

May 2021

2020 Urban Water Management Plan for Linda County Water District

Public Draft





2882 Prospect Park Drive, Suite 240
Rancho Cordova, CA 95670
916-858-2700

Public Draft

**2020 Urban Water
Management Plan**

14 May 2021

Prepared for

Linda County Water District
1280 Scales Avenue
Marysville, CA 95901

KJ Project No. 1770003*14

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Abbreviations

AF	acre-feet
AFY	acre-feet per year
Act	Urban Water Management Planning Act
ADWF	average dry weather flow
AMR	automatic meter reading
AWWA	American Water Works Association
CCF	hundred cubic feet
CDP	Census Designated Place
CEQA	California Environmental Quality Act
CII	commercial, industrial, and institutional
CIMIS	California Irrigation Management Information System
COG	Council of Governments
Council or CUWCC	California Urban Water Conservation Council
DDW	State Water Resources Control Board, Division of Drinking Water
District, LCWD	Linda County Water District
DMM	Demand Management Measure
DWR	Department of Water Resources (California)
DWR Guidebook	DWR Guidebook for Urban Water Suppliers
ERP	emergency response plan
ETo	evapotranspiration
GIS	Geographic Information System
GPCD	gallons per capita day
GPD	gallons per day
GMP	Groundwater Management Plan

GSP	Groundwater Sustainability Plan
GPM	U.S. gallons per minute
HCD	Housing and Community Development
HECW	high efficiency clothes washer
HET	high efficiency toilet
ILI	infrastructure leakage index
IRWMP	Yuba County Integrated Regional Water Management Plan
LCWD, District	Linda County Water District
MCL	maximum contaminant level
MF	multi-family
mg/L	milligrams per liter
MGD	million gallons per day
MOU	Memorandum of Understanding (Regarding Urban Water Conservation in California)
N/A	not available, not applicable
NAICS	North American Industry Classification System
NPDES	National Pollutant Discharge Elimination System
O&M	operation and maintenance
RHNA	Regional Housing Needs Allocation
SACOG	Sacramento Area Council of Governments
SBX7-7	Senate Bill X7-7, The Water Conservation Act of 2009
SDWA	Safe Drinking Water Act
SF	single-family
SGMA	Sustainable Groundwater Management Act
SMCL	secondary maximum contaminant level
SYGB	South Yuba Groundwater Basin
ULFT	ultra-low-flush-toilet

USBR	U.S. Bureau of Reclamation
USEPA	U.S. Environmental Protection Agency
UWMP	Urban Water Management Plan
VOC	volatile organic compound
WRCC	Western Regional Climate Center
WSS	WaterSense Specification
WWTP	Wastewater Treatment Plant
WY	water year
YWA	Yuba Water Agency

Definitions

Chapter 2, Part 2.6, Division 6 of the California Water Code provides definitions for the preparation of the Urban Water Management Plans.

CHAPTER 2. DEFINITIONS

CWC 10611.

Unless the context otherwise requires, the definitions of this chapter govern the construction of this part.

CWC 10611.3.

“Customer” means a purchaser of water from a water supplier who uses the water for municipal purposes, including residential, commercial, governmental, and industrial uses.

CWC 10611.5.

“Demand management” means those water conservation measures, programs, and incentives that prevent the waste of water and promote the reasonable and efficient use and reuse of available supplies.

CWC 10612.

“Drought risk assessment” means a method that examines water shortage risks based on the driest five-year historic sequence for the agency’s water supply, as described in subdivision (b) of Section 10635.

CWC 10613.

“Efficient use” means those management measures that result in the most effective use of water so as to prevent its waste or unreasonable use or unreasonable method of use.

CWC 10614.

“Person” means any individual, firm, association, organization, partnership, business, trust, corporation, company, public agency, or any agency of such an entity.

CWC 10615.

“Plan” means an urban water management plan prepared pursuant to this part. A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, and reclamation and demand management activities. The components of the plan may vary according to an individual community or area’s characteristics and its capabilities to efficiently use and conserve water. The plan shall address measures for residential, commercial, governmental, and industrial water demand management as set forth in Article 2 (commencing with Section 10630) of Chapter 3. In addition, a strategy and time schedule for implementation shall be included in the plan.

CWC 10616.

“Public agency” means any board, commission, county, city and county, city, regional agency, district, or other public entity.

CWC 10616.5.

“Recycled water” means the reclamation and reuse of wastewater for beneficial use.

CWC 10617.

“Urban water supplier” means 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. An urban water supplier includes a supplier or contractor for water, regardless of the basis of right, which distributes or sells for ultimate resale to customers. This part applies only to water supplied from

public water systems subject to Chapter 4 (commencing with Section 116275) of Part 12 of Division 104 of the Health and Safety Code.

CWC 10617.5.

“Water shortage contingency plan” means a document that incorporates the provisions detailed in subdivision (a) of Section 10632 and is subsequently adopted by an urban water supplier pursuant to this article.

CWC 10618.

“Water supply and demand assessment” means a method that looks at current year and one or more dry year supplies and demands for determining water shortage risks, as described in Section 10632.1.

Executive Summary

Linda County Water District (LCWD, District) provides water and wastewater services to the community of Linda in Yuba County. The mission of LCWD is to provide reliable, safe, clean water to their community, as well as to protect the health of our community and the environment, while maintaining a standard of excellence in customer service and environmental conservation.

The District's 2020 Urban Water Management Plan (UWMP) has been prepared in compliance with Sections 10610 through 10656 of the Urban Water Management Planning Act (Act), which were added by Statute 1983, Chapter 1009, and became effective on January 1, 1984. The Act, as amended, requires development of an UWMP every 5 years. The UWMP is intended to serve as a general, flexible, and open-ended document that periodically can be updated to reflect changes in the regional water supply trends, and conservation and water use efficiency policies. The District's 2020 UWMP revises the 2015 UWMP, and incorporates changes enacted by legislation since that time.

Coordination

This UWMP was prepared in consultation with California Water Service, Olivehurst Public Utility District, Sutter County Development Services, Yuba County Planning, and Yuba Water Agency. The 2020 UWMP was made available from the District's website and at the District's office for public inspection prior to the public hearing, so that comments could be received and discussed by the District's Board of Directors prior to the UWMP adoption. UWMP adoption took place on XX, 2021 at the regular meeting of the Board of Directors.

Water Demands

The UWMP evaluates many of the factors influencing water demands, including population, land use, social and demographic factors, climate, and water customer type. Chapters 4 and 7 of this UWMP provides projections of water demands from 2025 to 2045 assuming a normal/average water year, a single-dry year and a multiple-dry period lasting five years.

Chapter 5 evaluates long term trends in water use in the LCWD service area, including water use in gallons per capita per day. The evaluation found a decreasing trend in gallons per capita per day with a slight increase in 2020, coinciding with the COVID-19 pandemic, and determined that the District is in compliance with the Water Conservation Bill of 2009 which targeted a decrease in municipal water use of 20% by year 2020.

Water Resources

This UWMP evaluates the groundwater supply available to the District over the period 2025 to 2045. Chapter 6 specifically looks at the availability of the source, potential limitations on the source (water quality, hydrology, climate) and evaluates future water supplies in an average year, single-dry year, and a multiple-dry period lasting five years. Chapter 6 also provides specifics on the District's wastewater system and barriers to developing recycled water for beneficial use.

Water Service Reliability

The UWMP, in Chapter 7, evaluates the ability to meet water demands with anticipated supplies in a normal/average, single-dry, and multiple-dry years. As documented in Chapter 7, with

planned supplies, the District has adequate supplies to meet demands during an average year, single-dry year, and multiple dry years.

Demand Management

Chapter 9 of the UWMP provides a summary of the various demand management measures that LCWD has undertaken, and plans to undertake, to insure efficient water use.

Contingency Planning

LCWD has prepared a separate Water Shortage Contingency Plan. This plan is provided in Appendix J. The Water Shortage Contingency Plan reviews the actions the District will take to monitor supplies and demands, evaluate the potential for a shortage, and then the actions that will be taken to augment supply and/or decrease demand.

Fundamental Findings of this UWMP

The analysis in this Plan documents that in a normal year, single-dry year, and multiple-dry year LCWD has adequate supplies for customers.

Chapter 1: Introduction

CWC 10630.5.

Each plan shall include a simple lay description of how much water the agency has on a reliable basis, how much it needs for the foreseeable future, what the agency's strategy is for meeting its water needs, the challenges facing the agency, and any other information necessary to provide a general understanding of the agency's plan.

1.1 Overview

This document presents the Urban Water Management Plan (UWMP or Plan) 2020 for the Linda County Water District (LCWD, District) service area, which is located south and east of the confluence of the Feather River and the Yuba River in Yuba County. Figure 1-1 shows the location of the District. This chapter describes the general purpose of the UWMP. A list of acronyms and abbreviations is provided at the end of the table of contents.

1.2 Purpose

An UWMP is a planning tool that generally guides the actions of water management agencies. It provides managers and the public with a broad perspective on a number of water supply issues. It is not a substitute for project-specific planning documents, nor was it intended to be when mandated by the State Legislature. For example, the Legislature mandated that a plan includes a section which “describes the opportunities for exchanges or water transfers on a short-term or long-term basis.” (California Urban Water Management Planning Act, Article 2, Section 10630(d).) The identification of such opportunities, and the inclusion of those opportunities in a general water service reliability analysis, neither commits a water management agency to pursue a particular water exchange/transfer opportunity, nor precludes a water management agency from exploring exchange/transfer opportunities not identified in the plan. When specific projects are chosen to be implemented, detailed project plans are developed, environmental analysis, if required, is prepared, and financial and operational plans are detailed.

In short, this Plan is a management tool, providing a framework for action, but not functioning as a detailed project development or action. It is important that this Plan be viewed as a long-term, general planning document, rather than as an exact blueprint for supply and demand management. Water management in California is not a matter of certainty, and planning projections may change in response to a number of factors. From this perspective, it is appropriate to look at the Plan as a general planning framework, not a specific action plan. It is an effort to generally answer a series of planning questions including:

- What are the potential sources of supply and what is the reasonable probable yield from them?
- What is the probable demand, given a reasonable set of assumptions about growth and implementation of good water management practices?
- How well do supply and demand figures match up, assuming that the various probable supplies will be pursued by the implementing agency?

Using these “framework” questions and resulting answers, the implementing agency will pursue feasible and cost-effective options and opportunities to meet demands.

The California Urban Water Management Planning Act (Act) became part of the California Water Code with the passage of Assembly Bill 797 during the 1983-1984 regular session of the California Legislature. The Act requires that every urban water supplier providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet (AF) of water annually to prepare a plan that:

- Accomplishes water supply planning over a 20-year period in 5 year increments (LCWD is going beyond the requirements of the Act by developing a plan which spans 25 years.)
- Identifies and quantifies adequate water supplies, including recycled water, for existing and future demands, in normal, single-dry, and multiple-dry years.
- Implements conservation and efficient use of urban water supplies.

State legislation, Senate Bill 7 of Special Extended Session 7 (SBX7-7) was signed into law in November 2009, which calls for progress towards a 20 percent reduction in per capita water use statewide by 2020. The legislation, known as 20x2020 mandated each urban retail supplier develop and report an interim 2015 water use target, their baseline daily per capita use and 2020 compliance daily per capita use, along with the basis for determining those estimates. This UWMP reports on STPUD’s final progress in meeting the SBX7-7 targets in Section 5.

In short, the Plan answers the question: *Will there be enough water for the area served by STPUD in future years, and what mix of programs should be explored for making this water available?*

The analysis in this Plan documents that LCWD has the necessary projected water supplies to meet normal and dry-year demands.

The primary requirements for the UWMP include:

- A description of the water service area.
- A description of the existing and planned supply sources.
- Estimates of past, present, and projected water use.
- SBX7-7 (20x2020) analysis and target compliance.
- An assessment of water supply reliability.
- A description of the conservation program and demand management measures.
- A description of plan adoption, submittal, and implementation.

This UWMP will serve as a source of information for potential water supply assessments and written verification of water supply. This UWMP also serves as:

- A long-range planning document for water supply,
- Source data for development of a regional water plan,
- A component in Integrated Regional Water Management planning, and
- An informational source for cities and counties as they prepare their General Plans, including Olivehurst, Marysville, Yuba Water Agency and Yuba County.

The 2020 UWMP must submit data in specific tables to the DWR, which has provided these tables, and this UWMP utilizes the provided tables without changes to format or organization. The LCWD 2020 UWMP presents each required element per the DWR 2020 Urban Water Management Plan Guidelines.

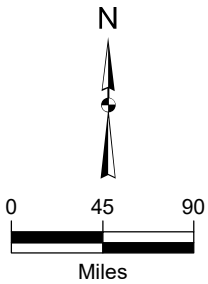
This UWMP is organized to follow the DWR 2020 UWMP Guidelines recommended organization and data tables.

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Legend

 Linda County Water District



Kennedy/Jenks Consultants
Linda County Water District
2020 Urban Water Management Plan

**Linda County Water District
Location Map**

K/J 1770003*14
May 2021

Figure 1-1

1.3 Urban Water Management Planning and the California Water Code

1.3.1 Urban Water Management Planning Act of 1983

The Act became part of the California Water Code (CWC) with the passage of Assembly Bill 797 during the 1983–1984 regular session of the California legislature. Subsequently, assembly bills between 1990 and 2014 amended the Act to include additional data and reporting requirements. The Act describes the contents of the UWMP as well as how urban water suppliers should adopt and implement the UWMP and was updated most recently by SB 1420 and AB 2067.

This UWMP addresses all subjects required by Section 10631 of the Act, which permits “levels of water management planning commensurate with the numbers of customers served and the volume of water supplied.” All applicable sections of the Act are discussed in this UWMP, with chapters of the UWMP and DWR Guidebook Checklist cross-referenced against the corresponding provision of the Act. Additionally, a completed copy of the 2020 UWMP Checklist organized by subject is included as Appendix A.

