within the recycled water service area. As development occurs, off-site agricultural reuse of WWTRF effluent is assumed to decrease over time as a result of the anticipated increase in recycled water demands associated with landscape irrigation for planned development and other municipal recycled water customers. It is assumed that the City and County will have rights to the beneficial use of recycled water in proportion to their usage of the WWTRF.

The City's identified actions to expand recycled water use within its service area are summarized in Table 6-13. Expected increase in recycled water use varies. Future increases in recycled water use will help offset potable water demand where possible but are difficult to quantify.

As part of the on-going Village 5 planning, a recycled water system is being considered to serve irrigation demands. Backbone recycled water pipeline infrastructure is included in Village 5 master planning and needs to be reconciled with the City's Reclamation Master Plan.

Table 6-13. Methods to Expand Future Recycled Water Use (DWR Table 6-6 Retail)

Name of Action	Description	Planned Implementation Year	Expected Increase in Recycled Water Use (AF)
Phase II Reclamation Project		Ongoing	Varies
Recycled Water Infrastructure Installation in New Development	Require installation of recycled water distribution mains within new developments to facilitate future recycled water connections.	Ongoing	Varies
Municipal Code Requirements for Construction Use of Recycled Water	Enforce LMC Section 13.04.150 requiring recycled water use for eligible construction projects within one mile of the WWTRF fill station.	Existing / Ongoing	Varies
		Total (AF)	0
		Unit Conversion to AF	0

6.7 DESALINATED WATER

Desalination is the process of removing dissolved minerals from brackish or saltwater to produce freshwater that can be used for municipal needs such as drinking water and industrial uses. It is one of several elements that may be included in a community's water supply portfolio.

The City has no sources of ocean water, brackish water, or groundwater that provide viable opportunities for development of desalinated water as a long-term supply. Thus, the City has not included desalinated water in planning for its future water supply sources.

6.8 WATER EXCHANGES AND TRANSFERS

Water exchanges or transfers between willing sellers and willing buyers may supplement water supplies during dry periods and move water to areas of critical need. The City may have opportunities to acquire water through transfers or make water available for transfer under certain conditions.

Acquiring water through transfers would require the City to obtain permission from PCWA to use PCWA conveyance facilities. PCWA currently maintains adequate supplies to meet the City's projected needs under normal conditions; therefore, water transfers are not a primary component of the City's long-term supply strategy.

Through conjunctive use of its groundwater assets, the City may be able to adjust groundwater and surface water usage in coordination with PCWA during periods of shortage. Any exchange or transfer of surface water assets would require regional cooperation among wholesale water agencies and compliance with applicable regulatory requirements.

The City delivers recycled water supplies to agricultural users in accordance with its discharge requirements. As additional recycled water supplies become available, the City plans to expand recycled water deliveries to offset potable surface water and groundwater demands. Excess recycled water supplies discharged to Auburn Ravine may be used for beneficial purposes consistent with regulatory approvals.

6.9 FUTURE WATER PROJECTS

The City has identified projects to expand capacity from existing surface water, groundwater, and recycled water supplies. Table 6-14 summarizes the future water supply projects or programs planned by the City. Further discussion of these projects is provided below. Additionally, the City may evaluate future development of new raw water sources, including opportunities to serve new development with raw water supplies; however these are not evaluated in this UWMP and may be addressed in future studies.

6.9.1 Ophir Water Treatment Plant

In 2023, the City adopted Resolution 2023-109 approving a funding agreement with PCWA for construction of the Ophir Water Treatment Plant Phase 1 (see Appendix E). Under the agreement, the City's Partner Capacity is planned to begin in 2030 at 0.46 MGD (560 AFY) and increase incrementally to reach a maximum capacity of up to 5 MGD (5,600 AFY) within approximately 10 years.

Additional capacity from Phases 2 and 3 is assumed to begin in 2040 and become incrementally available to the City with an estimated maximum capacity of approximately 10 MGD (11,200 AFY) beyond the 20-year UWMP planning time frame.

The construction and implementation of Ophir Water Treatment Plant will support the City's long-term growth and enhance surface water supply reliability from PCWA.

6.9.2 Future Aquifer Storage and Recovery Groundwater Wells

As the City expands and develops the western and northern portions of its SOI, new groundwater production wells will be necessary to be constructed in the developing areas. To mitigate potential impacts on the groundwater basin, the City intends to equip a strategic subset of future wells with aquifer storage and recovery (ASR) capability.

ASR is a water management strategy that involves the injection of treated surface water into a suitable aquifer during times when surplus water is available, typically winter months when demands are low. The stored water can then be recovered and used for potable supply during periods of high demand, such as the summer or for emergency conditions.

These ASR wells will increase the City's overall groundwater production capacity and improve its ability to rely on groundwater supplies if PCWA supplies are curtailed due to drought or are unavailable due to an emergency. Construction of these new wells is not intended to increase the City's groundwater production in normal or wet years; rather, they will provide additional capacity to support peak demands, system resiliency, conjunctive use operations.

As discussed in Chapter 4 of the City's 2025 WMPU, the City will need to construct a new well approximately every four to five years assuming a capacity of 1.7 MGD (1,900 AFY) per well to support growth in peak demands. By 2045, seven new ASR wells are planned to be constructed per the City's Capital Improvement Program in the 2025 WMPU. By 2050, an additional ASR well is anticipated, resulting in a total of eight new ASR wells added to the system and an estimated 15,235 AFY of additional groundwater production capacity (subject to change depending on actual well capacity once constructed).

Table 6-14. Expected Future Water Supply Projects or Programs (DWR Table 6-7 Retail)

☑	Check the box if 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.						
Sections 6.9.3 and 6.9.4	Provide page location of narrative in the UWMP						
Name of Future Projects or Programs[(a)]	Joint Project with other suppliers?		Additional Description (as needed)	**Potable or Non-Potable** (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) (AF)
	Drop Down List (yes/no)	If Yes, Supplier Name					
Ophir Water Treatment Plant Phase 1	Yes	Placer County Water Agency	See note (b)	Potable	2030 - 2040	All Year Types	560 - 5,600
Ophir Water Treatment Plant Phases 2 and 3	Yes	Placer County Water Agency	See note (c)	Potable	2040 onwards	All Year Types	11,200
Aquifer Storage and Recovery Groundwater Wells	No		See note (d)	Potable	2030 onwards	Single-Dry and Multi-Dry Year	1,900 - 15,235

NOTES:

(a) The City is evaluating groundwater recharge and recycled water system expansion; these projects do not have quantifiable supply increases and are discussed in Sections 6.9.3 and 6.9.4.

(b) In 2023, the City adopted Resolution No. 2023-109 approving a funding agreement with PCWA for Phase 1 of the Ophir Water Treatment Plant. The City's partner capacity is expected to begin in 2030 at 0.46 mgd (560 AFY) and increase incrementally to up to 5 mgd (5,600 AFY) over approximately 10 years. The range shown reflects this incremental increase.

(c) Additional capacity from Phases 2 and 3 is assumed to begin in 2040 and become incrementally available to the City with an estimated maximum capacity of approximately 10 MGD (11,200 AFY) beyond 20-year UWMP planning time frame.

(d) ASR wells are planned to support peak demands, system resiliency, and conjunctive use operations. The capacity range shown (1,900–15,235 AFY) represents the incremental addition of one to eight ASR wells, assuming approximately 1.7 MGD (1,900 AFY) per well, as planned in the City's 2025 WMPU.

6.9.3 Groundwater Recharge

In addition to ASR, the City is working with other agencies that rely on the NASb to develop potential groundwater recharge to help ensure a sustainable groundwater basin for all users. The West Placer WPGSA has been leading the effort to regionally determine recharge projects that will benefit groundwater users of the basin which includes the City.

WPGSA completed a groundwater recharge site feasibility study in 2023.[5] The study helped to identify multiple sites throughout western Placer County that would be suitable for groundwater recharge and develop criteria to rank the priority of potential projects. Locations identified include potential sites within the City's existing city limits as well as the sphere of influence. A groundwater recharge study was recommended in the City's 2025 WMPU to perform field investigation and testing on the sites identified in WPGSA's 2023 groundwater recharge site feasibility study. This study would further evaluate whether implementation of recharge is viable in the City.

6.9.4 Recycled Water System Expansion

The City plans to continue expanding its recycled water system and increase recycled water deliveries within its water service area. The City's Phase II Reclamation Project will extend recycled water service to Machado Park and Peter Singer Park. The City will extend service to other existing customers and continue to require construction of recycled water pipelines in new developments. Use of recycled water by these existing and new customers would offset potable water use and increase the City's potable water system reliability. Additionally, the City is planning to update the Reclamation Water Master Plan in the next couple of years and continue to work with developers and LiSWA to maximize the future use of recycled water.

6.10 SUMMARY OF EXISTING AND PLANNED SOURCES OF WATER

The City's existing water supplies and projected normal year water supplies are summarized in Table 6-15 and Table 6-16, respectively. Existing supplies reflect actual 2025 production from surface water and groundwater sources. Projected supplies reflect the City's conjunctive use strategy of utilizing approximately 90 percent surface water and 10 percent groundwater, in addition to recycled water for recycled water demands.

Future surface water supplies include the City's existing maximum delivery entitlement from PCWA as well as additional treated water capacity associated with the Ophir Water Treatment Plant beginning in 2030. Groundwater supplies will continue to be used to support peak demands and system resiliency. Recycled water supply will continue to be used to supply the increase in recycled water demands.