1.3.2 Applicable Changes to the Water Code Since 2015 UWMPs

Since 2015, legislative bills [(Assembly Bill 1668 and Senate Bill 606 in May 2018 (Making Conservation and California Way of Life); Assembly Bill 1739, Senate Bill 1168, and Senate Bill 1319 in 2018 (Sustainable Groundwater Management Act); and Senate Bill 664 in 2016 (Seismic Risk Assessment)] have made changes to the Water Code affecting requirements and guidance for UWMP development. A summary list of the changes is provided below:

- Mandatory Reporting of Energy Intensity, CWC Section 10631.2(a) and (b)
- Report compliance with SBx7-7 2020 Target
- Report compliance with Water Loss Standard, CWC Section 10608.34 and 10608.35(a)
- Conduct a Drought Risk Assessment over a five-year duration (previously a three-year duration), CWC Section 10635(b)
- Prepare and adopt a Water Shortage Contingency Plan as part of the Urban Water Management Plan, CWC Section 10632(a)
- Conduct an Annual Water Supply and Demand Assessment on or before July 1 of each year starting in 2022, CWC 10632(a)(2)
- Conduct a Water System Seismic Risk Assessment and Mitigation Plan, CWC Section 10632.5(a)
- Consistency with Groundwater Sustainability Plan for basins underlying the urban water supplier’s service area, CWC Section 10631(4)(A)

1.3.3 Water Conservation Act of 2009 (SBX7-7)

Senate Bill No. 7 (SBX7-7), which became law in November 2009, requires increased emphasis on water demand management and requires the state to achieve a 20 percent reduction in urban per capita water use by December 31, 2020. Retail urban water suppliers are required to report their Baseline Daily Per Capita Water Use (Baseline GPCD), 2020 Urban Water Use Target, Compliance Daily per Capita Water Use, and the SBX7-7 verification form. The Baseline GPCD, Targets, and methodologies are presented in Chapter 5.

1.4 Urban Water Management Plans in Relation to Other Planning Efforts

LCWD uses the UWMP as a source for water use and supply planning in conjunction with their water system master planning and capital improvement program. In addition, the UWMP supports communication with neighboring stakeholders and the development of projects and water supply determinations.

1.5 UWMP Organization

Pursuant to the Act, the District previously prepared an UWMP in 2010 and 2015, which were received by the California Department of Water Resources (DWR) on August 4, 2011 and January 27, 2017. The 2020 UWMP serves as an update to the 2015 UWMP and draws extensively from that report; however, this plan has been restructured in response to legislative changes discussed above and new requirements presented in the 2020 UWMP Guidebook for Urban Water Suppliers (Guidebook) developed by DWR (DWR 2021).

LCWD has organized its 2020 UWMP following DWR's recommended outline from the 2020 UWMP Guidebook. LCWD has also elected to present data in this UWMP using the required DWR Tables as presented in the Guidebook. Additional tables are used to provide further clarification.

1.6 UWMPs and Grant or Loan Eligibility

Since 2016, urban retail water suppliers must comply with water conservation requirements in the Water Conservation Act of 2009 (SBX7-7) in order to be eligible for State of California water grants and loans. Retail water suppliers can meet these requirements through:

1. Meeting its 2015 Interim Urban Water Use Target and reporting compliance in the 2020 UWMP, or
2. Submitting documentation qualifying its entire service area as a disadvantaged community.

If the supplier has not met the per capita reductions required, the urban retail water supplier can be eligible for a water grant or loan by submitting a schedule, financing plan, and budget to DWR for achieving the per capita reductions. The supplier may request grant or loan funds to achieve the per capita reductions to the extent the request is consistent with the eligibility requirements applicable to the water funds.

Chapter 2: Plan Preparation

2.1 Basis for Preparing a Plan

CWC 10617

“Urban water supplier” means 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. An urban water supplier includes a supplier or contractor for water, regardless of the basis of right, which distributes or sells for ultimate resale to customers. This part applies only to water supplied from public water systems...

CWC 10620

- (b) Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.*

CWC 10621

- (a) Each urban water supplier shall update its plan at least once every five years on or before July 1, in years ending in six and one, incorporating updated and new information from the five years preceding each update.*

In accordance with the CWC, urban water suppliers with 3,000 or more service connections or supplying 3,000 or more AFY are required to prepare an UWMP every 5 years. LCWD directly supplies more than 3,000 AFY to its retail customers and manages more than 3,000 service connections, meeting the threshold for UWMP preparation as a retail supplier.

LCWD prepared this UWMP with the assistance of its consultant, Kennedy/Jenks Consultants, as permitted by the following section of the Act.

CWC 10620

- (e) The urban water supplier may prepare the plan with its own staff, by contract, or in cooperation with other governmental agencies.*

2.1.1 Public Water Systems

CWC 10608.52

- (a) The department, in consultation with the board, the California Bay-Delta Authority or its successor agency, the State Department of Public Health, and the Public Utilities Commission, shall develop a single standardized water use reporting form to meet the water use information needs of each agency, including the needs of urban water suppliers that elect to determine and report progress toward achieving targets on a regional basis as provided in subdivision (a) of Section 10608.28.
- (b) At a minimum, the form shall be developed to accommodate information sufficient to assess an urban water supplier's compliance with conservation targets pursuant to Section 10608.24... The form shall accommodate reporting by urban water suppliers on an individual or regional basis as provided in subdivision (a) of Section 10608.28.

California Health and Safety Code 116275

- h) "Public Water System" means a system for the provision of water for human consumption through pipes or other constructed conveyances that has 15 or more service connections or regularly serves at least 25 individuals daily at least 60 days out of the year.

LCWD was formed in 1955 to provide treated potable water and fire protection for the health and safety of the unincorporated community of Linda. In 1960, the District expanded its services to include wastewater collection, treatment, and disposal. The District's general role in water planning is in the capacity as a water purveyor and wastewater treatment agency.

LCWD is a California Special District formed under Section 61000 et seq., Title 6, Division 3 of the California Government Code Water Code, Section 3000. The District meets the definition of a Public Water System and provides water services for approximately 20,000 people through almost 5,052 service connections (see Table 2-1).

Public Water System Number	Public Water System Name	Number of Municipal Connections 2020	Volume of Water Supplied 2020
5810002	Linda County Water District	5,052	3,186
TOTAL		5,052	3,186
NOTES:			
1. Volume is in units of AF.			
2. Volume of water supplied is for potable water only. Neither raw nor recycled water is used within the District.			
3. Table format based on DWR Guidebook Table 2-1 Retail Only.			

2.2 Regional Planning

LCWD regularly coordinates with other agencies, cities, and counties as part of its regular business operations and planning efforts. The District is a participating agency of the Yuba County Regional Water Management Group and a stakeholder and adoptee of the 2008 Yuba County Integrated Regional Water Management Plan (IRWMP). The IRWMP was updated in 2018 and can be found at:

http://yubairwmp.org/wp-content/uploads/2019/08/Yuba-IRWMP_Collated-Chapters_2018-Update.pdf

2.3 Individual or Regional Planning and Compliance

Water suppliers can choose to develop an individual UWMP or work together with an IRWMP group, wholesaler, or other retailers to develop a Regional UWMP or Regional Alliance. LCWD has elected to develop an individual UWMP for its system as shown in Table 2-2.

Table 2-2: Plan Identification	
<input checked="" type="checkbox"/>	Individual UWMP
<input type="checkbox"/>	Regional UWMP (RUWMP)
NOTES:	

2.4 Fiscal or Calendar Year and Units of Measure

CWC 10608.20

(a)(1) Urban retail water suppliers...may determine the targets on a fiscal year or calendar year basis.

LCWD reports on a calendar year basis and has included water use and planning data for the entire calendar year of 2020. Water volumes are reported in acre-feet (AF) throughout this UWMP. Table 2-3 summarizes the selected reporting method and unit of measure below.

Table 2-3: Supplier Identification	
Type of Supplier (select one or both)	
<input type="checkbox"/>	Supplier is a wholesaler
<input checked="" type="checkbox"/>	Supplier is a retailer
Fiscal or Calendar Year (select one)	
<input checked="" type="checkbox"/>	UWMP Tables Are in Calendar Years
<input type="checkbox"/>	UWMP Tables Are in Fiscal Years
Units of Measure Used in UWMP (select one)	
<input checked="" type="checkbox"/>	Acre Feet (AF)
<input type="checkbox"/>	Million Gallons (MG)
<input type="checkbox"/>	Hundred Cubic Feet (CCF)
NOTES:	

2.5 Coordination and Outreach

The 2020 UWMP requirements for agency coordination include specific timetables and requirements as presented in this chapter. During the preparation of the UWMP, documents that have been prepared over the past several years by LCWD and other entities were reviewed and information from those documents incorporated, as applicable, into this UWMP. The list of references is provided at the end of this document.

2.5.1 Wholesale and Retail Coordination

CWC 10631

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

Retail agencies are required to provide their wholesaler(s) with their projected water demand. LCWD relies on District-owned groundwater wells and does not receive wholesale water. Therefore, Table 2-4 was left blank.

Table 2-4: Water Supplier Information Exchange
The retail supplier has informed the following wholesale supplier(s) of projected water use in accordance with CWC 10631.
Wholesale Water Supplier Name
NOTE: 1. Not Applicable – No Wholesale Supplier.

2.5.2 Coordination with Other Agencies and the Community

CWC 10620

(d)(3) Each urban water supplier shall coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.

CWC 10642

Each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan.

Table 2-5 lists the agencies with which coordination occurred while preparing this 2020 UWMP. The initial coordination began in April 2021, which included the distribution of letter notifications

and requests for information. Each notification letter was followed up with e-mails or telephone calls as necessary to obtain supporting data and coordinate preparation of the UWMP. Table 2-5 also provides a list of agencies that were provided public hearing notifications and access to the draft UWMP that is discussed in further detail in Chapter 10 and included in Appendix B.

Table 2-5: Coordination with Agencies						
Agency	Contacted for Assistance	Participated in UWMP Development	Commented on the Draft	Attended Public Meetings	Received Copy of the Draft	Sent Notice of Intent to Adopt
Yuba County	✓				✓	✓
Yuba Water Agency	✓	✓			✓	
Sutter County	✓					
Public					✓	✓

2.5.3 Notice to Cities and Counties

CWC 10621

(b) Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days before the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan.

Notifications of preparation of the plan were provided to cities and counties within which LCWD provides water at least 60 days in advance of the public hearing as required by the Act (see Appendix B). Copies of the draft plan were available for review at LCWD’s office and posted on LCWD’s website prior to the public hearing. Additional information and documentation regarding notification and the Plan adoption process is presented in Chapter 10.

Chapter 3: System Description

This chapter summarizes LCWD's service area and presents an analysis of available demographics, population growth projections, and climate data to provide the basis for estimating future water requirements.

3.1 General Description

CWC 10631

(a) Describe the service area of the supplier. Describe the land uses within the service area.

LCWD lies within the unincorporated town of Linda and surrounding vicinities in Yuba County and is the sole water supplier for the greater Linda community. Communities surrounding LCWD include the City of Marysville, the City of Wheatland, unincorporated Yuba County, and Beale Air Force Base (Beale AFB).

The valley floor portion of Yuba County is bordered by watercourses on three sides and bisected by the Yuba River. Within the County boundary, water purveyors currently utilize both surface water and groundwater to meet demand.

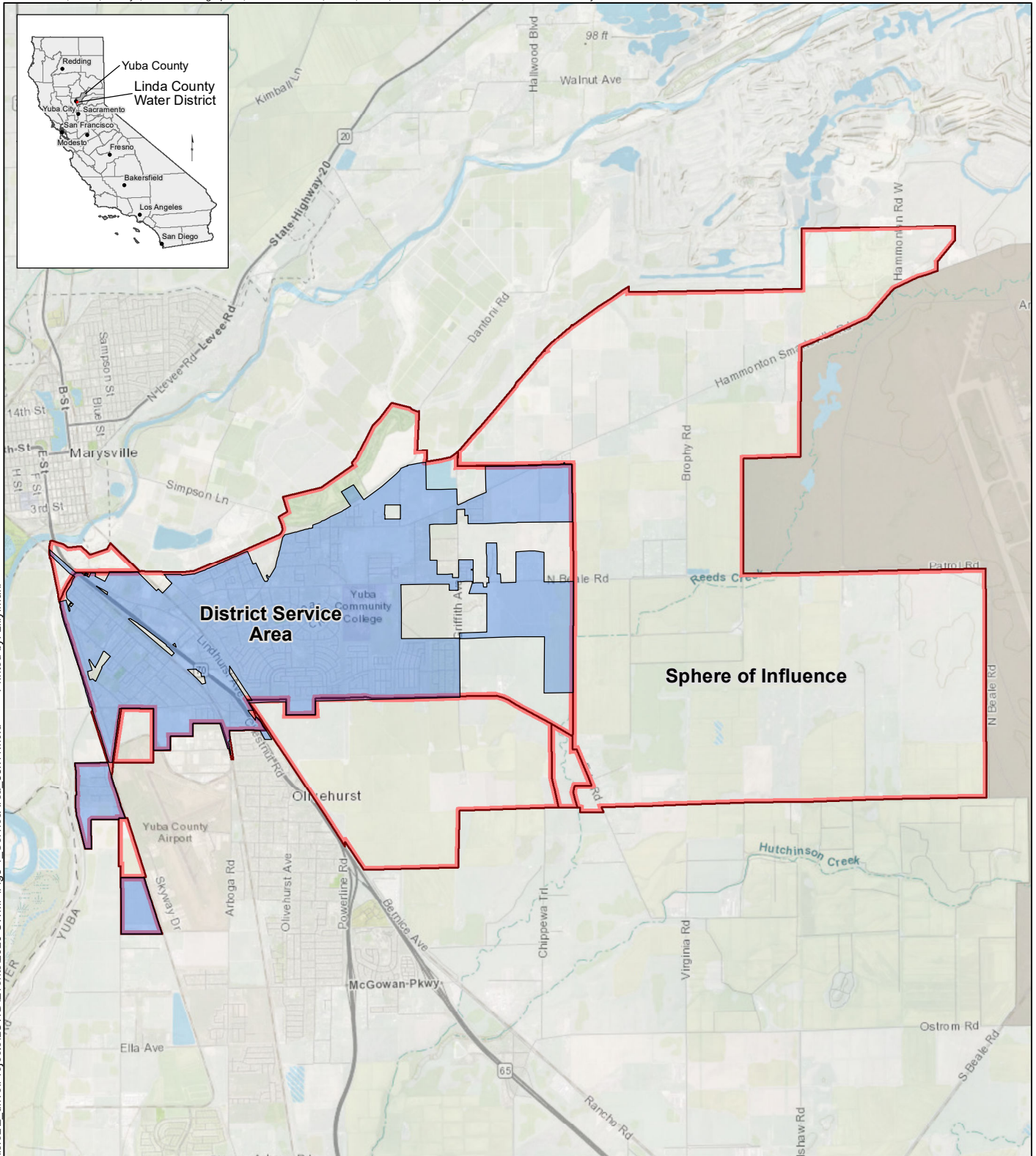
The economy of the region is largely driven by agriculture and agricultural-related activities, and Beale AFB. Urban communities within the region are generally small and include the communities of Yuba County, Marysville, Linda, Olivehurst, and Wheatland.

The service area shown in Figure 3-1 is bordered by Simpson-Dantoni Road to the North, the Feather River to the West, Earle Road to the South, and Beale Air Force Base to the East.



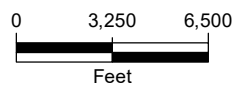
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Legend

- Linda County Water District
- Sphere of Influence Boundary



Kennedy/Jenks Consultants

Linda County Water District
2020 Urban Water Management Plan

**Linda County Water District
Service Area Map**

1770003.14
May 2021

Figure 3-1

3.2 Service Area Climate

CWC 10631

(a) Describe the service area of the supplier, including... climate...

In the winter, the lowest average monthly temperature is approximately 38 degrees Fahrenheit. The highest average monthly temperature reaches approximately 96 degrees Fahrenheit in the summer. The rainy season is typically from November to April. Monthly precipitation during the winter months ranges from 2 to 4 inches. Low humidity occurs in the summer months from May to September. Figure 3-2 presents the monthly average precipitation, ETo, maximum temperature, and minimum temperature.

Climate in Linda is typically mild. It does not snow in the winter, summers are usually mildly hot, and there is very little rain from May to October. LCWD is located near Marysville, CA, for which the Western Regional Climate Center (WRCC) has maintained 30 years of historic climate data, which was used for the climate data analysis.

Similar to the WRCC, the California Irrigation Management Information System (CIMIS) website (<http://www.cimis.water.ca.gov>) tracks and maintains records of evapotranspiration (ETo) for select locations only. ETo statistics used for this system come from the Browns Valley station, which is 15 miles from LCWD. ETo is a standard measurement of environmental parameters that affect the water use of plants. ETo is given in inches per day, month, or year and is an estimate of the ETo from a large field of well-watered, cool-season grass that is 4- to 7-inches tall. The monthly average ETo is presented in inches in Figure 3-2. As Figure 3-2 indicates, a greater quantity of water is evaporated from April through October in correlation to high temperatures and low humidity, which will result in high water demands.

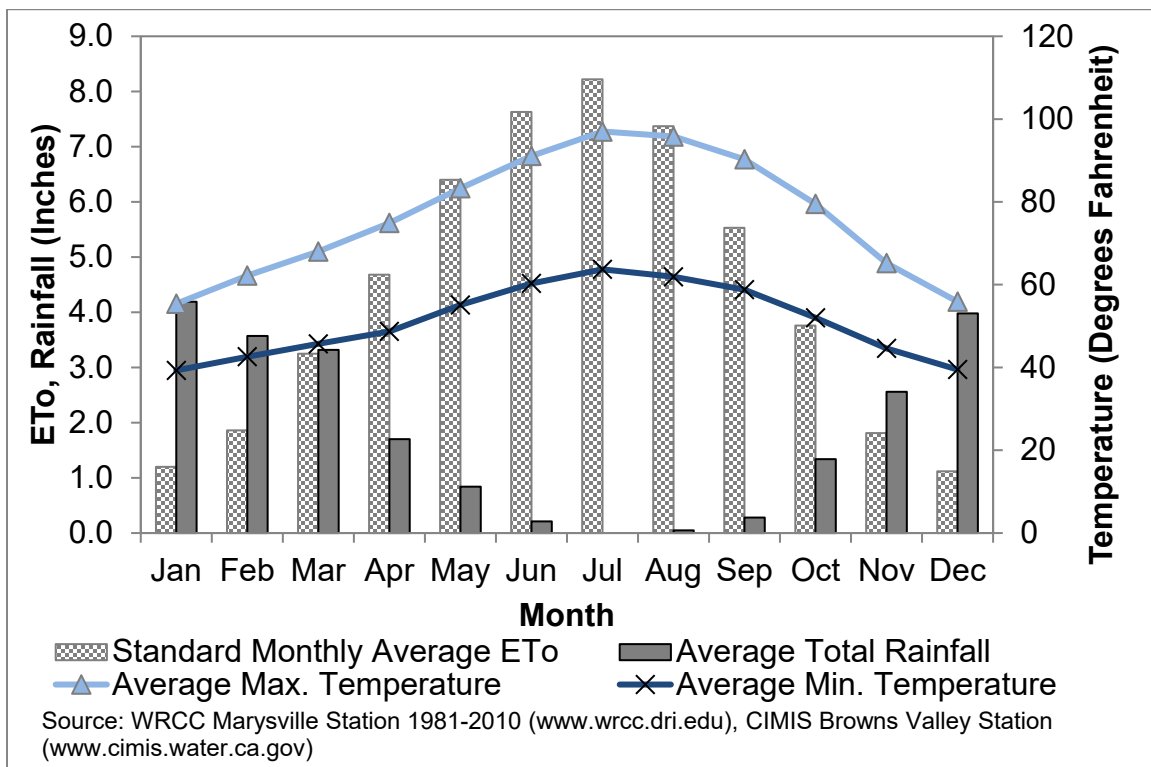


Figure 3-2: Monthly Average Climate in Linda System Based on 20-Year Historical Data

3.3 Service Area Population and Demographics

CWC 10631

(a) Provide population projections for 2025, 2030, 2035, 2040 and optionally 2045.

In 2020 the estimated population of the District service area was 20,943, according to the DWR Population Tool and methodology described in Chapter 5. The following sections discuss population and other demographics that influence water use.

3.3.1 SACOG Population Projection Development Methodology

Sacramento Area Council of Governments (SACOG) population, housing, and employment data and 2036 forecasts are derived from 2012 actual data, the 2010 U.S. Census Bureau, California State Department of Finance (DOF), Demographic Research Unit (DRU) Info USA employment data, regional growth targets data from the Center for Continuing Study of the California Economy (CCSCE), and the General Plan from the Sacramento Region Blueprint Project. A detailed explanation of the population, household and employment projection process employed by SACOG can be found in the document: "Projections of Employment, Population, Households, and Household Income in the SACOG Region for 2000-2050".

In 2016, SACOG released updated regional projections for a 2036 planning horizon, adopting the regional 2035 totals for employment, population, and housing. This approach was based on the assumption that long-term growth trends for the region have not changed since the 2012 projections for 2035, despite the short-term impacts of the recession. Further details can be found in the *2016 Metropolitan Transportation Plan/Sustainable Communities Strategy, Appendix D-1: Regional Projections*.

3.3.2 Historical and Projected Population

CWC 10631

(a) Indicate the current population of the service area.

The population of the area served by LCWD is the defined service area population for this UWMP. Population projections were developed for LCWD using SACOG and 2010 U.S. Census Bureau data.

U.S. Census Bureau data was used to estimate the population within the LCWD service area in 2020 according to the DWR Population Tool and methodology described in Chapter 5. SACOG data was then used to project the population through 2045. According to SACOG projections, the annual growth rate from 2012 to 2036 for the LCWD service area (Linda Census Designated Place) is approximately 1.7 percent. This growth rate was applied to project the number of water connections through 2045. The District's first year with reliable connection data is 2003. An average persons-per-connection ratio was determined using 2003 and 2010 data. This persons-per-connection number was then applied consistently to the projected connections to calculate the projected population through 2045. Table 3-1 presents the current and projected population for the District.

Table 3-1: Population – Current and Projected						
Population Served	2020	2025	2030	2035	2040	2045(opt)
	20,943	22,837	24,903	27,630	29,612	32,290
NOTE: 1. Population from DWR 2020 Population Tool. Inputs: combined single family (SF) and multi-family (MF) connections without the sphere of influence (SOI)						

3.3.3 Other Demographic Factors

CWC 10631

(a) Describe the service area of the supplier, including...other social, economic, and demographic factors affecting the supplier's water management planning.

LCWD's housing density has historically been considered low with four or less houses per acre. Recent developments have been constructed with approximately six houses per acre. This will increase the water for indoor usage, while decreasing the water demand for irrigation on a per acre basis.

Since Linda is an unincorporated area, it is identified as a U.S. Census Bureau designated place (CDP). LCWD's service area was evaluated to determine its status as a disadvantaged community shown in Table 3-2.

Table 3-2: Disadvantaged Community Summary		
Area	Median Household Income in 2018 Dollars	Percent of Statewide Annual Median Household Income
Linda CDP, California	39,886	56.0
State of California	71,228	100
SOURCE: U.S. Census Bureau and DAC Mapping Tool		

Based on U.S. Census Bureau data for 2018, LCWD is considered a disadvantaged community as defined by the California Water Code and a severely disadvantaged community as defined by the California Department of Health. As a disadvantaged community, LCWD is able to apply for additional grants and loans, even if the District had not met their SBX7-7 water use target (see Chapter 5).

Chapter 4: System Water Use

4.1 Recycled versus Potable and Raw Water Demand

This 2020 UWMP reports recycled, potable (drinking), and raw water demands separately. Neither raw water nor recycled water is used within the District's service area. Therefore, water demands reported in this chapter are for drinking water only.

4.2 Water Uses by Sector

CWC 10631

- (a) ...The description shall include the current and projected land uses within the existing or anticipated service area affecting the supplier's water management planning...
- (d) (1) For an urban retail water supplier, quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, based upon information developed pursuant to subdivision (a), identifying the uses among water use sectors, including, but not necessarily limited to, all of the following:
- (A) Single-family residential.
 - (B) Multifamily.
 - (C) Commercial.
 - (D) Industrial.
 - (E) Institutional and governmental.
 - (F) Landscape.
 - (G) Sales to other agencies.
 - (H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.
 - (I) Agricultural.
 - (J) Distribution system water loss.
- (2) The water use projections shall be in the same five-year increments described in subdivision (a).
- (3)(A) The distribution system water loss shall be quantified for each of the five years preceding the plan update, in accordance with rules adopted pursuant to Section 10608.34.

Historical water sales data from 2003 to 2020 were analyzed to provide an overview of historical water usage trends for LCWD. Connection and water sales data were grouped using the assigned North American Industry Classification System (NAICS) codes into the eight applicable DWR categories: single-family, multi-family, commercial, industrial, institutional/government, landscape, agricultural irrigation, distribution system water loss, and other. Table 4-1 presents the 2020 water use for LCWD broken down by the DWR categories, including as estimated 2020 losses.

Table 4-1: Demands for Potable and Non-Potable Water – Actual

Use Type	2020 Actual		
	Additional Description (as needed)	Level of Treatment When Delivered	Volume
Single Family		Drinking Water	2,010
Multi-Family		Drinking Water	701
Commercial	Includes Institutional	Drinking Water	325
Industrial		Drinking Water	0
Landscape		Drinking Water	151
Losses		Drinking Water	647
TOTAL			3,833

NOTE:
1. Volume is in units of AF.

LCWD does not have any significant industrial water users. The District mainly supplies single and multifamily residential customers. LCWD has limited agricultural or landscape water use. There are agricultural areas surrounding LCWD, but they either have their own water supply source or purchase their water from an agricultural water purveyor. Domestic water is provided for some parks and beautification projects in the area but amounts to less than 0.4 percent of the total for water within the District’s distribution system.

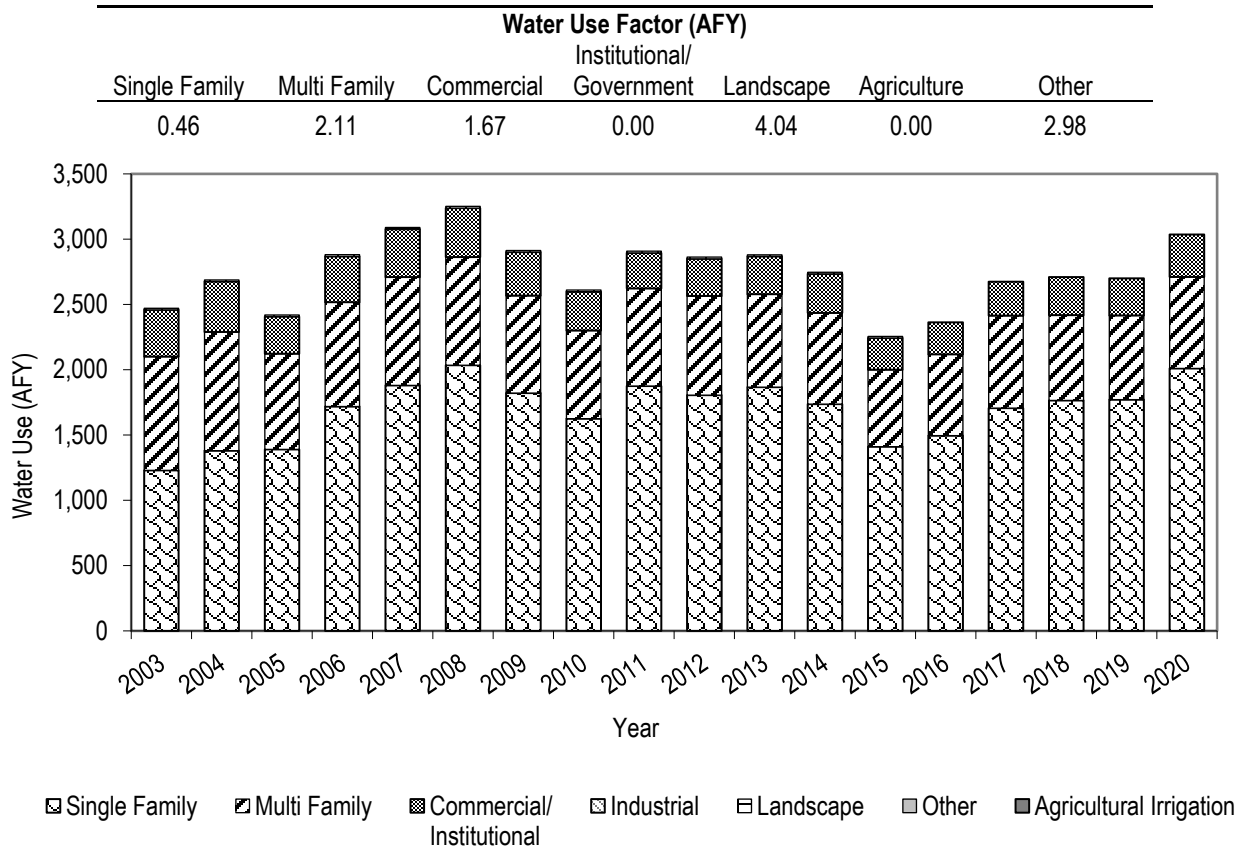


Figure 4-1: Historic Water Use and Water Use Factors by Category

Figure 4-1 shows a decline in water use from 2008 to 2015 by approximately 32 percent and an increase in water use from 2016 to 2020 by approximately 12 percent. The decline in water use may have been a result of several factors including lot size in new developments, changes in plumbing codes, the economic downturn beginning in 2008 and the statewide drought beginning in 2012. After drought restrictions were lifted in 2017, usage rates were slightly lower than usage rates during the drought—this is likely due to conservation efforts and increased public awareness. A slight increase in water usage was observed in 2020 and likely due to the COVID-19 pandemic. LCWD’s service area is predominantly a “bedroom community” that commutes to neighboring cities such as Yuba City and Sacramento.