[5] GEI Consultants. March 2023. *Groundwater Recharge Site Feasibility Evaluations West Placer County, California*

Table 6-15. Water Supplies – Actual (DWR Table 6-8 Retail)

Water Supply		2025		
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)	**Potable or Non-Potable** (after treatment if treated) (OPTIONAL) Drop Down list	Actual Volume (AF)	Total Entitlement (OPTIONAL) See 'DWR Notes' below (AF)
Purchased or Imported Water	PCWA Surface Water[a,b]	Potable	8,932	
Purchased or Imported Water	NID Surface Water[a]	Potable	1,440	
Groundwater (not desalinated)		Potable	496	
Recycled Water		Non-Potable	889	
		Subtotal Potable	10,868	0
		Subtotal Non-Potable	889	0
		Total	10,868	0

NOTES:
(a) The City purchases NID supply from PCWA, which is treated and delivered through PCWA facilities.
(b) PCWA supply is equal to total potable supply delivered via PCWA facilities to the City less NID supply.

Table 6-16. Water Supplies – Projected (DWR Table 6-9 Retail)

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	Potable or Non-Potable (after treatment if treated) (OPTIONAL) Drop Down list	Reasonably Available Volume (AF)	Total Entitlement (OPTIONAL) See 'DWR Notes' below	Reasonably Available Volume (AF)	Total Entitlement (OPTIONAL) See 'DWR Notes' below	Reasonably Available Volume (AF)	Total Entitlement (OPTIONAL) See 'DWR Notes' below	Reasonably Available Volume (AF)	Total Entitlement (OPTIONAL) See 'DWR Notes' below	Reasonably Available Volume (AF)	Total Entitlement (OPTIONAL) See 'DWR Notes' below
Purchased or Imported Water	PCWA Surface Water	Potable	12,043		14,938		17,842		19,848		22,877	
Purchased or Imported Water	NID Surface Water	Potable	0		0		0		0		0	
Groundwater (not		Potable	1,338		1,660		1,982		2,205		2,542	
Recycled Water		Non-Potable	3,146		3,252		3,292		3,622		3,892	
Subtotal Potable			13,381	0	16,598	0	19,824	0	22,053	0	25,419	0
Subtotal Non-Potable			3,146	0	3,252	0	3,292	0	3,622	0	3,892	0
Total			16,527	0	19,850	0	23,116	0	25,675	0	29,311	0

6.11 CLIMATE CHANGE IMPACTS TO SUPPLY

The State of California continues to take proactive steps to understand and address changing climate conditions. Observed increases in air and ocean temperatures, changing precipitation patterns, and reduced snowpack have implications for long-term water supply reliability.

As part of statewide planning efforts, considerations of changing climate conditions are incorporated into regulatory programs and water management documents. For example, State Water Resources Control Board Resolution 2017-0012 requires water system inspections to address climate related impacts and concerns. UWMPs must recognize these factors and evaluate potential impacts to water supplies.

NABRDCP discusses how changing climate conditions may influence the City's water supplies. Factors such as increased average temperature, decreased snowpack, increased evapotranspiration, and sea level rise may affect regional water supply reliability. In response to these conditions, Folsom Reservoir operations may be adjusted to regulate flow in the American River and to contribute water to the Sacramento–San Joaquin Delta to satisfy Delta flow requirements and protect endangered species. Changes in Folsom Reservoir operations may impact City supplies because of PCWA's reliance on the American River for a significant portion of its surface water portfolio.

The NABRDCP projects that low storage in Folsom Reservoir may have a moderate impact on PCWA and City supplies. The City has taken steps to increase the resiliency of its water supply portfolio and reduce potable water demands, including expansion of its recycled water system, participation in regional groundwater management under SGMA, and implementation of local and regional water conservation programs. Together, these actions are intended to reduce potential impacts of changing climate conditions on the City's water supplies.

Placer County's February 2026 Draft Drought Resilience Plan (DRP) evaluates drought and water shortage vulnerabilities within the County, including areas served by domestic wells and small water systems.[6] The DRP identifies factors that may increase regional water shortage vulnerability, including changing climate conditions, rising temperatures, and prolonged drought periods. These factors may contribute to declining groundwater levels, reduced surface water supplies, and increased water demand. The plan highlights potential water quality risks in aquifers east and northeast of the City and indicates that domestic wells in western Placer County, including areas around the City, may be more vulnerable to reduced production or, in the worst-case, become unavailable during extended drought conditions. In addition, the DRP identifies social vulnerability and rapid population growth in communities such as the City may increase sensitivity to water shortages during prolonged droughts.

6.12 ENERGY INTENSITY

In accordance with California Water Code §10631.2(a), the energy intensity to provide water service to the City's customers over a one-year period is presented in this section to the extent that the information is available. The amount of energy to extract, pump, treat, and distribute the City's water supply within the system it owns and operates is included. The amount of energy that PCWA requires to transport, treat, and deliver potable water, and that NID requires to deliver raw water to PCWA's treatment facilities, is excluded from this Plan.

[6] Stantec. February 2026. *Placer County Drought Resilience Plan (DRP) Public Draft.*

Energy intensity is the total amount of energy in kilowatt-hours (kWh) expended on a per acre-foot basis to take water from the City's sources to its point of delivery. Understanding whole-system energy intensity allows the City to:

- Identify energy and cost-saving opportunities;
- Calculate energy savings and greenhouse gas emissions reductions associated with water conservation programs;
- Identify opportunities for receiving energy efficiency funding for water conservation programs;
- Inform climate change mitigation strategies; and
- Benchmark energy use at each water acquisition and delivery step and compare energy use with those of similar agencies.

The calculated energy intensity of the City's potable water service for 2025 is provided in Table 6-17. The City uses energy to extract groundwater from its wells and to operate its distribution system. The City does not treat or convey surface water and does not store water in an energy-intensive manner. Energy required to extract groundwater is reported as extraction and diversion consumption. Energy consumption from the City's booster pump station is reported as distribution consumption.

The total energy intensity for the City's potable water service in 2025 is 110 kWh/MG (36 kWh/AF).

Table 6-17. Energy Intensity – Total Utility Approach (DWR Table O-1B)

Water Delivery Product drop down list (If delivering more than one type of product recommend using Table O-1C)	Retail Potable Deliveries	**Only for Water Delivery Products Under the Urban Water Supplier's Operational Control**		
Start Date of Reporting Period	1/1/2025	**Sum of All Water Management Processes**	**Non-Consequential Hydropower**	
End Date of Reporting Period	12/31/2025			
Is upstream embedded energy in the values reported?	No			
Units of Measure for Water	AF	**Total Utility** See DWR NOTES	**Hydropower**	**Net Utility**
Volume of Water Entering Process		10,868	-	10,868
Energy Consumed (kWh)		388,925	-	388,925
Energy Intensity (kWh/vol. converted to MG)		110	-	110

Quantity of Self-Generated Renewable Energy

0 kWh

Data Quality (Estimate, Metered Data, Combination of Estimates and Metered Data)

Combination of Estimates and Metered Data

Data Quality Narrative:

Energy consumption data provided by PG&E.

Narrative:

Energy consumed is from City groundwater wells and single booster pump station only.

As discussed in Section 6.6.1, LiSWA provides wastewater collection, treatment, and disposal services within its potable water service area and from a portion of Placer County. As discussed in Section 6.6.2, LiSWA distributes recycled water to areas both within and outside of the City's potable water service area.

Since LiSWA is responsible for wastewater and recycled water services to the City, energy consumption data at the level necessary to attribute energy use to separate processes is not readily available to the City. City staff were able to obtain and report energy use for wastewater collection and conveyance for 2025 as provided in Table 6-18; data not readily available were left blank. Due to these data limitations, energy intensity values cannot be calculated or reported for wastewater and recycled water services.

Table 6-18. Energy Intensity – Wastewater & Recycled Water (DWR Table O-2)

Start Date of Reporting Period	1/1/2025	**Only for Water Delivery Products Under the Urban Water Supplier's Operational Control**			
End Date of Reporting Period	12/31/2025				
Is upstream embedded energy in the values reported?	NO	**Water Management Process**			
Units of Measure for Water	AF	**Collection / Conveyance**	**Treatment**	**Discharge / Distribution**	**Total**
Volume of Wastewater Entering Process (volume units selected above)					0
Wastewater Energy Consumed (kWh)		252,154			252,154
Wastewater Energy Intensity (kWh/volume converted to MG)		0.0	0.0	0.0	0.0
Volume of Recycled Water Entering Process (volume units selected above)					0
Recycled Water Energy Consumed (kWh)					0
Recycled Water Energy Intensity (kWh/volume converted to MG)		0.0	0.0	0.0	0.0

Quantity of Self-Generated Renewable Energy related to recycled water and wastewater operations

0 kWh

Data Quality (drop down)

Combination of Estimates and Metered Data

Data Quality Narrative:

Energy consumption data provided by PG&E.

Narrative:

Since LiSWA is responsible for wastewater and recycled water services to the City, energy consumption data at the level necessary to attribute energy use to separate processes is not readily available to the City. City staff were only able to obtain and report energy use for wastewater collection and conveyance. Data not readily available were left blank.

CHAPTER 7
Water Service Reliability and Drought Risk Assessment

This chapter discusses the City's water supply reliability under varying conditions through 2050. Factors impacting long-term reliability of water supplies are discussed. In assessing the City's water supply reliability, a comparison of projected water supplies and projected water demand in normal, single dry, and five consecutive dry years is provided for the City's water service area. This chapter also includes the City's Drought Risk Assessment (DRA) for the next five years. Findings show that the City's water supplies are sufficient to meet the existing and projected water demands during normal and dry conditions.

7.1 WATER SERVICE RELIABILITY ASSESSMENT

The City's water supply reliability reflects its ability to meet the needs of its water customers with its water supply under varying conditions. Details from Chapter 4, which describes the City's water use, and Chapter 6, which describes the City's water supply, are incorporated in this chapter to conduct the assessment. Findings from this assessment influence the City's water management decisions.

7.1.1 Constraints on Water Sources

The City's existing water supplies are described in Chapter 6 of this UWMP and consist of the following:

- Treated surface water purchased from PCWA and NID.
- Groundwater pumped by the City from the NASb of the Sacramento Valley Groundwater Basin.
- Recycled water produced at the City's WWTRF for non-potable use.

This section presents the constraints on PCWA's surface water supply, the City's groundwater supply, and the City's recycled water supply.

7.1.1.1 Physical

Water supply reliability is dependent on the hydraulic capacity of supply and distribution system facilities. In general, the City's existing water distribution system has sufficient capacity to deliver existing average and peak demands. As the City continues to expand and new developments are connected to the City's distribution system, new facilities will need to be constructed to increase the system's hydraulic capacity. The City proactively evaluates the impacts of new developments by using a hydraulic model of the distribution system to identify necessary system improvements.

Physical constraints on PCWA's water transmission and treatment infrastructure are discussed in PCWA's 2025 UWMP. The City and PCWA meet regularly to discuss the City's water supply and any improvements to PCWA infrastructure needed to supply the City.

7.1.1.2 Legal

As discussed in Section 6.2.1, the City has a contract with PCWA for a maximum delivery entitlement of 18.9 MGD of treated water supply. The City's future surface water supply from PCWA is governed by existing agreements, including participation in the Ophir Water Treatment Plant expansion. Increases in available treated capacity are anticipated to occur through the phased implementation of the Ophir WTP and associated facilities, consistent with executed agreements between the City and PCWA. New City developments annexed into the City will be served by PCWA Zone 6 supply as they are connected to the City's distribution system.

Existing regulations do not directly limit the City's use of groundwater resources underlying the City.

The City does not anticipate future legal constraints on the recycled water system.

Per California Senate Bill 610, the City will prepare a Water Supply Assessment (WSA) for any development which is governed by the requirements set forth in CWC §10910 through §10915 (inclusive). Per California Senate Bill 221, the City will obtain an affirmative written verification of sufficient water supply for new residential subdivisions as required by the legislation.

7.1.1.3 Water Quality

Water quality for groundwater and surface water supplies is published annually in the City's Consumer Confidence Report (CCR). The most recent CCR is available on the City's website at https://www.lincolnca.gov/our-government/a-z-city-services-and-departments/public-works/water/consumer-confidence-report/. As shown in the CCR, the City's water supply meets or exceeds all federal and state drinking water standards.

PCWA participates in regular updates to the Watershed Sanitary Surveys (WSS) for the American River Watershed and the Yuba/Bear River Watershed. PCWA diverts most of its water supplies from these two watersheds. As a result, water quality is not expected to impact supply reliability. Refer to PCWA's most recent UWMP for additional information on the quality of PCWA's supplies.

Groundwater underlying the City's service area meets all primary and secondary drinking water standards for municipal water use. As discussed in Chapter 6, the City participates in regional groundwater management through the Western Placer GSA. The City will continue to regularly monitor groundwater quality and proactively address future regulations to minimize potential impacts to groundwater supply reliability.

LiSWA's recycled water produced at the WWTRF meets all standards for unrestricted use under DDW Title 22. The City has installed in-line filters at select locations within the recycled water distribution system to protect irrigation system emitters from being clogged by small particulates. The City does not anticipate any water quality constraints in the recycled water system.

7.1.1.4 Climate

The NABRDCP discusses the impacts of changing climate conditions on the PCWA water supplies. Effects of these changes are expected to include increased average temperature, decreased snowpack, increased evapotranspiration, and rising sea level. As a result of climate change impacts, Folsom Reservoir may need to be relied upon more heavily to regulate flow in the American River and to contribute high-quality water to the Sacramento-San Joaquin Delta to satisfy Delta flow requirements and protect endangered fish species. Because PCWA takes its water supplies upstream of Folsom Reservoir, the NABRDCP (Table 3-2) projects that low storage in Folsom Reservoir will have only a moderate impact on PCWA and City supplies.

The draft Placer County DRP evaluates drought and water shortage vulnerability across the County.[1] The DRP identifies climate factors that may contribute to declining groundwater levels and reduced surface water availability. Additionally, the DRP highlights potential water quality risks in aquifers east and northeast of the City and identifies domestic wells in western Placer County, including areas around the City, as more susceptible to going dry during extended drought conditions.

[1] Stantec. February 2026. *Placer County Drought Resilience Plan (DRP) Public Draft.*

The City's recycled water supplies are not expected to be impacted by climate factors, and the City does not anticipate future disruption of these supplies as a result of climate factors.

7.1.2 Year Type Characterization

Water supply reliability is assessed based on the characteristics of the City's water supplies during various water year types which are provided in this section. CWC §10635(a) requires that the City's water service reliability be assessed based on the following three water year types:

1. **Normal Year** – A single year or averaged range of years in the historical sequence that most closely represents the average water supply available to the City.
2. **Single Dry Year** – The year that represents the lowest water supply available to the City.
3. **Five Consecutive Year Drought** – The period that represents the lowest average water supply availability to the City for a consecutive multiple year period (five years or more).

The City's base years remain consistent with the hydrologic conditions documented in PCWA's 2025 UWMP. The year 1977 represents the Single Dry Year for the City, and the period 1988 through 1992 represents the Five-Consecutive-Year Drought period. PCWA determines available supply in an average year using modeling of the long-term hydrologic record.

For purposes of this reliability assessment, each applicable supply source is assumed to be 100 percent reliable under the identified water year types. PCWA supply reliability was determined by consultation with PCWA staff and PCWA has historically been able to meet the City's full contractual entitlement during dry year conditions. However, should PCWA determine a water shortage or implement a given stage of PCWA's WSCP, the City would be required to implement its WSCP as necessary to achieve the required level of water conservation. Details of PCWA's available supply under various water types are documented in PCWA's 2025 UWMP. The City's groundwater and recycled water supplies are not dependent on hydrologic year type. As discussed in Chapter 6, to be conservative, NID water supply is not included as a projected water supply.

Because all supply sources share the same base years and are each projected to meet 100 percent of available supply during the identified water year types, a single consolidated DWR Table 7-1 Retail is provided below as Table 7-1.

Table 7-1. Basis of Water Year Data (DWR Table 7-1 Retail)

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[a,b] ☐ Check the box if quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. **Location:** [insert location from UWMP] Quantification of available supplies is provided in this table as either volume only, percent only, or both.	
		Volume Available (AF)	% of Average Supply
Average Year	See Notes		100%
Single-Dry Year	1977		100%
Consecutive Dry Years 1st Year	1988		100%
Consecutive Dry Years 2nd Year	1989		100%
Consecutive Dry Years 3rd Year	1990		100%
Consecutive Dry Years 4th Year	1991		100%
Consecutive Dry Years 5th Year	1992		100%

NOTES:
(a) PCWA uses modeling of the long-term hydrologic record to determine available supplies in an average year.
(b) This table reports the reliability of PCWA surface water supplies, City-operated groundwater supplies, and recycled water supplies. Each source is independently projected to meet 100 percent of available supply during the identified base years.

7.1.3 Potable Water Service Reliability

The City's potable water supplies consist of treated surface water purchased from PCWA and groundwater pumped through City owned wells.

Projected potable water supplies and projected potable water demands are compared under Normal Year, Single Dry Year, and Five Consecutive Year Drought conditions in five-year increments through 2050. Projected demands are presented in Chapter 4 and projected supplies are presented in Chapter 6.

7.1.3.1 Potable Water Service Reliability – Normal Year

In normal year conditions, the City anticipates full availability of its potable water supply portfolio. Projected potable water supplies from PCWA and City operated groundwater wells are based on projected potable water demands; therefore, available supplies are equal to projected demands.

Table 7-2 compares the projected normal year potable supply from Chapter 6 and projected potable demands from Chapter 4. No potable water supply shortage is anticipated during normal years through 2050.

Table 7-2. Normal Year Supply and Demand Comparison – Potable (DWR Table 7-2 Retail)

	2030 (AF)	2035 (AF)	2040 (AF)	2045 (AF)	2050 (AF)
Supply totals (autofill from Submittal Table 6-9 R)	13,381	16,598	19,824	22,053	25,419
Use totals (autofill from Submittal Table 4-2 R)	13,381	16,598	19,824	22,053	25,419
Surplus/(shortfall)	0	0	0	0	0

7.1.3.2 Potable Water Service Reliability – Single Dry Year

Table 7-3 compares projected Single Dry Year potable water supplies and demands. PCWA is projected to meet the City's full contractual entitlement and groundwater supplies are assumed to remain available during Single Dry Year conditions. No potable water supply shortage is anticipated through 2050. The City will implement water conservation measures, including activation of its WSCP, if required by the State or PCWA.