4.2.1 Water Use Projections

Growth projections for the number of service connections and water use were calculated for years 2025 through 2045 in five-year increments. Future water demands were estimated using connection information and historical usage. The projected population information and historical water use data was used to project future water use by connection type. The projections for the number of service connections, and the resulting water demand are provided in Table 4-2 by water use type.

Table 4-2 summarizes the projected retail water demand through the year 2045 based on the historical-trend growth rate.

Table 4-2: Use for Potable and Raw Water - Projected						
Use Type	Additional Description (as needed)	Projected Water Use <i>Report to the Extent that Records are Available</i>				
		2025	2030	2035	2040	2045 (opt)
Single Family		2,242	2,473	2,703	2,934	3,165
Multi-Family		901	994	1,087	1,179	1,272
Commercial	Includes Institutional	353	389	425	462	498
Landscape		178	196	215	233	251
Losses		372	410	448	486	523
TOTAL		4,046	4,462	4,878	5,294	5,709
NOTE: 1. Volume is in units of AF.						

Table 4-3 presents the total current (2020) and projected water demands for LCWD through 2045.

Table 4-3: Total Water Use (Potable and Non-Potable)						
	2020	2025	2030	2035	2040	2045 (opt)
Potable Water, Raw, Other Non-potable	3,833	4,046	4,462	4,878	5,294	5,709
Recycled Water Demand	0	0	0	0	0	0
TOTAL WATER USE	3,833	4,046	4,462	4,878	5,294	5,709

NOTE:
1. Volume is in units of AF.

4.3 Distribution System Water Losses

CWC 10631

- (d)(3)(A) Report the distribution system water loss for each of the 5 years preceding the plan update, in accordance with rules adopted pursuant to Section 10608.34.*
- (d)(3)(B) The distribution system water loss quantification shall be reported in accordance with a worksheet approved or developed by the department through a public process. The water loss quantification worksheet shall be based on the water system balance methodology developed by the American Water Works Association.*
- (d)(3)(C) In the plan due July 1, 2021, and in each update thereafter, data shall be included to show whether the urban retail water supplier met the distribution loss standards enacted by the board pursuant to Section 10608.34.*

System losses must be incorporated when projecting total water demand. System losses (also known as non-revenue water) are defined as the difference between water entering the distribution system (or total production) and metered uses and sales. Included are system losses due to leaks, unauthorized usage, inaccurate meters, and other water used in operations such as system flushing and filter backwashing.

Since 2015, water retailers must report distribution system loss in their UWMPs based on the American Water Works Association’s Water Audit Software (version 5.0). This assessment was

completed for 2020 and is provided in Appendix C; it shows the volume of water loss reported from 2016 to 2020 (see Table 4-4).

Table 4-4: Last 5 Years of Water Loss Audit Reporting	
Reporting Period Start Date (01/2015)	Volume of Water Loss
01/2016	464.1
01/2017	458.7
01/2018	617.4
01/2019	699.2
01/2020	639.3
NOTES: 1. Volume is in units of AF. 2. Volume of Water Loss obtained from AWWA Water Audit report. 3. 2020 volume of Water Loss is estimated from 2020 pumping reports.	

From 2015 through 2020, system water losses (the difference between production and sales) have averaged approximately 18 percent of total water sales. A portion of these losses is due to the Linda Wastewater Treatment Plant (WWTP), which draws significant water flow from the system for its processes. In February 2020, the District installed a meter to make this connection metered and unbilled. It is assumed that additional Demand Management Measures implemented by the District will reduce the District’s future water losses to 10 percent of total water sales or less (see Chapter 9).

4.4 Estimating Future Water Savings

CWC 10631

- (d)(4)(A) Water use projections may, where available, shall display and account for the water savings estimated to result from adopted codes, standards, ordinances, or transportation and land use plans identified by the urban water supplier, as applicable to the service area.*
- (d)(4)(B) To the extent that an urban water supplier reports the information described in subparagraph (A), an urban water supplier shall do both of the following: (i) Provide citations of the various codes, standards, ordinances, or transportation and land use plans utilized in making the projections. (ii) Indicate the extent that the water use projections consider savings from codes, standards, ordinances, or transportation and land use plans. Water use projections that do not account for these water savings shall be noted of that fact.*

Future water savings due to changes in codes, standards, ordinances, or transportation and land use plans are not considered in these water use projections (see Table 4-5 in Section 4.5).

4.5 Water Use for Lower Income Households

CWC 10631.1

- (a) *The water use projections required by Section 10631 shall include projected water use for single-family and multifamily residential housing needed for lower income households, as defined in Section 50079.5 of the Health and Safety Code, as identified in the housing element of any city, county, or city and county in the service area of the supplier.*

California Health and Safety Code 50079.5

- (a) *“Lower income households” means persons and families whose income does not exceed the qualifying limits for lower income families... In the event the federal standards are discontinued, the department shall, by regulation, establish income limits for lower income households for all geographic areas of the state at 80 percent of area median income, adjusted for family size and revised annually.*

Senate Bill 1087 requires that water use projections of a UWMP include the projected water use for single-family and multi-family residential housing for lower income households as identified in the General Plan Housing Element of any city and county in the service area of the supplier (see Table 4-5).

Table 4-5: Inclusion in Water Use Projections	
Are Future Water Savings Included in Projections?	No
Are Lower Income Residential Demands Included In Projections?	Yes
NOTES:	

General Plan Housing Elements rely on the Regional Housing Needs Allocation (RHNA) generated by the State Department of Housing and Community Development (HCD) to allocate the regional need for housing to the regional Council of Governments (COG) (or a HCD for cities and counties not covered by a COG) for incorporation into housing element updates. Before the housing element is due, the HCD determines the total regional housing need for the next planning period for each region in the state and allocates that need. The COGs then allocate to each local jurisdiction its “fair share” of the RHNA, broken down by income categories; very low, low, moderate, and above moderate, over the housing element’s planning period.

SACOG updated their RHNA in 2020. A lower income household is defined as a household with income that is 80 percent of median family income for that jurisdiction, adjusted for family size. SACOG identified the target number of low-income households in the unincorporated portions of the County from 2021-2029 as 21.5 percent and very low-income households as 13 percent. However, it is unknown what percentage of the low-income and very low-income households are within LCWD’s boundaries. For this reason, it is not possible to project water use for lower income households separately from overall residential demand. However, to remain consistent with the intent of the SB-1087 legislation and to comply with the UWMP Act, an effort has been made to identify those water use projections for future single and multi-family households based on the aggregate percentage of both the low-income and very low-income categories. The total of low- and very low-income housing need of 36.52 percent was used to estimate demand projections as shown in Table 4-6.

Table 4-6: Low-Income Projected Water Demands					
	2025	2030	2035	2040	2045
Single-Family Residence	219	85	169	253	337
Multi-Family Residence	40	73	107	141	175
TOTAL	259	158	276	394	512
NOTE: 1. Volume is in units of AF.					

LCWD will not deny or condition the approval of water services, or reduce the amount of services applied for by a proposed development that includes housing units affordable to lower income households unless one of the following occurs:

- LCWD specifically finds that it does not have sufficient water supply.
- LCWD is subject to a compliance order issued by the State Department of Public Health that prohibits new water connections.
- The applicant has failed to agree to reasonable terms and conditions relating to the provision of services.

4.6 Climate Change Considerations

CWC 10635

- (b) Every urban water supplier shall include, as part of its urban water management plan, a drought risk assessment for its water service to its customers as part of information considered in developing the demand management measures and water supply projects and programs to be included in the urban water management plan. The urban water supplier may conduct an interim update or updates to this drought risk assessment within the five-year cycle of its urban water management plan update. The drought risk assessment shall include each of the following...
- (4) Considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.

A topic of growing concern for water planners and managers is climate change and the potential impacts it could have on California's future water supplies. Climate change models have predicted that potential effects from climatic changes will result in increased temperatures, early snow melt, and a rise in sea level.

In the 2013 update of the *DWR California Water Plan*, the implications of future climate conditions are evaluated. These changing hydrological conditions could affect future planning efforts, which are typically based on historic conditions. The *California Water Plan* identifies the following probable impacts due to changes in temperature and precipitation:

- More winter runoff and less spring/summer runoff due to warmer temperatures.
- Greater extremes in flooding and droughts.

- Greater water demand for irrigation and landscape water due to increased temperatures and their impacts on plant water needs.
- Increased sea level rise, increased threat of coastal flooding, and saltwater intrusion into coastal groundwater aquifers.

While uncertainties remain regarding the exact timing, magnitude, and regional impacts of these temperature and precipitation changes, researchers have identified the following several areas of concern for California water planners:

- Increases in both maximum and minimum temperatures and heat extremes.
- More intense precipitation focused during the winter season.
- Increased evapotranspiration.
- Increased drought risk.
- Potential for longer wildfire season with more ignitions as population growth continues.
- Reduction in Sierra Nevada snowpack.
- Longer duration and more intense atmospheric rivers.

In 2018, the Yuba County IRWMP addressed climate change vulnerabilities and adaptation strategies (Yuba County 2018). Climate change analyses helped identify observed and projected climate trends and impacts affecting or potentially affecting the Yuba County IRWMP region. Climate effects anticipated in the Yuba County IRWMP region include:

- Reduced streamflow and water supply resulting in increased conflicts between human and environmental uses.
- Reduced water quality from rising temperatures, eutrophication, increased algal growth, release of mercury methylation, increased sedimentation from increased winter runoff, and decreased vegetative cover due to fire.
- Increased flooding with greater storm intensity and higher winter precipitation.
- Inability of water infrastructure designed for a historic flow regime to accommodate increased winter peak flows.
- Increased wildfire potential and catastrophic wildfire.
- Upslope movement of vegetative communities as temperatures rise.
- Potential fragmentation and/or degradation of habitat for stream-dependent species and elevation-dependent species in particular.
- Greater numbers of both terrestrial and aquatic invasive species.

- Reduced viability for heat-sensitive crops—berries, mandarin oranges, grapes, and apples.
- Effects on the region’s recreation industry from lower summer flows, both rafting and reservoir-based use.

Chapter 11 of the 2018 Yuba County IRWMP outlines climate trends and impacts to the region, environmental effects of climate changes, modeling to analyze potential climate impacts on vegetation, projected and anticipated climate vulnerabilities, potential climate adaptation strategies that could be used to address climate effects and climate vulnerabilities within the region, prioritization of climate vulnerabilities, and greenhouse gas (GHG) emissions of identified programs and projects. The IRWMP includes a vulnerability checklist based on the DWR’s Climate Handbook that was populated with information from the data collection effort and then presented to and refined by stakeholders.

The Yuba Water Agency 2019 Groundwater Sustainability Plan outlines the projected effects of climate change on the North and South Yuba Groundwater Basins (YWA 2019). The Yuba Groundwater Model (YGM) produced results that indicate that the projected climate change will have negligible effects on the change in storage across a 63-year period.

Chapter 5: SBX7-7 Baselines and Targets

CWC 10608.20

- (e) An urban retail water supplier shall include in its urban water management plan due in 2010...the baseline per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.

CWC 10608.24

- (b) Each urban retail water supplier shall meet its urban water use target by December 31, 2020.

The Water Conservation Bill of 2009 (SBX7-7) is one of four policy bills enacted as part of the November 2009 Comprehensive Water Package (Special Session Policy Bills and Bond Summary). The Water Conservation Bill of 2009 provides the regulatory framework to support the statewide reduction in urban per capita water use described in the *20 x 2020 Water Conservation Plan*. Consistent with SBX7-7, each water supplier must determine and report its existing baseline water consumption and establish water use targets in GPCD, and compare actual water use against the target. Reporting began with the 2010 UWMP.

In the 2020 UWMP, retail water agencies must demonstrate compliance with the target established in the 2015 UWMP. Compliance is done through completion of the DWR SBX7-7 Compliance Form submitted as Appendix D1 of the 2020 UWMP.