Table 7-3. Single Dry Year Supply and Demand Comparison – Potable (DWR Table 7-3 Retail)

	2030 (AF)	2035 (AF)	2040 (AF)	2045 (AF)	2050 (AF)
Supply totals	13,381	16,598	19,824	22,053	25,419
Use totals	13,381	16,598	19,824	22,053	25,419
Surplus/(shortfall)	0	0	0	0	0

7.1.3.3 Potable Water Service Reliability – Five Consecutive Dry Years

Table 7-4 compares projected potable water supplies and demands under Five Consecutive Year Drought conditions. Surface water and groundwater supplies are projected to remain available, and no potable water supply shortage is anticipated through 2050. The City will implement conservation measures and its WSCP if required during drought conditions.

Table 7-4. Multiple Dry Years Supply and Demand Comparison – Potable (DWR Table 7-4 Retail)

		2030 (AF)	2035 (AF)	2040 (AF)	2045 (AF)	2050 (AF)
First year	Supply totals	13,381	16,598	19,824	22,053	25,419
	Use totals	13,381	16,598	19,824	22,053	25,419
	Surplus/(shortfall)[(a)]	0	0	0	0	0
Second year	Supply totals	14,024	17,243	20,270	22,726	25,419
	Use totals	14,024	17,243	20,270	22,726	25,419
	Surplus/(shortfall)[(a)]	0	0	0	0	0
Third year	Supply totals	14,668	17,888	20,716	23,399	25,419
	Use totals	14,668	17,888	20,716	23,399	25,419
	Surplus/(shortfall)[(a)]	0	0	0	0	0
Fourth year	Supply totals	15,311	18,534	21,161	24,073	25,419
	Use totals	15,311	18,534	21,161	24,073	25,419
	Surplus/(shortfall)[(a)]	0	0	0	0	0
Fifth year	Supply totals	15,955	19,179	21,607	24,746	25,419
	Use totals	15,955	19,179	21,607	24,746	25,419
	Surplus/(shortfall)[(a)]	0	0	0	0	0

NOTES:
(a) No WSCP actions are planned for these years, as no supply shortfalls are projected.

7.1.4 Non-Potable Water Service Reliability

The City's non-potable water supply evaluated in this UWMP consists of recycled water produced at the LiSWA WWTRF.

Projected recycled water supplies and demands are compared under Normal Year, Single Dry Year, and Five-Consecutive-Year Drought conditions in five-year increments through 2050. Projected recycled water supplies are presented in Chapter 6, and projected recycled water demands are presented in Chapter 4.

Recycled water production is based on treated wastewater flows and available treatment capacity. Because recycled water supply is not dependent on hydrologic year type, it is assumed to remain available under all evaluated conditions. No recycled water supply shortage is anticipated through 2050.

7.1.4.1 Non-Potable Water Service Reliability – Normal Year

Table 7-5 compares the projected Normal Year recycled water supply and projected recycled water demands are presented in Chapter 4. No recycled water supply shortage is anticipated during Normal Year conditions through 2050.

Table 7-5. Normal Year Supply and Demand Comparison – Non-Potable (DWR Table 7-2 Retail)

	2030 (AF)	2035 (AF)	2040 (AF)	2045 (AF)	2050 (AF)
Supply totals (autofill from Submittal Table 6-9 R)	3,146	3,252	3,292	3,622	3,892
Use totals (autofill from Submittal Table 4-2 R)	3,146	3,252	3,292	3,622	3,892
Surplus/(shortfall)	0	0	0	0	0

7.1.4.2 Non-Potable Water Service Reliability – Single Dry Year

Table 7-6 compares projected Single Dry Year recycled water supply and projected recycled water demand. Recycled water production is based on treated wastewater flows and is not directly impacted by hydrologic year type. No recycled water supply shortage is anticipated during Single Dry Year conditions through 2050.

Table 7-6. Single Dry Year Supply and Demand Comparison – Non-Potable (DWR Table 7-3 Retail)

	2030 (AF)	2035 (AF)	2040 (AF)	2045 (AF)	2050 (AF)
Supply totals	3,146	3,252	3,292	3,622	3,892
Use totals	3,146	3,252	3,292	3,622	3,892
Surplus/(shortfall)	0	0	0	0	0

7.1.4.3 Non-Potable Water Service Reliability – Five Consecutive Dry Years

Table 7-7 compares projected recycled water supply and projected recycled water demand during Five-Consecutive-Year Drought conditions. Although potable water conservation may reduce wastewater inflows slightly during drought conditions, the City's projected recycled water production capacity remains sufficient to meet projected recycled water demand. No recycled water shortage is anticipated during the Five Consecutive Year Drought period through 2050.

Table 7-7. Multiple Dry Years Supply and Demand Comparison – Non-Potable (DWR Table 7-4 Retail)

		2030 (AF)	2035 (AF)	2040 (AF)	2045 (AF)	2050 (AF)
First year	Supply totals	3,146	3,252	3,292	3,622	3,892
	Use totals	3,146	3,252	3,292	3,622	3,892
	Surplus/(shortfall)	0	0	0	0	0
Second year	Supply totals	3,146	3,252	3,292	3,622	3,892
	Use totals	3,146	3,252	3,292	3,622	3,892
	Surplus/(shortfall)	0	0	0	0	0
Third year	Supply totals	3,146	3,252	3,292	3,622	3,892
	Use totals	3,146	3,252	3,292	3,622	3,892
	Surplus/(shortfall)	0	0	0	0	0
Fourth year	Supply totals	3,146	3,252	3,292	3,622	3,892
	Use totals	3,146	3,252	3,292	3,622	3,892
	Surplus/(shortfall)	0	0	0	0	0
Fifth year	Supply totals	3,146	3,252	3,292	3,622	3,892
	Use totals	3,146	3,252	3,292	3,622	3,892
	Surplus/(shortfall)	0	0	0	0	0

7.2 DESCRIPTION OF MANAGEMENT TOOLS AND OPTIONS

The City uses a variety of management tools to maintain the reliability of its water supplies.

Table 6-14 (DWR Table 6-7 Retail) identifies expected future water supply projects that the City anticipates implementing. As described in Chapter 6, the City plans to construct additional ASR groundwater production wells to support peak demands and system resiliency. Recycled water will continue to be utilized where available to offset potable water demands.

In 2023, the City approved a funding agreement with PCWA for participation in the Ophir Water Treatment Plant, which will provide additional treated water capacity beginning in 2030. This project supports long-term supply planning and regional reliability.

As discussed in Chapter 6, the City's water supply projections conservatively assume the City does not receive NID supply after 2025 because the Temporary Agreement does not specify the amount of NID supply the City is entitled to and negotiations to amend the agreement are ongoing. Pending the results of these negotiations, NID may continue to provide water supply to the City within its service area. Continuing to receive supply from NID in the future would further diversify the City's water supply portfolio and increase supply reliability.

The City participates in regional water management through the WPGSA and the Regional Water Authority RWA. The WPGSA is implementing the NASb GSP under the Sustainable Groundwater Management Act to ensure sustainable groundwater management. RWA coordinates regional water supply planning, conjunctive use efforts, and water conservation programs that support long-term reliability.

In addition to regional programs, the City implements local demand management measures and a WSCP, as described in Chapters 8 and 9.

7.3 DROUGHT RISK ASSESSMENT

California Water Code §10635(b) requires the City to prepare a DRA based on the supply condition associated with the five driest consecutive years on record. For this UWMP, that supply condition is assumed to occur over the next five years, from 2026 through 2030.

For the purposes of this DRA, recycled water supplies are assumed to be sufficient to meet recycled water demands and therefore are excluded from the DRA. The DRA will only be performed for the City's potable water supplies. This section describes the data and methodology used to evaluate the assumed drought condition and compares projected potable water supplies and demands for the 2026-2030 period. The DRA includes surface water purchased from PCWA and groundwater produced from City operated wells.

The DRA allows the City to evaluate potential drought impacts and prepare for implementation of its WSCP, if necessary. Findings show that, should the region experience a Five Consecutive Year Drought beginning in 2026, adequate water supplies are projected to be available to meet projected City demands.

7.3.1 Data, Methods, and Basis for Water Shortage Condition

The DRA assumes hydrologic conditions consistent with the Five Consecutive Year Drought period identified in Section 7.1.2.

Projected potable water demands for 2026 through 2029 were linearly interpolated between actual 2025 total water demand and projected 2030 total water demand, as presented in Table 4-4 in Chapter 4. These projections represent unconstrained demand conditions, consistent with DWR guidance.

As documented in PCWA's 2025 UWMP, surface water supplies from PCWA can meet the City's full surface water supply entitlement during a Five Consecutive Year Drought condition. Groundwater supply volumes are projected consistent with the City's conjunctive use strategy, which assumes approximately 10 percent of total demand is met by City operated wells and 90 percent by PCWA surface water supplies. Table 7-8 summarizes the projected potable water supplies available during the DRA period and are equal to the City's normal year demands for the evaluated period.

Table 7-8. Projected Potable Water Supplies for Drought Risk Assessment, AF[(a,b)]

Supply Source	2026	2027	2028	2029	2030
PCWA Supply	10,233	10,686	11,138	11,591	12,043
Groundwater	1,137	1,187	1,238	1,288	1,338
Total	**11,370**	**11,873**	**12,376**	**12,879**	**13,381**

(a) Assumes 90 percent of total use is supplied by PCWA and 10 percent is supplied by City-operated wells.
(b) Projected supplies are equal to the City's normal dry year demands for the Drought Risk Assessment shown in Table 4-4 in Chapter 4.

7.3.2 DRA Water Source Reliability

As discussed in Section 7.1.3, PCWA surface water and City operated groundwater supplies are projected to remain available under the assumed Five Consecutive Year Drought condition. Accordingly, projected potable water supplies for the 2026-2030 DRA period reflects the availability of these two supply sources.

7.3.3 Total Water Supply and Use Comparison

Table 7-9 compares projected potable water supplies and projected potable water demands during the 2026–2030 DRA period. The analysis demonstrates that adequate potable water supplies are projected to be available to meet projected potable demands throughout the DRA period. The City may implement water conservation measures, including activation of its WSCP, if required during drought conditions.

Table 7-9. Five-Year Drought Risk Assessment (DWR Table 7-5 Retail)

2026	Total
Total Water Use (AF)	11,370
Total Supplies (AF)	11,370
Surplus/Shortfall w/o WSCP Action[(a)]	0
2027	**Total**
Total Water Use (AF)	11,873
Total Supplies (AF)	11,873
Surplus/Shortfall w/o WSCP Action[(a)]	0
2028	**Total**
Total Water Use (AF)	12,376
Total Supplies (AF)	12,376
Surplus/Shortfall w/o WSCP Action[(a)]	0
2029	**Total**
Total Water Use (AF)	12,879
Total Supplies (AF)	12,879
Surplus/Shortfall w/o WSCP Action[(a)]	0
2030	**Total**
Total Water Use (AF)	13,381
Total Supplies (AF)	13,381
Surplus/Shortfall w/o WSCP Action[(a)]	0

NOTES:
(a) No WSCP actions are planned for these years, as no supply shortfalls are projected.

CHAPTER 8
Water Shortage Contingency Plan

This chapter discusses the City's WSCP, seismic risk to City facilities, and WSCP adoption procedures. To allow for WSCP updates to be made outside of the UWMP preparation process, the City's WSCP is included in this plan as Appendix F.

8.1 BACKGROUND

Water shortages occur whenever the available water supply cannot meet the normally expected customer water use. These shortages can be due to several reasons, including climate change, drought, and catastrophic events. Drought, regulatory action constraints, and natural and manmade disasters may occur at any time. A WSCP presents how an urban water supplier plans to respond to a water shortage condition and helps prevent catastrophic service disruptions.

In 2018, the California State Legislature enacted two policy bills, (SB 606 (Hertzberg) and AB 1668 (Friedman) (2018 Water Conservation Legislation), to establish a new foundation for long-term improvements in water conservation and drought planning to adapt to climate change and the resulting longer and more intense droughts in California. The 2018 Water Conservation Legislation set new requirements for water shortage contingency planning; the City's WSCP has been prepared to be consistent with these requirements. The City is updating its WSCP with the preparation of the 2025 UWMP to improve usability, ensure consistency with State requirements, and provide a flexible, operational framework that City staff can apply during normal-year conditions, foreseeable water shortages, and emergency events.

8.2 CITY WATER SHORTAGE CONTINGENCY PLAN

The WSCP describes the City's strategic plan in preparation for and responses to water shortages. The WSCP includes water shortage levels and associated actions that will be implemented in the event of a water supply shortage. As part of the WSCP, the City's legal authorities, communication protocols, compliance and enforcement, and monitoring and reporting are included. The Lincoln Municipal Code (LMC) Chapter 13.04 Article VI Conservation and LMC Chapter 13.04 Article IX Water Conservation Penalties support the City's WSCP actions.

The City intends for its WSCP to be an adaptive management plan so that it may assess response action effectiveness and adapt to foreseeable and unforeseeable events. It may also be updated to conform to State legislative and regulatory requirements. The City's WSCP is included as Appendix F so that it may be updated outside of the UWMP preparation process.

When an update to the WSCP is proposed, the revised WSCP will undergo the process described in Section 8.4 for adoption by the City Council and distribution to Placer County, City customers, and the general public.

8.3 WATER SUPPLY RELIABILITY ANALYSIS

This section provides the water supply planning analysis and reliability findings from this UWMP. The discussion below includes a summary of the City's existing and projected water use (from Chapter 4 of the City's UWMP), existing and planned water supplies by source (from Chapter 6), and the water supply reliability assessment and the Drought Risk Assessment (from Chapter 7).

Findings show that the City has sufficient water supplies to meet projected average annual demands through 2050 during all evaluated hydrologic year types (normal, single dry, and multiple dry years). These projections consider the effects of a growing population and new development within the City. In response to any supply shortfalls that may occur, the City may declare a water shortage condition (as described in the WSCP, Appendix F). However, based on the 2025 WMPU, after 2035 the City's projected supplies may be inadequate to meet maximum day demand conditions. The City is actively exploring options to increase its supply reliability for maximum day demand conditions while also continuing to encourage demand conservation.

Statewide water supply conditions, changes in groundwater levels, and actions by the City's wholesale surface water suppliers may impact the City's available water supply. For the City, a water shortage condition occurs when the supply of potable water available cannot meet ordinary water demands for human consumption, sanitation, fire protection, and other beneficial uses. The City may be able to foresee its water shortage condition in some cases; however, in other cases, the water shortage may be caused by an unforeseen sudden or emergency event. In general, the City's water supply conditions may be affected by the following issues:

- PCWA supply availability and/or transmission or treatment issues
- NID supply availability and/or transmission issues
- City groundwater well production reduction and/or water quality issues

Approximately three months prior to July 1st, the City determines the expected purchased water and surface water supplies availability. In other cases, the City may experience unforeseen water shortage when catastrophic interruption of water supplies occurs due to regional power outage, an earthquake, or other potential emergency events.

In future years, the City will continue to conduct annual water supply and demand assessment in accordance with Section 2 of the WSCP. The analysis associated with this WSCP was developed in the context of the City's water supply sources and reliability.

Seismic events present potential water supply interruptions due to infrastructure failure. Because earthquakes are common, well tracked and recognized as high probability occurrences in California, UWMPs are required to include a seismic risk assessment and mitigation plan. The City's plan is described in the section below.

8.3.1 Seismic Risk Assessment and Mitigation Plan

CWC §10632.5(a) requires that the UWMP includes a seismic risk assessment and mitigation plan to assess the City's water system vulnerabilities and mitigate those vulnerabilities. A Local Hazard Mitigation Plan (LHMP) may be incorporated in this UWMP to address this requirement if it addresses seismic risk. The City participated in the Placer County 2021 Local Hazard Mitigation Plan Update (2021 LHMP), earthquake hazards remain included in the comprehensive risk assessment, and in the countywide hazard identification table the earthquake hazard is characterized as having a medium risk level based on its likelihood and potential severity. This reflects a similar overall risk characterization in the 2016 LHMP, although the 2021 LHMP does not provide a standalone jurisdiction-specific seismic risk rating for the City in the publicly available summary documents. There are no historical records of major earthquakes within the City. The most severe ground shaking caused by an earthquake on record resulted in only minor structural damage within the City. The 2021 LHMP includes mitigation actions for Placer County and the

City, some of which address seismic risk. The 2021 LHMP was submitted to the Federal Emergency Management Agency (FEMA), which found it in conformance with Title 44 Code of Federal Regulations Part 201.6 Local Mitigation Plans. The 2021 LHMP can be accessed at the following link: 2021 LHMP and is incorporated in this UWMP by reference.

In accordance with America's Water Infrastructure Act (AWIA), the City updated their Risk and Resilience Assessment (RRA) of its water system in 2025. The RRA systematically evaluated the City's assets, threats, and risks, and evaluated countermeasures that might be implemented to minimize overall risk to the system. Vulnerability to natural hazards, including earthquakes, was assessed based on the City's level of preparation/resilience, active response capability, and ability to recover. To protect the security of the City's water system, the RRA is retained by the City as a confidential document.

8.4 PLAN ADOPTION, SUBMITTAL, AND AVAILABILITY

The City's WSCP (Appendix F) is adopted concurrently with the City's 2025 UWMP, by separate resolution. Prior to adoption, a duly noticed public hearing was conducted. An electronic copy of the WSCP will be submitted to DWR within 30 days of adoption.

No later than 30 days after submittal to DWR, an electronic copy of the WSCP will be available for public review and download on the City's website. An electronic copy will also be provided to DWR and the State Library within 30 days of adoption.

The City's WSCP is an adaptive management plan. It is subject to refinements as needed to ensure that the City's shortage response actions and mitigation strategies are effective and produce the desired results. When a revised WSCP is proposed, the revised WSCP will undergo the process described in this section for adoption by City Council and distribution to Placer County, City customers, and the general public.

CHAPTER 9
Demand Management Measures

The City implements demand management measures (DMMs) to sustainably manage its water resources. If water demands are not managed, water service reliability may be reduced due to increases in water demand, and/or changes in water supplies associated with climate change and other factors. The implementation of DMMs can help improve water service reliability and help meet City and State water conservation goals. This chapter describes the City's historical and existing Water Conservation Program, status of implementation of DMMs, and projected future conservation implementation.