5.1 Guidance for Wholesale Agencies

For purposes of identifying baselines and targets, the following definition applies:

CWC 10608.12

- (w) *“Urban wholesale water supplier” means a water supplier, either publicly or privately owned, that provides more than 3,000 acre-feet of water annually at wholesale for potable municipal purposes.*

CWC 10608.36

Urban wholesale water suppliers shall include in the urban water management plans... an assessment of their present and proposed future measures, programs, and policies to help achieve the water use reductions required by this part.

LCWD does not supply nor receives wholesale water; therefore, this section is not applicable.

5.2 Baseline Periods

CWC 10608.20

- (g) An urban retail water supplier may update its 2020 urban water use target in its 2015 urban water management plan required pursuant to Part 2.6 (commencing with Section 10610).

Two water use baselines must be calculated prior to establishing target conservation water use. The first baseline is the average gross water use for a continuous period ending no earlier than December 31, 2004 and ending no later than December 31, 2010. This default baseline period is 10 years. If at least 10 percent of the 2008 gross water use was met by recycled water, then this baseline period may be extended to include an additional 5 years. The District did not use recycled water in 2008, therefore the first baseline period for the District is 10 years from 2001 to 2010.

The second baseline must be the average gross water use for a continuous 5-year period ending no earlier than December 31, 2007 and no later than December 31, 2010. The LCWD 5-year baseline is from 2006 to 2010.

5.3 Service Area Population

CWC 10608.20

- (f) When calculating per capita values for the purposes of this chapter, an urban retail water supplier shall determine population using federal, state, and local population reports and projections.

To calculate Base Daily Per Capita Water Use for past years, it was necessary to develop population estimates for those years. The population for the District was calculated for 2020 using the DWR online Population Tool. This was accomplished using a Geographic Information System (GIS) interface to derive population. By adding shape files for the service area boundaries or public water system boundary in 2020, population is derived using U.S. Census Bureau Census Tract data from that Census year. Then, along with District production and service connections, the DWR population tool derives a persons-per-connection number, which is used to determine population in the intervening years between 1990 and 2020.

The historic population presented in Chapter 3 was estimated using the DWR Population Tool. The population for the baseline period used for calculating the Baseline GPCD can be found in SBX7-7 Compliance Form (Table 3) in Appendix D1. See Appendix E for the DWR Population Tool inputs and outputs.

5.4 Gross Water Use

CWC 10608.12

(h) "Gross Water Use" means the total volume of water, whether treated or untreated, entering the distribution system of an urban retail water supplier, excluding all of the following:

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

California Code of Regulations Title 23 Division 2 Chapter 5.1 Article

Section 596 (a) An urban retail water supplier that has a substantial percentage of industrial water use in its service area is eligible to exclude the process water use of existing industrial water customers from the calculation of its gross water use to avoid a disproportionate burden on another customer sector.

The Base Daily Water Use calculation is based on gross water use by an agency in each year and can be based on a 10-year average ending no earlier than 2004 and no later than 2010, or a 15-year average if 10 percent of 2008 demand was met by recycled water. Base Daily Water Use must account for all water sent to retail customers, excluding:

- Recycled water
- Water sent to another water agency
- Water that went into storage

It is at an agency's discretion whether or not to exclude agricultural water use from the Base Daily Water Use Calculation. If agricultural water use is excluded from the Base Daily Water Use calculation it must also be excluded from the calculation of actual water use in later urban water management plans. The District did not supply water to agriculture during the period 1995 to 2010 and so agricultural water does not factor into the District's SBX7-7 calculations.

5.5 Baseline Daily per Capita Water Use

CWC 10608.12

(b) "Base daily per capita water use" means any of the following:

- (1) The urban retail water supplier's estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous 10-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.
- (2) For an urban retail water supplier that meets at least 10 percent of its 2008 measured retail water demand through recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier, the urban retail water supplier may extend the calculation described in paragraph (1) up to an additional five years to a maximum of a continuous 15-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.
- (3) For the purposes of Section 10608.22, the urban retail water supplier's estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous five-year period ending no earlier than December 31, 2007, and no later than December 31, 2010.

Daily per capita water use is calculated for each year within the baseline periods in Section 5.2 using the retail service area population in Section 5.3 and gross retail water use in Section 5.4. Since LCWD does not have historical data for a complete 10-year period there is one 8-year average available for LCWD to select. For the 2020 UWMP, the calculated Base Daily Water Use are:

- 10-year average (actually 8-year, 2003-2010): 215 GPCD
- 5-year average (2006-2010): 220 GPCD

The 10-year and 5-year Base Daily Water Use calculations are presented in the SBX7-7 Verification Tables (Table 5) in Appendix D2.

5.6 2015 and 2020 Targets

CWC 10608.20

(g) An urban retail water supplier may update its 2020 urban water use target in its 2015 urban water management plan required pursuant to Part 2.6 (commencing with Section 10610).

The year 2020 target was established in the 2015 UWMP. To assist the reader, this section reviews how the 2020 Target was established.

There are four methods for calculating the Compliance Water Use Target:

1. Eighty percent of the urban water supplier's Base Daily Water Use.
2. Per capita daily water use estimated using the sum of the following:
 - a. For indoor residential water use, 55 gallons per capita daily water use as a provisional standard. Upon completion of DWR's 2016 report to the Legislature

reviewing progress toward achieving the statewide 20 percent reduction target, this standard may be adjusted by the Legislature by statute.

- b. For landscape irrigated through dedicated or residential meters or connections, water use efficiency equivalent to the standards of the Model Water Efficient Landscape Ordinance set forth in section 490 et seq. of Title 23 of the California Code of Regulations, as in effect the later of the year of the landscape's installation or 1992.
 - c. For commercial, industrial, and institutional (CII) uses, a 10 percent reduction in water use from the baseline commercial, industrial, and institutional/government water use by 2020.
3. Ninety-five percent of the applicable state hydrologic region target as stated in the state's April 30, 2009, draft 20 by 2020 Water Conservation Plan. The District falls within the Sacramento River Region (target for this region is 176 GPCD).
 4. Reduce the 10 or 15-year Base Daily Per Capita Water Use a specific amount for different water sectors:
 - a. Indoor residential water use to be reduced by 15 GPCD or an amount determined by use of DWR's "BMP Calculator".
 - b. A 20 percent savings on all unmetered uses.
 - c. A 10 percent savings on baseline CII use.
 - d. A 21.6 percent savings on current landscape and water loss uses.

The District's 2010 UWMP used Compliance Method 1 to set the Compliance Water Use Target. For the 2020 UWMP, the District did not change its selected compliance methodology and continued to use Compliance Method 1.

5.6.1 5-Year Baseline – 2020 Target Confirmation

CWC 10608.22

Notwithstanding the method adopted by an urban retail water supplier pursuant to Section 10608.20, an urban retail water supplier's per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use as defined in paragraph (3) of subdivision (b) of Section 10608.12. This section does not apply to an urban retail water supplier with a base daily per capita water use at or below 100 gallons per capita per day.

The selected Compliance Water Use Target must be compared against what DWR calls the "Maximum Allowable GPCD". The Maximum Allowable GPCD is based on 95 percent of a 5-year average base gross water use ending no earlier than 2007 and no later than 2010. The Maximum Allowable GPCD use is used to determine whether a supplier's 2020 per capita water use target meet the minimum water use reduction of the SBX7-7 legislation.

As presented in the SBX7-7 Verification Tables (Table 5) in Appendix D2, LCWD's average water use over a continuous 10-year and 5-year period was 215 and 220 gpcd, respectively. Using Compliance Method 1, eighty percent of the 10-year average water use is 172 gpcd

(referred to as the Compliance Water Use Target). The Maximum Allowable GPCD, 95 percent of the 5-year Baseline GPCD, is 209 gpcd, which is above the Compliance Water Use Target of 172 gpcd. Therefore, the Compliance Water Use Target for the District is 172 GPCD.

As shown in Table 5-2, LCWD is in compliance with the 2020 Target, with an actual 2020 GPCD of 170. DWR has allowed for optional adjustments to the 2020 GPCD, including extraordinary events, economic adjustments, and weather normalization. The District made no such adjustments to the 2020 GPCD, as compliance was achieved without these factors.

5.6.2 Baselines and Targets Summary

The compliance water use targets are provided per Section 10608.20(e) of the Act. Table 5-1 summarizes the SBX7-7 baselines and targets.

Table 5-1: Baselines Calculations and Targets Summary from SB X7-7 Verification Form				
Baseline Period	Start Year	End Year	Average Baseline GPCD	Confirmed 2020 Target
10-15 Year	2003	2010	215	172
5 Year	2006	2010	220	
NOTE: 1. The District's first year with reliable connection data is 2003; thus, the baseline period is actually an 8-year period.				

5.7 2020 Compliance Daily per Capita Water Use (GPCD)

Retail suppliers shall report on their compliance in meeting their water use targets. The data shall be reported using a standardized form in the SBX7-7 2020 Compliance Form.

CWC 10608.12

(f) "Compliance daily per-capita water use" means the gross water use during the final year of the reporting period...

The District's 2020 GPCD was calculated by using the DWR population tool. Once population was derived for 2015, 2020 could be extrapolated by using the 2015 persons-per-connections. With 2020 production and connection data, a supplier can then calculate their 2020 consumption to determine if they have met their 2015 interim target.

The District's retail water use in 2015 was 138 GPCD, well below the SBX7-7 2015 interim target of 194 GPCD and its 2020 target of 172 GPCD. The District's retail water use in 2020 was 170 GPCD

The District will continue to implement its conservation program as presented in Chapter 9 and its commitment to comply with the Council MOU and implementation of additional demand management measures (DMMs) are expected to provide further water savings.

The LCWD Water Use Reduction Plan was developed to increase the level of retail water conservation to achieve the State's goal of a 20 percent reduction in per-capita water use by 2020. The District implements all of the water conservation components identified in the California Urban Water Conservation Council's Memorandum of Understanding (MOU) for Best Management Practices (BMPs). As a result of these efforts, the District's average per capita retail water use for 2003-2010 use decreased by over 8 percent for 2013, and even greater savings in 2014 and 2015 in response to voluntary District programs and mandatory Statewide conservation requirements. The District's water use started to increase after 2015 by approximately 12 percent as state drought restrictions lifted but 2016-2019 usage rates were slightly lower than usage rates during the drought—this is likely due to conservation efforts and increased public awareness. A slight increase in water usage was observed in 2020 and likely due to the COVID-19 pandemic. LCWD's service area is predominantly a "bedroom community" that commutes to neighboring cities such as Yuba City and Sacramento.

5.7.1 2015 Adjustments of 2015 Gross Water Use

CWC 10608.24

(d)(1) When determining compliance daily per capita water use, an urban retail water supplier may consider the following factors:

- (A) Differences in evapotranspiration and rainfall in the baseline period compared to the compliance reporting period.*
- (B) Substantial changes to commercial or industrial water use resulting from increased business output and economic development that have occurred during the reporting period.*
- (C) Substantial changes to institutional water use resulting from fire suppression services or other extraordinary events, or from new or expanded operations, that have occurred during the reporting period.*

(d)(2) If the urban retail water supplier elects to adjust its estimate of compliance daily per capita water use due to one or more of the factors described in paragraph (1), it shall provide the basis for, and data supporting, the adjustment in the report required by Section 10608.40.

Methodology Document, Methodology 4

This section discusses adjustments to compliance-year GPCD because of changes in distribution area caused by mergers, annexation, and other scenarios that occur between the baseline and compliance years.

The District's gross water use for 2020 achieves the calculated SBX7-7 compliance target of 172 GPCD. No adjustments are being made to the 2020 gross water use for the District (see Table 5-2).

Table 5-2: 2020 Compliance From SB X7-7 2020 Compliance Form				
2020 GPCD			2020 Confirmed Target GPCD	Did Supplier Achieve Targeted Reduction for 2020? Y/N
Actual 2020 GPCD	2020 TOTAL Adjustments	Adjusted 2020 GPCD <i>(Adjusted if applicable)</i>		
170	SB X7-7 Table 9	SB X7-7 Table 9	172	SB X7-7 Table 9
NOTES:				

Chapter 6: Water Supply Characterization

CWC 10631

(h) Retail suppliers will include documentation that they have provided their wholesale supplier(s) - if any - with water use projections from that source.

This chapter addresses the water supply sources of LCWD. The following chapter provides details in response to those requirements of this portion of the Act.

6.1 Purchased or Imported Water

LCWD does not currently receive water from a wholesale supplier; therefore, this section is not applicable.

6.2 Groundwater

CWC 10631

(b)(4) (Indicate) if groundwater is identified as an existing or planned source of water available to the supplier.

LCWD is exclusively dependent on groundwater from six active wells, all within the South Yuba Groundwater Basin, providing a maximum capacity of 10,100 gallons per minute (GPM) or 16,290 AFY. Table 6-0 lists the wells, along with the well capacity and status for LCWD.

Well	Design Well Capacity (GPM)	Design Well Capacity (AFY)	Status
3	1,100	1,774	Active
4	1,000	1,613	Active
12	1,500	2,420	Active
14	1,500	2,420	Active
15	3,000	4,839	Active
16	3,500	5,645	Active
Total	10,100	16,290	

NOTES:

- Design well capacity is provided; actual and annual average pumping capacity may vary for each well.
- Well 12 is an active well but operated intermittently by LCWD as a standby well due to the benzene levels detected in the well water. Well 12 is not included in the Total Design Well Capacity.

6.2.1 Basin Description

CWC 10631

(b)(4) If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information:

- (B) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater. For basins that a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. For a basin that has not been adjudicated, information as to whether the department has identified the basin as a high- or medium-priority basin in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to coordinate with groundwater sustainability agencies or groundwater management agencies listed in subdivision (c) of Section 10723 to maintain or achieve sustainable groundwater conditions in accordance with a groundwater sustainability plan or alternative adopted pursuant to Part 2.74 (commencing with Section 10720).

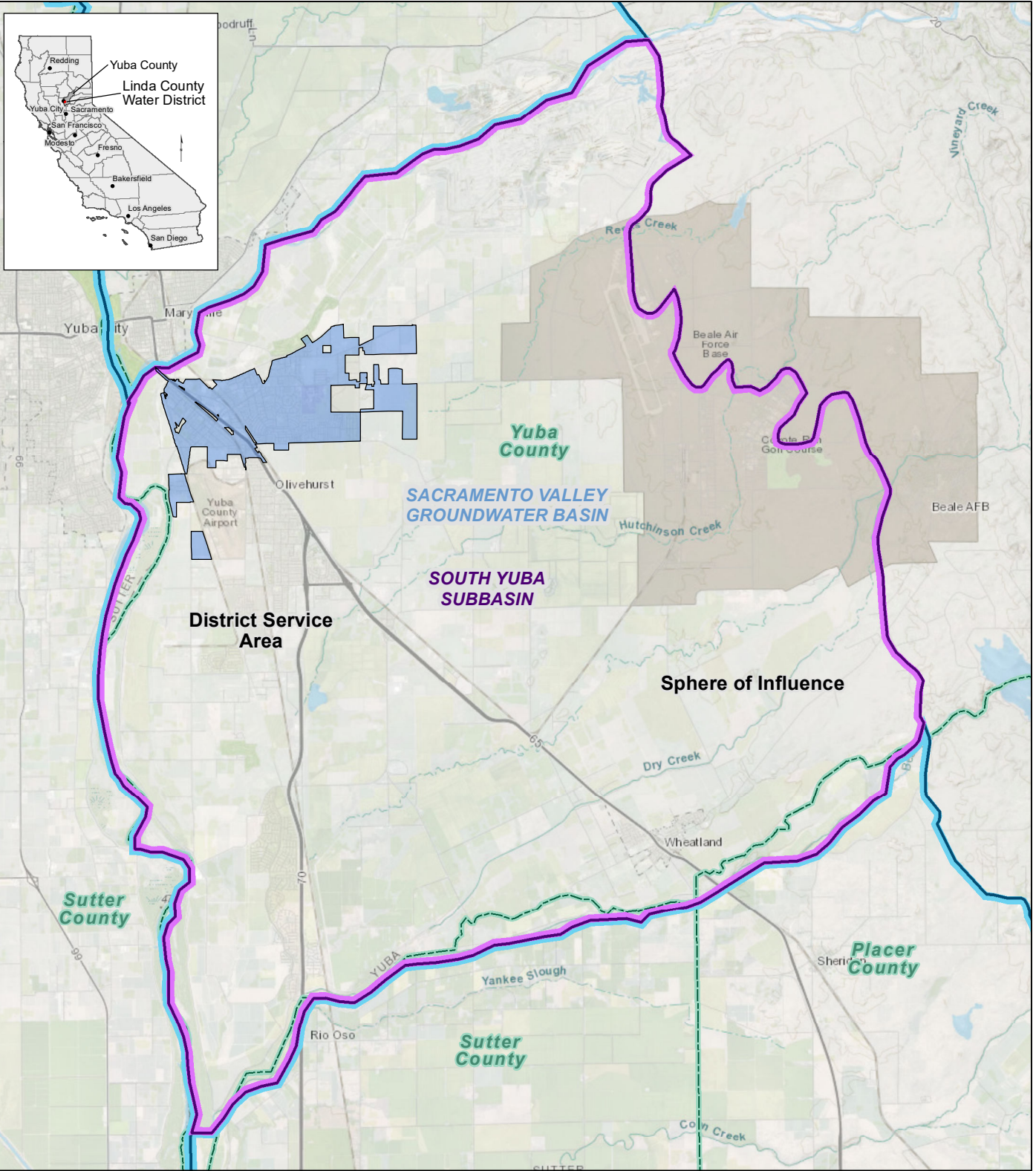
The South Yuba Groundwater Basin lies in the southern portion of the Sacramento Basin Hydrologic Study Area. It is bounded on the north by the Yuba River, the west by the Feather River, on the south by the Bear River and on the east by the Sierra Nevada and encompasses nearly 107,000 acres. According to DWR Bulletin 118, the Sacramento Valley Groundwater Basin has elevations that range from about 150 feet in the northwest region to about 30 feet in the southwest corner near the confluence of the Feather and Bear Rivers.

Average annual precipitation is 21.61 inches in the southwest and 19-26 inches in the rest of the basin. Stream channel and floodplain deposits present along the Yuba River, Feather River, and Honcut Creek are highly permeable and provide for large amounts of groundwater recharge within the subbasin. The potential for artificial recharge of groundwater in the basin is limited since areas which have available storage space typically have overlying soils with very low infiltration rates that would restrict recharge potential.

The capacity of the South Yuba Groundwater Basin (SYGB) as described in the Yuba Water Agency (YWA) Groundwater Management Plan is as follows:

Total freshwater storage in Yuba County's groundwater basin is estimated to be 7.5 million acre feet. The base of freshwater is estimated to range from less than 300 feet in the eastern portion of the basin to about 700 feet in the western portion, with depths to as much as 900 feet at the Feather River in the South Subbasin. However, since most wells are screened at less than 300 feet below ground surface, readily accessible freshwater is estimated at 4.0 million acre feet.

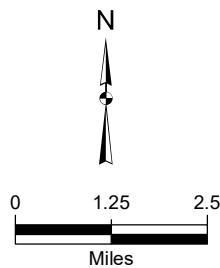
The SYGB Management Plan identifies steps to prevent the groundwater basin from becoming overdrafted. Notably, groundwater level measurements are taken from a large network of groundwater monitoring wells to help prevent basin overdraft. The wells are monitored by DWR, YWA, and local water suppliers. If overdraft is detected, YWA can take action to reduce production from the groundwater basin. It should be noted that the SYGB Groundwater Management Plan did not present what constitutes overdraft within the basin.



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Legend

- Linda County Water District
- South Yuba Groundwater Subbasin
- Sacramento Valley Groundwater Basin



Kennedy/Jenks Consultants

Linda County Water District
2020 Urban Water Management Plan

Groundwater Basin Map

1770003.14
May 2021

Figure 6-1

The YWA prepared a Groundwater Sustainability Plan (GSP) for the North Yuba and South Yuba Groundwater Basins (Yuba Subbasins) in December 2019 and actively manages both surface water and groundwater supplies. Unlike many medium- and high-priority basins and subbasins managed under GSPs, groundwater extraction in the Yuba Subbasins does not exceed the sustainable yield (YWA 2019). There are no adjudicated areas within or adjacent to the Yuba Subbasins. DWR has not identified the SYGB to be projected in or currently in overdraft.

6.2.2 Groundwater Management

CWC 10631

(b)(4) If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information:

(A) The current version of any groundwater sustainability plan or alternative adopted pursuant to Part 2.74 (commencing with Section 10720)... or any other specific authorization for groundwater management for basins underlying the urban water supplier's service area.

YWA prepared a Groundwater Management Plan in 2010 that includes the groundwater used by LCWD from the South Yuba Groundwater Basin (SYGB). Sections of the YWA Groundwater Management Plan discuss groundwater reliability, storage, and historical trends. A copy of the YWA Groundwater Management Plan for the Yuba Subbasins is included in Appendix F.

The SYGB that underlies LCWD is not adjudicated, and there are no set legal pumping rights. The California Statewide Groundwater Elevation Monitoring Program (CASGEM) has assigned the South Yuba Groundwater Basin a medium priority. DWR has not identified the SYGB to be projected in or currently in overdraft (YWA 2019). The SYGB Management Plan identifies steps to prevent the groundwater basin from becoming overdrafted. Notably, groundwater level measurements are taken from a large network of groundwater monitoring wells to help prevent basin overdraft. The wells are monitored by DWR, YWA, and local water suppliers. If overdraft is detected, the YWA can take action to reduce production from the groundwater basin.

The YWA prepared a Groundwater Sustainability Plan (GSP) for the North Yuba and South Yuba Groundwater Basins (Yuba Subbasins) in December 2019 and actively manages both surface water and groundwater supplies. Unlike many medium- and high-priority basins and subbasins managed under GSPs, groundwater extraction in the Yuba Subbasins does not exceed the sustainable yield (YWA 2019). There are no adjudicated areas within or adjacent to the Yuba Subbasins. Five sustainable management quantitative criteria, in addition to the sustainability goal and the undesirable results statement, were developed for the chronic lowering of groundwater levels in order to guide continued successful sustainable management of groundwater levels in the Yuba Subbasins. The criteria document when the subbasins are full (historically full aquifer level), the target for normal operations of the subbasins, the locally-preferred minimum level, and the identifier of when undesirable results may be occurring, which can trigger probationary status and State Water Resources Control Board (SWRCB) intervention. It should be noted that minimum thresholds and measurable objectives for reduction of groundwater storage were not developed because undesirable results related to groundwater storage are not present and are not likely to occur in the Yuba Subbasins.

6.2.3 Overdraft Conditions

CWC 10631

(b)(4)(B) For a basin that has not been adjudicated, (provide) information as to whether the department has identified the basin as a high- or medium-priority basin in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to coordinate with groundwater sustainability agencies or groundwater management agencies listed in subdivision(c) of Section 10723 to maintain or achieve sustainable groundwater conditions in accordance with a groundwater sustainability plan or alternative adopted pursuant to Part 2.74 (commencing with Section 10720).

Use of groundwater in Yuba County for irrigation and municipal supply developed gradually as the need for water increased. This provided benefits to water users in the basin, but as early as the 1950s, groundwater levels in southern Yuba County were falling because of overdraft. During this period, groundwater pumping exceeded the rate of recharge to the groundwater basin. Between 1948 and 1981, groundwater elevations in the South Yuba Groundwater Basin declined an estimated 130 feet.

Partly in response to this groundwater level decline, YWA began to provide Yuba River water to Brophy Water District and South Yuba Water District in 1983. YWA owns the New Bullards Bar Dam forming the New Bullards Bar Reservoir, which supplies water directly to the Yuba River, as well as providing water for irrigation, energy generation, and flood management. Monitoring indicates that groundwater levels have recovered since the early 1980s. Currently both the North Yuba subbasin and the South Yuba Groundwater Basin are in good health. Water levels have rebounded to near historical high levels in most areas, and a substantial volume of water has replenished the basins, particularly the South Yuba Groundwater Basin (YWA 2019).

6.2.4 Historical Groundwater Pumping

CWC 10631

*(b)(4) If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information:
(C) A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.*

Table 6-1 shows the groundwater pumping history for LCWD for calendar years 2016 through 2020. The total groundwater pumping for LCWD has ranged from 3,011 AFY to 3,992 AFY. Pumping amounts have generally been consistent over the last 5 years. There were no limitations or challenges for obtaining groundwater during the last 10 years, and the available groundwater quantity was sufficient. Pumping quantities were determined from LCWD’s annual Public Water System Statistics reports, DWR 38.

Groundwater Type	Location or Basin Name	2016	2017	2018	2019	2020
Alluvial Basin	South Yuba Groundwater Basin	3,011	3,370	3,565	3,613	3,992
TOTAL		3,011	3,370	3,565	3,613	3,992
NOTE:						
1. Volume is in units of AFY.						

6.3 Surface Water

LCWD does not hold water rights to use surface water and has no plans in the immediate future to pursue surface water as a source; therefore, this section is intentionally left blank.

6.4 Stormwater

The County of Yuba is responsible for collection of stormwater. LCWD has not been given jurisdiction and does not have infrastructure for beneficial reuse of stormwater; therefore, this section is intentionally left blank.

6.5 Wastewater and Recycled Water

This chapter covers Section 10633, which details the requirements of the Recycled Water Plan that are included in the Act. The Act states the following:

CWC 10633

The plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier. The preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area and shall include all of the following:

- (a) A description of the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.*
- (b) A description of the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.*
- (c) A description of the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.*
- (d) A description and quantification of the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.*
- (e) The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.*
- (f) A description of actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre feet of, recycled water used per year.*
- (g) A plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.*

6.5.1 Recycled Water Coordination

In 2007, LCWD participated in the Regional Recycled Water Facilities Master Plan with the City of Marysville and Yuba City to identify and evaluate regional opportunities to use recycled water to meet non-potable water demands in the Yuba-Sutter region. Participants (and their roles) in the development of the Regional Recycled Water Facilities Master Plan consisted of:

- Water Agencies: LCWD, Yuba City, City of Maryville
- Wastewater Agencies: LCWD, Yuba City, City of Maryville
- Groundwater Agencies: LCWD, Yuba City, City of Maryville
- Planning Agencies: Yuba County

Currently LCWD does not have access to recycled water; therefore, all tables including past, current, or projected recycled water use have been intentionally left blank in this UWMP.

6.5.2 Wastewater Collection, Treatment, and Disposal

CWC 10633

- (a) *(Describe) the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.*
- (b) *(Describe) the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.*

6.5.2.1 Wastewater Collected Within Service Area

The District owns and operates an equivalent-tertiary treatment level wastewater treatment plant situated on a 15-acre parcel of District property, located just outside of the flood protection levee of the Feather River. The WWTP is located at 909 Myrna Avenue, Olivehurst, CA.

The original WWTP was constructed in 1960, with major plant upgrades completed in 1996, 2002 and 2015. The Facility was upgraded and expanded in 2013 to discharge up to 5.0 million gallons per day (MGD) of tertiary level treated effluent to Feather River. The Facility currently discharges to a series of seven percolation ponds that are hydrologically connected to the Feather River (see Table 6-3). Direct discharges to the Feather River are projected to occur within the term of the proposed NPDES Permit. In 2017, LCWD regionalized its wastewater treatment with the City of Marysville and increased the Facility's capacity to accommodate an additional 1.7 MGD, for an increased discharge of up to 6.7 MGD to the Feather River.

6.5.2.2 Wastewater Treatment and Discharge within Service Area

The LCWD WWTP is located within the service area of the South Yuba Groundwater Basin and treats an estimated 2,672 AFY (2.4 MGD) of effluent to be discharged to the Feather River via a series of seven percolation ponds. Wastewater effluent totals and disposal information are included in Table 6-3.