9.1 DEMAND MANAGEMENT MEASURES FOR RETAIL SUPPLIERS

Since the 2020 UWMP reporting cycle, the City has continued to implement DMMs within its service area as part of its standard practice. The following DMMs are discussed in this section:

- Water waste prevention ordinances
- Metering
- Conservation pricing
- Public education and outreach
- Programs to assess and manage distribution system real loss
- Water conservation program coordination and staffing support

Any other DMMs implemented by the City that have had significant impact on water use are also described.

Section 9.1.7 also presents the non-utility based DMMs that the City had actively implemented to aid in the reduction of total system water demands. For each DMM, implementation over the past five years is described and planned implementation over the next five years is discussed.

9.1.1 Water Waste Prevention Ordinances

The City discourages wasteful water use and promotes the use of water saving devices with the primary purpose of ensuring that the City's water resources are used reasonably and for beneficial uses to maximize water supply reliability for all customers in both normal and dry years. The City has the authority through the Municipal Code to establish water waste prevention regulations to help reduce water waste.

The City's Municipal Code (Title 13, Public Services, Chapter 13.04 Water, Articles VI, VIII, and IX) defines water waste, prohibited uses of water, and associated enforcement provisions. A summary of the water use restrictions is provided:

- Wasteful or unreasonable use of potable water, including use that results in runoff or does not serve a beneficial purpose;
- Unauthorized use of water from City facilities, including fire hydrants, except as permitted by the City;
- Failure to repair leaks, breaks, or malfunctions in a customer's plumbing or irrigation system within a reasonable period after notification or discovery; and
- Other inefficient or non-essential uses of water subject to determination and enforcement by the City.

The City distinguishes special water features, such as decorative fountains and ponds, differently from pools and spas. Special water features are regulated separately under the City's Municipal Code. The Municipal Code includes provisions that restrict the use of potable water in decorative water features unless the water is recirculated. These requirements are intended to reduce nonessential water use while allowing the continued operation of decorative features that are designed to minimize water loss.

These restrictions are administered and enforced by the City in accordance with the Municipal Code. Enforcement actions may include customer notifications and other corrective measures, and enforcement activities may be enhanced during periods of water shortage consistent with the City's WSCP, included as Appendix F.

The City also encourages the public to report instances of water misuse, which allows staff to investigate potential violations and provide follow-up as appropriate. In addition, the City has enhanced monitoring capabilities with the implementation of Advanced Metering Infrastructure (AMI) which supports identification of potential leaks and unusual water use patterns.

Implementation of this DMM is ongoing. Although water savings from water waste prevention ordinances cannot be directly quantified, this measure is expected to support the City's water use objectives by minimizing nonessential water uses and prioritizing water availability for essential needs such as human consumption, sanitation, and fire protection.

9.1.2 Metering

All City potable water customers are metered and billed in compliance with State metering requirements for urban water systems (California Water Code § 527). Water service charges include a monthly fixed charge and a capital improvement program component, both based on meter size, and a volumetric charge based on water use. Universal metering allows the City to track water use, support accurate billing, and evaluate water demand trends across the service area.

Over the past five years, the City worked towards implementation of AMI with systemwide implementation completed in 2025. AMI data are used to support system monitoring, demand analysis, and planning efforts, and were most recently used in the development of the 2025 WMPU. Starting in 2026, the City plans to implement in stages the ability for the AMI to allow residents to view real-time and historical water use data using an online portal. It also provides leak alerts for City staff, allowing for faster response time, especially in irrigated areas that may not be frequented often. This helps prevent the flooding of recreational fields and associated significant water losses.

Implementation of this DMM is ongoing. The City will continue to install meters with AMI on new service connections. Metering supports efficient water use by providing accurate water use information to both customers and the City, allowing customers to better understand their water consumption patterns and enabling the City to monitor system demands and identify potential inefficiencies over time.

9.1.3 Conservation Pricing

As discussed in Section 9.1.2, the City's potable water customers are billed for water supply and service in accordance with the City's Municipal Code. The water bill consists of a monthly fixed service charge and capital improvement program component, both based on meter size, and a volumetric charge based on the amount of water used by each customer. The City's current water rate structure is codified in Municipal Code § 13.04.200 (Appendix G).

The City's rate structure includes a volumetric pricing component that recovers a portion of water system costs based on customer water use. Volumetric pricing provides a financial signal that encourages customers to manage water use efficiently while ensuring that water system costs are recovered in a manner consistent with applicable legal and regulatory requirements. City Council periodically reviews and approves water rates to ensure that revenues are sufficient to cover the costs of providing water service, including operations and maintenance, capital improvements, debt service, and reserve funding.

The City also retains the authority to implement drought-related pricing measures, as appropriate, to address revenue impacts associated with extended periods of reduced water demand during water shortage conditions, consistent with the City's WSCP.

Implementation of conservation-oriented pricing is ongoing. This demand management measure supports the City's water use objectives by encouraging efficient water use and ensuring that sufficient funding is available to maintain, repair, and replace water system infrastructure and to support water conservation programs. The City will continue to evaluate its rate structure as part of future rate studies updated every five years to ensure rates remain aligned with the cost of service.

9.1.4 Public Education and Outreach

To fulfill the public education and outreach requirements of CWC §10631(1)(B) part (iv), the City participates in both local and regional public education and outreach activities to promote water conservation and support efficient water use, each described in the following sections.

At the local level, the City provides water conservation information directly to customers through a variety of outreach methods. These efforts are intended to raise awareness of water use efficiency practices, communicate conservation messaging, and encourage participation in available programs and services.

At the regional level, the City participates in a public education and outreach program through the RWA. RWA was formed in 2001 as a joint powers authority to serve and represent the interests of over 22 water suppliers and associated agencies in the greater Sacramento, Placer, El Dorado, Sutter, Nevada and Yolo County Region. RWA's mission is to serve, represent and align the interests of regional water suppliers and stakeholders for the purposes of improving water supply reliability, availability, quality and affordability. In collaboration with 17 water supplier members and other wastewater, stormwater and energy partners, RWA formed the Water Efficiency Program (WEP) in 2001 to bring cost effectiveness through economies of scale to public education and outreach activities.

The WEP operates on an average annual budget of $610,000 funded by participating local water suppliers and is supplemented by grant funding. Grants are an important funding resource for the Program. Since 2003, the Program has been awarded $19.9 million in grant funding for public outreach and education as well as a variety of rebate programs, fixture direct install programs, system water loss, individualized customer usage reports, large landscape budgets and more. Of those funds, $6.7 million was awarded between 2021 and 2025.

The WEP develops and distributes regional public outreach messaging in collaboration with its member water suppliers. Campaigns are implemented at a regional scale through coordinated media and advertising buys, while allowing individual agencies flexibility to tailor materials to their local supply conditions and calls to action. WEP has received national and regional recognition for its efforts, including the U.S. Environmental Protection Agency WaterSense Partner of the Year award in 2021 and three Public Relations Society of America, California Capital Chapter awards in 2023 and 2024 for public outreach and

school education programs. From 2021-2025, the WEP created a series of public outreach campaigns. Below is a summary of each campaign and highlighted achievements.

From 2021 through 2022, WEP adapted quickly to changing drought conditions. Early 2021 messaging focused on household leaks and the Check and Save campaign to reduce landscape overwatering. As drought conditions intensified, outreach shifted to Stress Your Lawn, Save Your Trees, encouraging reduced lawn irrigation while protecting long-term tree health, in support of the Governor's voluntary 15 percent conservation request. WEP also partnered with the Sacramento Tree Foundation to provide co-branded educational materials and videos promoting tree care and canopy preservation.

As drought conditions eased in 2023, WEP launched a multi-year effort to sustain conservation engagement during non-drought periods. The Summer Strong campaign promotes water-wise outdoor practices such as efficient tree watering, soil moisture checks, weather-based irrigation controllers, and use of low-water and native plants. The Suds Would Be Duds Without H2O campaign partners with local craft breweries to highlight the importance of water to beer production and encourage efficiency, including promotional materials and commercial rebate incentives for water-saving equipment upgrades. Both campaigns continued through 2025, expanded regional partnerships, and were promoted through paid advertising and public service announcements in English and Spanish across radio and digital platforms.

9.1.4.1 Public Information Programs

The City implements ongoing public information programs to promote participation in its water conservation efforts. At the local level, the City operates a booth at several community events, such as the annual National Night Out, where staff hand out information pamphlets, shower timers, low-flow shower heads, low-flow sprayers for garden hoses, water buckets, moisture meters, leak detector kits, and water conservation and education kits for children. The City has also implemented rebate programs for smart irrigation controllers, high-efficiency washers and toilets, which has been advertised to the public through its outreach efforts. Other outreach methods used by the City include indoor and landscape water efficiency surveys for residential and Commercial, Industrial, and Institutional (CII) customers to improve conservation measures, leak and pressure checks, and customer access to water use data. These efforts are intended to improve customer awareness of efficient water use practices and available conservation programs.

Through its participation in the RWA WEP, the City contributes to and benefits from regionally coordinated outreach campaigns. The WEP develops and distributes water conservation messaging across the region through a combination of paid advertising, public service announcements, social media, digital platforms, and public events. Campaign themes have historically focused on outdoor water use efficiency, irrigation practices, and long-term water conservation behaviors. Table 9-1 summarizes the WEP advertising activities from 2021 through 2025.

Table 9-1. Summary of Water Efficiency Program Advertising, 2021 - 2025		
Outreach Activity	Impressions (millions)	Other Statistics
Broadcast Media Advertising (Television and Radio)	43.2	9,199 advertisements
Digital Media Advertising (Streaming Video and Digital)	33.0	3.5 million advertisements
Billboards	62.8	2.0 million placements
Public Service Announcements	24.3	Equivalent value of $683,400

The WEP also utilizes a public outreach website (BeWaterSmart.Info) and the "Be Water Smart" brand to provide information on rebates and services, water-saving tips, irrigation scheduling tools, and educational resources to customers throughout the region. In addition, the WEP distributes electronic newsletters and participates in regional public events to engage customers and reinforce conservation messaging.

Every year the WEP selects two public events at which local water efficiency staff will communicate the WEP messaging to the public in-person. At these events, the Be Water Smart team provided water-wise tips, encouraged visitors to sign the pledge banner, collected e-mails for those who wish to sign up for the e-newsletter list, as well as identified a customer's water supplier and connected them with rebates and services. Additionally, WEP, in coordination with participating local water providers, hosts an annual Mulch Mayhem event in which customers can pick up a truck load of free mulch from selected locations throughout the region. Combined, these in-person events are attended by thousands of people each year throughout the region.

Public information programs are reviewed and updated periodically to reflect current water conditions, conservation priorities, and available resources. Implementation of these programs is ongoing and supports the City's water use objectives by increasing public awareness of water conservation and encouraging efficient water use.

9.1.4.2 School Education Programs

Historically, the City participated in regional school-based water education efforts through the WEP. These programs were designed to increase awareness of water conservation and water-related issues among students and to complement broader public education initiatives.

As part of the regional education efforts, the WEP administered educational campaigns and student engagement activities to promote water conservation and encourage students to share efficiency messages within their communities.

Since 2012, WEP hosted the Water Spots Video Contest for middle and high school students; however, the program was discontinued in late 2023 and replaced with a new initiative, *Drip Drop, Hip Hop*, developed in partnership with the NorCal School of the Arts. This program brings together the worlds of art and sustainability to empower children, families, and communities in the Sacramento region.

Funded by a $300,000 grant from the Capital Region Creative Corps and California Arts Council, *Drip Drop, Hip Hop* educates students and families about water efficiency through a two-person play and arts-integrated lesson plan. The program is free of charge for primarily Title I schools and community venues

in Sacramento, Placer, and El Dorado counties plus the City of West Sacramento. The children receive a shower timer with water-efficiency tips with each classroom visit. Teacher feedback indicates increased water conservation knowledge and that students shared the information with their families.

The City now has the capability of administering a local school education program with the addition of a Water Efficiency Specialist Position. Additionally, the City continues to support regional education efforts through participation in RWA and the WEP, which provide ongoing opportunities for student and school engagement related to water conservation.

9.1.5 Programs to Assess and Manage Distribution System Real Loss

To manage distribution system water losses, the City conducts annual water loss audits, repairs system leaks when identified, and replaces aging infrastructure as part of its routine water system operations.

As discussed previously in Section 4.3, beginning in 2016, water suppliers are required to report distribution system water losses based on the AWWA Water Audit Software. Since the initial audit, the City has focused on improving the accuracy of water production and customer metering data and has taken measurable steps to validate the water audit inputs. The City completes annual water loss audits in accordance with State requirements. These audits account for water produced and water delivered to customers and identify both real losses, such as leaks, and apparent losses, such as meter inaccuracies.

Distribution system real loss is further managed through ongoing monitoring, maintenance, and repair activities. These activities include responding to water main breaks, service line leaks, and valve or hydrant leaks, as well as tracking leak locations and repair history through the City's work order management system. The City also performs meter testing, calibration, and replacement activities to support accurate water loss evaluation.

If annual water loss audit results indicate elevated levels of water loss, the City may conduct additional evaluation or targeted leak detection to identify contributing factors and determine appropriate corrective actions.

In addition, the City conducts proactive leak detection activities as part of its water loss management program. Leak detection surveys are performed annually for approximately 20 to 25 percent of the distribution system on a rotating basis, with the goal of assessing the entire system over time. Initial efforts focused on older infrastructure; however, the program has expanded to include newer system areas less than 20 years old to support a comprehensive and accurate assessment of distribution system conditions.

Implementation of this DMM is ongoing and supports the City's water use objectives by improving system efficiency, minimizing avoidable water losses, and maintaining compliance with CCR Title 23 §638.5. The City has made measurable progress in reducing water loss over the past five to ten years and has consistently met the State Water Board Water Loss Standard since its implementation in 2022. The City will continue to evaluate distribution system losses annually using the AWWA Water Audit Software and report results to DWR.

9.1.6 Water Conservation Program Coordination and Staffing Support

To ensure that water conservation efforts are coordinated effectively, the City has established dedicated staff positions responsible for implementation and oversight of water conservation activities within the Public Works Department. In 2024, the City created and filled Water Efficiency Specialist I and II positions, which oversee and implement the City's water conservation programs. Additional operations staff support water conservation activities as needed, depending on program demands. City staff are responsible for developing, implementing, and monitoring the DMMs described in this chapter, in coordination with other departments as needed. During periods of drought or water shortage, the City may assign additional staff resources to support conservation implementation and enforcement activities.

Implementation of this DMM is ongoing and supports the City's water use objectives by ensuring that water conservation activities remain an integral part of water system management.

9.1.7 Other Demand Management Measures

In addition to the DMMs described in Sections 9.1.1 through 9.1.6, the City also participates in local and regional rebate programs that support water use efficiency.

At the local level, the City has implemented rebate programs for high-efficiency clothes washers, toilets and smart irrigation controllers to encourage the replacement of older, less efficient fixtures. At the regional level, the City participates in rebate programs coordinated through the WEP. A variety of rebate options were provided, including rebates for toilets, clothes washers, and irrigation systems, and are summarized in Table 9-2. These regional programs, which are partially funded by State and federal grants, have included rebates for toilets, clothes washers, and irrigation-related equipment.

These rebate programs complement the City's primary DMMs by promoting the adoption of water-efficient devices and practices to support long-term reductions in water demand.

Table 9-2. Regional Rebates and Installations from 2021-2025

Rebate/Installation Type	2021	2022	2023	2024	2025	Lifetime Water Savings 2021-2025 (MG)	Lifetime Energy Savings 2021-2025 (kWh)[a]
High Efficiency Clothes Washer Rebates	359	265	307	321	298	75	79,309
High Efficiency Toilet Rebates	767	1,275	602	423	326	138	145,990
Smart Irrigation Controller Rebates	686	1,049	3,051	556	464	1,190	1,264,024
Irrigation Efficiencies Rebates[b]	5,941	7,153	13,327	11,160	10,321	5,269	5,595,912
Turf Replacement Rebates (square feet)	153,880	239,645	135,607	300,152	266,840	406	430,711
Toilet Direct Installation	NA	NA	584	2,183	1,688	142	150,671
Showerhead Direct Installation	NA	NA	562	1,766	1,532	197	209,475
Faucet Aerators Direct Installation	NA	NA	884	3,215	2,343	21	21,850
Urinal Direct Installation	NA	NA	-	19	40	1	1,348
Total Water Savings (MG)	-	-	-	-	-	**7,438**	-
Total Energy Savings (kWh)[b]	-	-	-	-	-	-	**7,899,291**

Source: Regional Demand Management Measures (DMM) RWA Regional Water Efficiency Program (WEP) Activities covered from 2021-2025.

(a) Regional average of 1,062 kWh per MG.

(b) Includes pressure regulator equipment, pipe and pipe fittings, drip or low volume equipment, and sprinkler heads or nozzles.

kWh = kilowatt hour

MG = million gallons

NA = no funding available

Lifetime = 10 years

9.2 CONTINUED IMPLEMENTATION OF DMMS

Water conservation measures are a vital part of the City's overall plan to provide a reliable, high-quality, and cost-effective water supply to its customers. The City plans to continue implementation of its DMMs into the future. The City plans to comply with the Making Conservation a California Way of Life Regulation to meet its Urban Water Use Objectives (UWUOs), and to submit annual water loss audits in compliance with SB 555 water loss performance standards as part of its Water Loss Control Program.

The City has successfully implemented several water conservation measures to educate its water customers and encourage the efficient use of available water supplies. The City plans to continue implementing the DMMs described in this chapter to help achieve its water use targets and researching emerging technologies and conservation strategies that may bolster its existing DMMs.

The City continually monitors and assesses the success of its water conservation programs to determine if additional measures are needed to meet its own water conservation goals and regulatory water use objectives.