Table 6-2: Wastewater Collected Within Service Area in 2020						
<input type="checkbox"/> There is no wastewater collection system. The supplier will not complete the table below.						
Wastewater Collection			Recipient of Collected Wastewater			
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated?	Volume of Wastewater Collected from UWMP Service Area 2020	Name of Wastewater Treatment Agency Receiving Collected Wastewater	Treatment Plant Name	Is WWTP Located Within UWMP Area?	Is WWTP Operation Contracted to a Third Party? (optional)
Linda County Water District	Metered	2,672	Linda County Water District	Linda County Water District WWTP	Yes	No
Total Wastewater Collected from Service Area in 2020:		2,672				
NOTE: 1. Volume is in units of AFY						

Table 6-3: Wastewater Treatment and Discharge Within Service Area in 2020										
<input type="checkbox"/> No wastewater is treated or disposed of within the UWMP service area. The supplier will not complete the table below.										
Wastewater Treatment Plant Name	Discharge Location Name or Identifier	Discharge Location Description	Method of Disposal	Does This Plant Treat Wastewater Generated Outside the Service Area?	Treatment Level	2020 Volumes				
						Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area	Instream Flow Permit Requirement
Linda Wastewater Treatment Plan	NPDES No. CA 0079651	Feather River Percolation Ponds	Percolation Ponds	No	Tertiary	2,672	2,672	0	0	0
Total						2,672	2,672	0	0	0
NOTE: 1. Volume is in units of AFY.										

6.5.3 Recycled Water System

CWC 10633

- (b) *(Describe) the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.*
- (c) *(Describe) the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.*

Despite the recent upgrades, the LCWD WWTP effluent does not comply with Title 22 requirements; therefore, the effluent fails to be classified as recycled water. In 2013, a recycled water study was conducted and the resulting determination was that funding and modifying the existing WWTP to produce recycled water would not be beneficial or economical. LCWD does not currently have infrastructure for beneficial reuse of recycled water and has no immediate plan to build one.

6.5.4 Recycled Water Beneficial Uses

CWC 10633

- (d) *(Describe and quantify) the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, indirect potable reuse, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.*
- (e) *(Describe) the projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years and a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.*

Recycled water was not used in 2020, nor was it projected to be used in 2020. Therefore, Table 6-4 and Table 6-5 have been intentionally left blank.

Table 6-4: Recycled Water Direct Beneficial Uses Within Service Area										
<input checked="" type="checkbox"/>	Recycled water is not used and is not planned for use within the service area of the supplier. The supplier will not complete the table below.									
Beneficial Use Type	Potential Beneficial Uses of Recycled Water (Describe)	Amount of Potential Uses of Recycled Water (Quantity)	General Description of 2020 Uses	Level of Treatment	2020	2025	2030	2035	2040	2045 (opt)
				Total:	0	0	0	0	0	0
NOTES:										

Table 6-5: 2015 UWMP Recycled Water Use Projection Compared to 2020 Actual		
<input checked="" type="checkbox"/>	Recycled water was not used in 2015 nor projected for use in 2020. The supplier will not complete the table below. If recycled water was not used in 2020, and was not predicted to be in 2015, then check the box and do not complete the table.	
Beneficial Use Type	2015 Projection for 2020	2020 Actual Use
Total	0	0
NOTES:		

6.5.5 Actions to Encourage and Optimize Future Recycled Water Use

<p>CWC 10633</p> <p>(f) <i>(Describe the) actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre-feet of recycled water used per year.</i></p> <p>(g) <i>(Provide a) plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.</i></p>
--

Since there are currently no plans to provide recycled water directly to LCWD, there are no actions in place at this time by which LCWD is able to encourage the use of recycled water in their system; therefore, Table 6-6 is not applicable and has been left intentionally blank.

Table 6-6: Methods to Expand Future Recycled Water Use			
<input checked="" type="checkbox"/>	Supplier does not plan to expand recycled water use in the future. Supplier will not complete the table below but will provide narrative explanation.		
6-9, 6-10	Provide page location of narrative in UWMP		
Name of Action	Description	Planned Implementation Year	Expected Increase in Recycled Water Use
Total			0
NOTES:			

6.6 Desalinated Water Opportunities

CWC 10631

(g) Describe the opportunities for development of desalinated water, including, but not limited to, ocean water, brackish water, and groundwater, as a long-term supply.

LCWD does not currently have opportunities for development of ocean water, brackish water, or saline groundwater as a long-term supply; therefore, this section has been left intentionally blank.

6.7 Exchanges or Transfers

CWC 10631

(c) Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.

There are no planned transfer and/ or exchange opportunities for LCWD at this time; therefore, this section has been left intentionally blank.

6.8 Future Water Projects

CWC 10631

(f) ...The urban water supplier shall include a detailed description of expected future projects and programs... that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in normal and single-dry water years and for a period of drought lasting five consecutive water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.

As part of its normal maintenance and operations, LCWD constructs new wells, pipelines, and treatment systems as needed to maintain its supply and meet distribution system requirements. There are no planned water supply projects and programs in LCWD at this time; therefore, this section was left intentionally blank.

Table 6-7: Expected Future Water Supply Projects or Programs						
<input checked="" type="checkbox"/>	No expected future water supply projects or programs that provide a quantifiable increase to the agency's water supply. Supplier will not complete the table below.					
<input type="checkbox"/>	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.					
	Provide page location of narrative in the UWMP					
Name of Future Projects or Programs	Joint Project with other suppliers?		Description (if needed)	Planned Implementation Year	Planned for Use in Year Type	Expected Increase in Water Supply to Supplier
	Y/N	Supplier Name				
NOTES:						

6.9 Summary of Existing and Planned Sources of Water

CWC 10631

- (a) Provide population projections for 2025, 2030, 2035, 2040 and optionally 2045.
- (b)(3) For any planned sources of water supply, a description of the measures that are being undertaken to acquire and develop those water supplies.
- (b)(4) If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information:
 - (D) (Provide a) detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.
- (f) The urban water supplier shall include a detailed description of expected future projects and programs that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in normal and single-dry water years and for a period of drought lasting five consecutive water years.

As described in the preceding sections, LCWD obtains its water supply entirely from groundwater well pumping. LCWD does not plan on acquiring other sources of water other than groundwater. LCWD operates and manages several wells within the South Yuba Groundwater Basin. The YWA has implemented a Groundwater Management Plan for the South Yuba Groundwater Basin. The actual volume of groundwater pumped in 2020 is presented in Table 6-8.

Table 6-8: Water Supplies — Actual				
Water Supply	Additional Detail on Water Supply	2020		
		Actual Volume	Water Quality	Total Right or Safe Yield (optional)
Groundwater (not desalinated)		3,992	Drinking Water	
Total		3,992		0

NOTE:
1. Volume is in units of AFY.

The SYGB that underlies LCWD is not adjudicated, and there are no set legal pumping rights. DWR has not identified the SYGB to be projected in or currently in overdraft. Therefore, in order to establish a basis of supply available to LCWD, the projected water supply that is reasonably available is calculated as the anticipated pumping rate plus 15 percent, to account for annual demand variability. Table 6-9 summarizes the planned water supplies available to LCWD that will meet their projected water demand during normal water year conditions. The availability of water from groundwater is estimated through the year 2045. Between 2016 and 2020, groundwater represented the entirety of the total water supply for LCWD. In the future, groundwater is expected to continue to supply 100 percent of LCWD's supply demands.

Table 6-9: Water Supplies — Projected						
Water Supply	Additional Detail on Water Supply	Projected Water Supply <i>Report to the Extent Practicable</i>				
		2020	2025	2030	2035	2040 (opt)
		Reasonably Available Volume	Reasonably Available Volume	Reasonably Available Volume	Reasonably Available Volume	Reasonably Available Volume
Groundwater	Six active wells	4,653	5,131	5,610	6,088	6,566
Total		4,653	5,131	5,610	6,088	6,566

NOTES:
1. Volume is in units of AFY.
2. The projected water supply that is reasonably available is calculated as the anticipated pumping rate plus 15 percent; to account for annual demand variability

6.10 Energy Accounting

CWC 10631.2

- (a) In addition to the requirements of Section 10631, an urban water management plan shall include any of the following information that the urban water supplier can readily obtain:
- (1) An estimate of the amount of energy used to extract or divert water supplies.
 - (2) An estimate of the amount of energy used to convey water supplies to the water treatment plants or distribution systems.
 - (3) An estimate of the amount of energy used to treat water supplies.
 - (4) An estimate of the amount of energy used to distribute water supplies through its distribution systems.
 - (5) An estimate of the amount of energy used for treated water supplies in comparison to the amount used for nontreated water supplies.
 - (6) An estimate of the amount of energy used to place water into or withdraw from storage.
 - (7) Any other energy-related information the urban water supplier deems appropriate.

LCWD maintains an accounting of the electric energy use separated by treated water and wastewater systems. LCWD categories energy use by Distribution and Treatment. Table 6-10 summarizes the information used to calculate the energy intensity of LCWD's water service. The energy consumed is based on PG&E bills for the District's water facilities from November 2019 to October 2020. The Volume of Water Entering Process is based on LCWD's 2020 pumping reports. It is assumed that the annual energy use difference between November 2019-October 2020 and January 2020-December 2020 is negligible.

The energy intensity is assumed to be the total energy consumed (as metered by PG&E) by the District's water facilities and office divided by the total volume of water produced.

LCWD maintains many backup generators that operate during power outages to provide energy to critical pumps and systems. These generators are fueled by both diesel and propane. The energy used in these backup systems are not included in the energy analysis.

Table 6-10: Table O-1A: Recommended Energy Reporting - Total Utility Approach				
Enter Start Date for Reporting Period	11/1/2019	Urban Water Supplier Operational Control		
End Date	10/30/2020			
Is upstream embedded in the values reported? <input type="checkbox"/>		Sum of All Water Management Processes	Non-Consequential Hydropower	
<i>Water Volume Units Used</i>	AF	Total Utility	Hydropower	Net Utility
	<i>Volume of Water Entering Process (volume unit)</i>	3,992	0	3,992
	<i>Energy Consumed (kWh)</i>	2,002,103	0	2,002,103
	<i>Energy Intensity (kWh/volume)</i>	502	0	502
Quantity of Self-Generated Renewable Energy				
	0	kWh		
Data Quality (<i>Estimate, Metered Data, Combination of Estimates and Metered Data</i>)				
	Metered Data			
Data Quality Narrative:				
Energy consumed based on PG&E bills for District water facilities for November 2019-October 2020. Volume of Water Entering Process is based on the District's 2020 pumping reports. It is assumed that the annual energy use difference between November 2019-October 2020 and January 2020-December 2020 is negligible. The energy intensity is assumed to be the total energy consumed (as metered by PG&E) by the District's water facilities and office divided by the total volume of water produced.				
Narrative:				
The District's supply consists of groundwater well pumps and treatment at each site. Facilities include six groundwater wells, four groundwater treatment facilities, five booster pump stations, a wastewater treatment plant, and two administration buildings.				

Chapter 7: Water Supply Reliability Assessment

Sections 10631 and 10635 of the Act require that an assessment of water supply reliability for various climatic conditions be undertaken. The Act states:

CWC 10635

- (a) *Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.*
- (b) *Every urban water supplier shall include, as part of its urban water management plan, a drought risk assessment for its water service to its customers as part of information considered in developing the demand management measures and water supply projects and programs to be included in the urban water management plan.*

This section summarizes the reliability of LCWD's water supply. LCWD obtains its water supply from one source, groundwater from the South Yuba Groundwater Basin. In general, LCWD's water supply is expected to be highly reliable through 2045. This reliability is derived from historic availability and demonstrated sustainable groundwater levels.

7.1 Constraints on Water Sources

CWC 10634

The plan shall include information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments as described in subdivision (a) of Section 10631, and the manner in which water quality affects water management strategies and supply reliability.

This chapter provides a water supply and demand assessment for LCWD for a normal year, a single-dry year, and multiple-dry years. The following is a summary of the water supply sources and reliability of those sources for LCWD. The details of water supply sources are provided in Chapter 6 and the water demand projections are documented in Chapter 4.

Supply reliability for LCWD is based on the availability of groundwater supply and functionality of the District's infrastructure to extract and treat groundwater. In general, LCWD's overall supply quantity is expected to be highly reliable through 2045, due to a historically reliable groundwater supply from the South Yuba Groundwater Basin. Legal, environmental, water quality, or other constraints are not anticipated.

The Sustainable Groundwater Management Act requires the formation of a Groundwater Sustainable Authority with the responsibility of managing the groundwater subbasins in a sustainable fashion. YWA is the apparent candidate to become the Groundwater Sustainability Authority for the South Yuba Groundwater Basin. While changes to the Basin management may

occur as a result of the SGMA, legal and environmental constraints to LCWD's groundwater supply are not anticipated.

7.2 Reliability by Type of Year

CWC 10631

- (b) *Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a), providing supporting and related information, including all of the following:*
 - (1) *A detailed discussion of anticipated supply availability under a normal water year, single dry year, and droughts lasting at least five years, as well as more frequent and severe periods of drought, as described in the drought risk assessment. For each source of water supply, consider any information pertinent to the reliability analysis conducted pursuant to Section 10635, including changes in supply due to climate change.*

Table 7-1 reports base years for average year, single dry year, and five consecutive multiple dry years for LCWD. The normal year water supply represents the expected supply under average hydrologic conditions, the dry year supply represents the expected supply under the single driest hydrologic year, and the multiple dry year supply represents the expected supply during a period of three consecutive dry years.

The base years were obtained from the Groundwater Sustainability Plan which evaluated water year type for the SYGB over a 21-year period (YWA 2019). The historical water budget identified water year types using the Sacramento Valley Index (W = Wet year type, AN = Above normal year type, BN = Below normal year type, D = Dry year type, C = Critical year type). Within the historical hydrology from 1997 to 2017, there were 6 wet years, 3 above normal years, 4 below normal years, 5 dry years and 3 critically dry years.