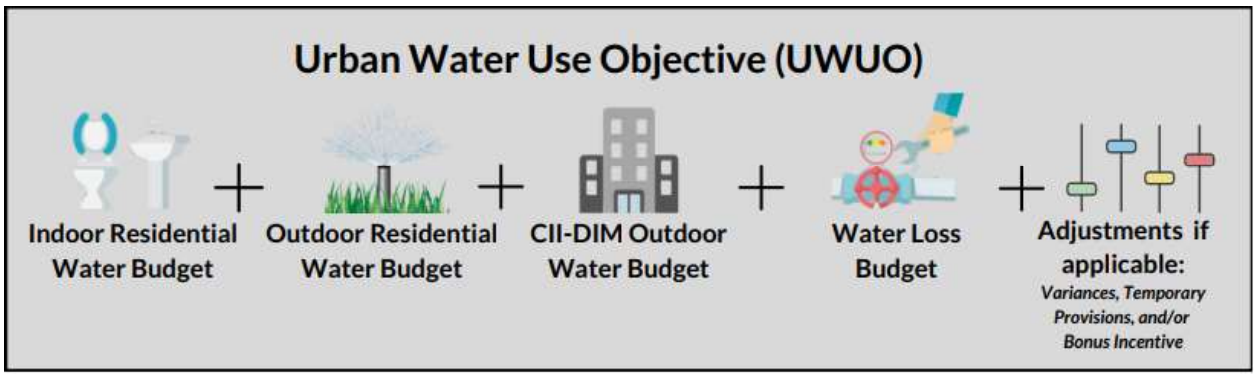
9.2.1 Meeting Urban Water Use Objectives

On July 3, 2024, the State Water Board adopted the Making Conservation a California Way of Life Regulation. This Legislation established a new framework for improvements in long-term urban water use efficiency. This Legislation builds on the statewide 2020 water conservation targets set under SB X7-7 (CWC §10609.2(d)). Under the Legislation, the State Water Board, in coordination with DWR, was required to adopt urban water use efficiency standards, variances, and performance measures by June 30, 2022.

As part of this regulation, Urban Water Suppliers will be held to annual UWUOs. The City is required to calculate its UWUO annually, which is a sum of water efficiency budgets for the following uses:

- Residential indoor water use
- Residential outdoor water use
- Real water loss
- CII landscapes with dedicated irrigation meters (DIMs)

The City's UWUO is calculated using statewide efficiency standards, and considers the City's water service area population, climate, and landscape area. Efficiency standards for the different components will progressively decrease from 2025 to 2040. Variances and adjustments may be allowed for special cases such as seasonal population fluctuation, special landscape areas (sports fields and recreational areas), potable recycled water use, and agricultural uses. Figure 9-1 summarizes the components that make up the UWUO.



Source: California Water Efficiency Partnership. May 2024. Making Conservation a California Way of Life Standards Framework Cut Sheet

Figure 9-1. Urban Water Use Objective Components

In addition to calculating and complying with the UWUO, beginning in 2027, the City will need to classify its CII properties, and begin deploying best management practices (BMPs) for indoor and outdoor CII water use. These CII performance measures are intended to enable water-usage benchmarking per CII classification category, as well as establish BMPs for indoor and outdoor CII water use.

To support implementation of California's "Making Conservation a California Way of Life" framework, particularly the indoor residential component of the UWUO, the City participated in the DWR indoor residential water use study pilot program. This program is intended to improve understanding of indoor residential water use through disaggregated end-use data to inform statewide analyses associated with indoor water use standards. The City was selected as one of a limited number of California water providers to participate, and the program launched in September 2024. Participation in the program was strong, with approximately 100 City customers enrolling, and within a few months of program initiation all available monitoring devices were fully distributed. The results of this study support the City's ongoing UWUO compliance efforts by improving understanding of indoor water use patterns and informing future targeted efficiency and conservation actions.

9.2.2 Annual Water Use Reporting

Starting in 2024, the City is required to calculate its UWUO, compare its actual water use to its UWUO, and provide an Annual Water Use Report to the State by January 1 of each year. Reporting is based on fiscal year data. The City's UWUO will become increasingly stringent from 2025 to 2040. Each year the City will need to recalculate its UWUO and meet the applicable UWUO for the year. If the City anticipates that it would not be able to meet this regulation, the City will need to develop a plan and intensify or implement demand management actions to maintain compliance with the regulation.

The City submitted its Fiscal Year 2024/2025 Annual Water Use Report to the State on December 30, 2025. Based on the most recent reporting cycle, the City has not met its calculated objective for Fiscal Year 2024/2025. To work towards meeting compliance with its UWUO, the City will continue to monitor its potable water distribution system efficiency and implement the DMMs described above. The City will continue to prepare its Annual Water Use Report each year to assess its progress towards achieving its UWUO.

Reporting and compliance to UWUO falls under the authority of the SWRCB and tracked separately from the UWMP. Thus, UWUO compliance projections are not included in this UWMP.

CHAPTER 10
Plan Adoptions, Submittal, and Implementation

This chapter provides information regarding the notification, public hearing, adoption, and submittal of the City's 2025 UWMP and WSCP. It also includes discussion on plan implementation and the process of amending the UWMP and the WSCP.

10.1 INCLUSION OF ALL 2025 DATA

As indicated in Section 2.3 of this plan, the City uses a calendar year for water supply and demand accounting, and therefore this plan includes data through December 2025.

10.2 NOTICE OF PUBLIC HEARING

In accordance with the UWMP Act, the City must provide an opportunity for the public to provide input on this 2025 UWMP, including the WSCP. The City must consider all public input prior to its adoption. There are two audiences to be notified for the public hearing: cities, counties, and neighboring water districts; and the public.

10.2.1 Notices to Cities and Counties

As discussed in Section 2.4, the City provided greater than a 60-day notice regarding the preparation of its 2025 UWMP and WSCP to the County as well as neighboring cities and water agencies as listed below:

- California American Water District
- City of Roseville
- Lincoln-Sewer Maintenance District 1 Wastewater Authority (LiSWA)
- Nevada Irrigation District
- Placer County Public Works
- Placer County Water Agency
- Sacramento Area Council of Governments
- South Sutter Water District
- West Placer Groundwater Sustainability Agency

The notices of preparation are included as Appendix D.

Upon substantial completion of this 2025 UWMP and WSCP, the City coordinated internally and provided the County a notice of public hearing (Appendix D) as shown in Table 10-1.

Table 10-1. Notification to Cities and Counties (DWR Table 10-1 Retail)

City Name[(a)]	60 Day Notice **Drop Down (yes/no)**	Notice of Public Hearing **Drop Down (yes/no)**
Lincoln	Yes	Yes
Roseville	Yes	Yes
County Name **Drop Down List**	**60 Day Notice** **Drop Down (yes/no)**	**Notice of Public Hearing** **Drop Down (yes/no)**
Placer County	Yes	Yes
NOTES: (a) Other agencies the City provided notice to include California American Water District, Nevada Irrigation District, Placer County Water Agency, Sacramento Area Council of Governments, and South Sutter Water District.		

10.2.2 Notice to the Public

To allow ample time for the public to prepare comments, the City issued a notice of availability and public hearing to the public and provided a public review period following the notice and prior to adoption of the 2025 UWMP and WSCP. A notice of availability and public hearing was issued in accordance with Government Code Section 6066 and was published twice in the Lincoln News Messenger newspaper to notify all customers and local governments of the public hearing. In addition, the notice was posted on the City's website, https://www.lincolnca.gov/. A copy of the published Notice of Public Hearing is included in Appendix D.

10.3 PUBLIC HEARING AND ADOPTION

The City encouraged community participation in the development of this 2025 UWMP, including the WSCP, using public notices, electronic newsletters, and web-based communication. The notice included the time and place of the public hearing, as well as the location where the plan is available for public inspection.

10.3.1 Public Hearing

A public hearing was held on May 26, 2026.

The public hearing provided an opportunity for City water users and the general public to become familiar with the 2025 UWMP and the associated WSCP and ask questions about the City's water supply, its continuing plans for providing a reliable, safe, high-quality water supply, and plans to mitigate various potential water shortage conditions. Copies of the draft UWMP and WSCP were made available for public inspection on the City website.

10.3.2 Adoption

Subsequent to the public hearing, this 2025 UWMP and WSCP were adopted by the City Council on May 26, 2026. Copies of the adopted resolutions are included in Appendix H.

10.4 PLAN SUBMITTAL

The adopted 2025 UWMP was submitted electronically. This 2025 UWMP will be submitted to DWR within 30 days of adoption and by July 1, 2026. The adopted 2025 UWMP will be submitted electronically to DWR using the Water Use Efficiency (WUE) data submittal tool. A compact disc (CD) of the adopted 2025 UWMP was also submitted to the California State Library.

No later than 30 days after adoption, a copy of the adopted 2025 UWMP, including the WSCP, was provided to the cities and counties to which the City provides water.

10.5 PUBLIC AVAILABILITY

No later than 30 days after submittal to DWR, copies of this plan, including the WSCP, were made available at City Hall, City Clerk's Office 600 Sixth Street and Twelve Bridges Library, for public review during normal business hours. An electronic copy of this 2025 UWMP and WSCP was also made available for review and download on the City's website: https://www.lincolnca.gov/.

10.6 PLAN IMPLEMENTATION

This 2025 UWMP will be the source document for any SB 610 Water Supply Assessments or SB 221 Water Supply Verifications required for any proposed projects between 2026 and 2030 that are subject to the California Environmental Quality Act and would demand an amount of water equivalent or greater than the amount of water required by a 500-dwelling-unit project. Also, this 2025 UWMP will provide guidance and direction on development of new local supplies and implementation of water conservation programs.

10.7 AMENDING AN ADOPTED UWMP OR WSCP

The City may amend its 2025 UWMP and WSCP jointly or separately. If the City amends one or both documents, the City will follow the notification, public hearing, adoption, and submittal process described in Sections 10.2 through 10.4 above. In addition to submitting amendments to DWR through the WUE data portal, copies of amendments or changes to the plans will be submitted to the California State Library, and any city or county within which the supplier provides water supplies within 30 days after adoption.