Table 7-1: Basis of Water Year Data (Reliability Assessment)			
Year Type	Base Year	Available Supplies if Year Type Repeats	
		<input checked="" type="checkbox"/>	Quantification of available supplies is provided in this table as either volume only, percent only, or both.
		Volume Available	% of Average Supply
Average Year	2004	16,290	100%
Single-Dry Year	2001	16,290	100%
Consecutive Dry Years 1st Year	2012	16,290	100%
Consecutive Dry Years 2nd Year	2013	16,290	100%
Consecutive Dry Years 3rd Year	2014	16,290	100%
Consecutive Dry Years 4th Year	2015	16,290	100%
Consecutive Dry Years 5th Year	2016	16,290	100%

NOTE:

- Base years are based on the Yuba Subbasins Water Management Plan: A Groundwater Sustainability Plan (YWA 2019). The historical water budget identified water year types (W = Wet year type, AN = Above normal year type, BN = Below normal year type, D = Dry year type, C = Critical year type) using the Sacramento Valley Index.

7.3 Supply and Demand Assessment

CWC 10635

- (a) Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the long-term total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and a drought lasting five consecutive water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.

LCWD will meet projected water demands under all anticipated hydrologic conditions. During single-dry and multiple-dry years, LCWD is not anticipating any reduction of available groundwater supply. Historically, the South Yuba Groundwater Basin has been a reliable source of groundwater and has substantial storage capacity to provide a buffer during droughts. Demand for LCWD is not projected to increase greatly, and the ability to meet future supply during multiple-dry years is 100 percent.

7.3.1 Normal Water Year Analysis

Table 7-2 summarizes the service supply reliability assessment for an average/ normal water year based on water supply and water demand projections. Local groundwater is expected to be highly reliable to meet the projected demands during normal water year conditions through 2045.

Table 7-2: Normal Year Supply and Demand Comparison					
	2025	2030	2035	2040	2045 (Opt)
Supply totals	4,653	5,131	5,610	6,088	6,566
Demand totals	4,046	4,462	4,878	5,294	5,709
Difference	607	669	732	794	856
NOTES:					
1. Supply and demand volumes are in AFY.					
2. Supply volume calculated as projected water demand plus 15 percent for annual demand variability.					

7.3.2 Single-Dry Year Analysis

Table 7-3 demonstrates the reliability of water supplies to meet projected annual water demands for LCWD in a single dry year. Local groundwater is expected to be highly reliable to meet the projected demands during single-dry year conditions through 2045.

Table 7-3: Single Dry Year Supply and Demand Comparison					
	2025	2030	2035	2040	2045 (Opt)
Supply totals	4,653	5,131	5,610	6,088	6,566
Demand totals	4,046	4,462	4,878	5,294	5,709
Difference	607	669	732	794	856
NOTES:					
1. Supply and demand volumes are in AFY.					
2. Supply volume calculated as projected water demand plus 15 percent for annual demand variability.					

7.3.3 Multiple-Dry Year Analysis

CWC 10635

- (b) The drought risk assessment shall include each of the following:
- (2) A determination of the reliability of each source of supply under a variety of water shortage conditions. This may include a determination that a particular source of water supply is fully reliable under most, if not all, conditions.
 - (3) A comparison of the total water supply sources available to the water supplier with the total projected water use for the drought period.

Table 7-4 presents the projected multiple-dry year water supply and demand assessment for LCWD. The fifth year of the multiple-dry year water supply projection represents the end of each 5-year multiple-dry year period as required for the multiple dry year analysis. Local groundwater is expected to be highly reliable to meet the projected demands during multiple-dry year conditions through 2045.

Table 7-4: Multiple Dry Years Supply and Demand Comparison						
		2025	2030	2035	2040	2045 (Opt)
First year	Supply totals	4,653	5,131	5,610	6,088	6,566
	Demand totals	4,046	4,462	4,878	5,294	5,709
	Difference	607	669	732	794	856
Second year	Supply totals	4,653	5,131	5,610	6,088	6,566
	Demand totals	4,046	4,462	4,878	5,294	5,709
	Difference	607	669	732	794	856
Third year	Supply totals	4,653	5,131	5,610	6,088	6,566
	Demand totals	4,046	4,462	4,878	5,294	5,709
	Difference	607	669	732	794	856
Fourth year	Supply totals	4,653	5,131	5,610	6,088	6,566
	Demand totals	4,046	4,462	4,878	5,294	5,709
	Difference	607	669	732	794	856
Fifth year	Supply totals	4,653	5,131	5,610	6,088	6,566
	Demand totals	4,046	4,462	4,878	5,294	5,709
	Difference	607	669	732	794	856
NOTES:						
1. Supply and demand volumes are in AFY.						
2. Supply volume calculated as projected water demand plus 15 percent for demand variability.						

7.4 Regional Supply Reliability

CWC 10620

- (f) An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions.*

Since the declining water table conditions of the 1980's, YWA has done an excellent job of maintaining groundwater reserves and quality. YWA has adopted seven specific basin management objectives to maximize the use of local water resources and minimize the need to import water from other regions. The seven basin management objectives are:

- Maintain groundwater elevations that provide for sustainable use of the groundwater basin.
- Protect against potential inelastic land surface subsidence.
- Maintain and improve groundwater quality in the Yuba basin for the benefit of groundwater users.
- Manage groundwater to protect against adverse impacts to surface water flows in the Yuba River, Feather River, Honcut Creek, and Bear River within Yuba County.
- Improve communication and coordination among Yuba groundwater basin stakeholders.
- Maintain local control of the Yuba groundwater basin.
- Improve understanding of the Yuba groundwater basin and its stressors.

An annual Monitoring and Measurement Report is completed by June 1 each year, reporting conditions and activities completed through April 31 of the prior year. This report is produced to ensure that management actions are achieving the seven basic management objectives and avoiding overdraft conditions and importation of water from other regions. YWA invites agencies with groundwater interests located within or adjacent to Yuba Water Agency to attend and present at the Annual Groundwater Monitoring Report meeting. Additionally, YWA will attend meetings for groundwater management planning activities in Butte, Sutter, and Placer counties.

Chapter 8: Water Shortage Contingency Planning

LCWD has prepared a separate standalone Water Shortage Contingency Plan (WSCP), contained in Appendix J. This section includes a brief description summary of the WSCP and includes the drought risk assessment required by the UWMP Guidelines.

8.1 Purpose of the WSCP

LCWD has developed a WSCP to provide guidance if triggering events occur — whether from reduced supply, increased demand, or an emergency declaration — and to identify corresponding actions to be taken during the various stages of a water shortage. The plan includes voluntary and mandatory stages which are intended to be fair to all water customers and users while having the least impact on business, employment, and quality of life for residents.

8.2 Annual Assessment

New provisions in Water Code Section 10632.1. require that an urban water supplier such as the District, conduct an annual water supply and demand assessment (“Annual Assessment”), on or before July 1 of each year, to be submitted to DWR. As part of the WSCP, LCWD has identified the timeline, staff and outside agency coordination, and other actions necessary to conduct the Annual Assessment.

8.3 Shortage Stages

The WSCP describes six water shortage stages corresponding to progressive ranges of up to 10, 20, 30, 40, and 50 percent shortages and greater than 50 percent shortage.

8.4 Water Shortage Response Actions

The WSCP identifies water shortage response actions, including:

- Supply augmentation
- Customer demand reduction measures (including enforcement)
- Operational changes
- Consumption reduction methods

Chapter 9: Demand Management Measures

CWC 10631

- (e) Provide a description of the (wholesale) supplier's water demand management measures. This description shall include all of the following:
 - (1)(A) ... a narrative description that addresses the nature and extent of each water demand management measure implemented over the past five years.
 - (1)(B) The narrative pursuant to this paragraph shall include descriptions of the following water demand management measures:
 - (ii) Metering.
 - (iv) Public education and outreach.
 - (vi) Water conservation program coordination and staffing support.
 - (vii) Other demand management measures that have a significant impact on water use as measured in gallons per capita per day, including innovative measures, if implemented.
 - (2) For an urban wholesale water supplier, as defined in Section 10608.12, (provide) a narrative description of the items in clauses (ii), (iv), (vi), and (vii) of subparagraph (B) of paragraph (1), and a narrative description of its distribution system asset management and wholesale supplier assistance programs.

This Chapter addresses the Demand Management Measure (DMM) requirements of the Act for LCWD and includes a description of utility-based and other DMMs being implemented and DMMs implemented over the past 5 years to meet SBX7-7 water use targets.

9.1 Demand Management Measures for Retail Agencies

Sections 9.1.1 through 9.1.6 provide a narrative description of utility-based DMMs that LCWD has been implementing since its 2010 UWMP was developed and adopted. LCWD is currently implementing all these DMMs as standard practices. Section 9.1.7 provides a narrative description of other DMMs being implemented by LCWD that impact total water demands.

LCWD has implemented DMMs that are cost effective and within approved budget amounts. As the agency grows, with increasing staff and budget, LCWD will increase its efforts to reduce demand.

9.1.1 Water Waste Prevention Ordinances

LCWD has the authority to establish water waste prevention ordinances and policy. If required, LCWD has the authority to discontinue service to the customer as identified in Section 5.9.3 of the water code book, which reads, "No customer shall knowingly permit leaks or waste of water. Where water is wastefully or negligently used on a customer's premises, seriously affecting the general service, the District may discontinue the service if such conditions are not corrected within five (5) days after giving the customer written notice."

LCWD increases water waste enforcement as more stringent stages of its WSCP are triggered and additional demand reductions are required to meet water use cutback targets.

9.1.2 Metering

CWC 526

- (a) *Notwithstanding any other provisions of law, an urban water supplier that, on or after January 1, 2004, receives water from the federal Central Valley Project under a water service contract or subcontract... shall do both of the following:*
- (1) *On or before January 1, 2013, install water meters on all service connections to residential and nonagricultural commercial buildings... located within its service area.*

CWC 527

- (a) *An urban water supplier that is not subject to Section 526 shall do both the following:*
- (1) *Install water meters on all municipal and industrial service connections located within its service area on or before January 1, 2025.*

LCWD's service area is fully metered and all connections are billed based on the volume of water consumed during a designated water billing period. All new construction is required to have water meters on all new water service connections to the system. In addition, customers are classified by meter type including single family residential, multifamily residential, commercial, institutional, industrial, and irrigation accounts. As of 2021, ninety-nine (99) percent of LCWD's water meters are AMR technology allowing for an efficient reading process. The remaining are manually read.

LCWD periodically tests water meters and replaces older meters once they reach their useful life or do not accurately measure water use per AWWA accuracy standards. The average age of water meters in the system is less than 15 years.

9.1.3 Conservation Pricing

LCWD bills its customers monthly for water service on a commodity basis for metered water use. LCWD charges a single tier rate for all water consumption plus a monthly service charge based on meter size. LCWD does not currently have a conservation pricing rate structure that is tied to sewer service. As LCWD's water system grows, LCWD may consider the cost-effectiveness of conservation pricing in the future to reliably meet future water use targets. A copy of the LCWD Water Rate Schedule is included in Appendix G.

9.1.4 Public Education and Outreach

LCWD communicates with its customers through monthly utility billing. Customers receive monthly utility bills for water and sewer service. The utility bills indicate the amount of water used by each customer during a given billing period. Customers use their monthly water use information to manage their water use and monitor for possible leak losses occurring that impact customer water demands. LCWD plans to update its web page to provide more information on its water supplies, water quality, customers service, and demand management programs. Periodically, other communications sharing water system information and data are conveyed to the customer base. LCWD plans to review its current public education and outreach programs and update accordingly to enhance customer communication and improve participation in LCWD programs.

LCWD developed an updated web page that shares more information with customers and enhances public education and outreach efforts. The web page provides more information on DMM programs and includes water saving tips and information. The web page serves as an effective means to broadcast information pertaining to water conditions and work that LCWD is

engaged in to improve the reliability of the water system. LCWD may consider partnering with surrounding communities to share public information program costs to improve the cost-effectiveness and efficacy of the DMM program.

School Education Programs

LCWD has not historically established a school education program however, the District began offering school education materials that meet state curriculum standards on an as requested basis. LCWD will evaluate options for expanding its school education program during the 2020-2025 planning period. LCWD will consider local efforts as well as regional collaborative programs that provide school education materials to elementary age children in a more cost-effective manner. LCWD will be updating its DMM program budget in the FY21-22 budget cycle and will consider funding an on-going school education program for K-6 age students.

9.1.5 Programs to Assess and Manage Distribution System Real Loss

LCWD has an active Water Loss Control Program. Water losses are monitored by the water distribution staff by reviewing the annual Distribution System Water Audit results and assessing field conditions and infrastructure failures. LCWD tracks both real and apparent water losses as part of its on-going water loss control efforts. If the water distribution staff determines from the annual water audit analysis that a leak detection survey is needed, LCWD will contract with a qualified leak detection company to perform the survey using the most current leak detection technology.

LCWD performs its annual Distribution System Water Audits, consistent with American Water Works Association (AWWA) M36 methodology. LCWD plans to conduct these water audits on an annual basis. If annual audit results indicate water losses would exceed water system efficiency goals, a full audit is triggered to identify water loss sources and determine impacts on overall system water losses.

For Calendar Years 2016 to 2020, LCWD implemented the AWWA M36 Standard Water Audit methodology using version 5.0 of the water audit software—LCWD will complete the 2020 water audit report by the submission deadline of September 2021. The approach consists of a component analysis of metered water sources, metered water demands, quantification of water losses (apparent and real), and calculation of non-revenue water as a percent of total system flows. Results of the analysis, which are included in Appendix C, show an infrastructure leakage index (ILI) of 8.32. According to general guidelines, an ILI of 1.0 to 3.0 is appropriate for systems where water resources are costly to develop or purchase, the ability to increase revenues via water rates is greatly limited because of regulation or low ratepayer affordability and operating with system leakage above this level would require expansion of existing infrastructure and/or additional water resources to meet the demand. An ILI of >5.0 to 8.0 is appropriate for systems where the cost to purchase or obtain/treat water is low, as are rates charge to customers; operating with system leakage within this level can provide superior reliability, capacity, and integrity of the water supply infrastructure make it relatively immune to supply shortages. The initial evaluation suggests that LCWD will review the water audit analysis with a focus on determining whether production and/or customer metering data contains any errors that is skewing results, as defined by AWWA methodology.

LCWD will continue to annually implement the Standard Audit and Water Balance worksheets procedures following the AWWA M36 protocol for calendar years 2021-2025.

LCWD used version 5.0 of the AWWA Water Audit software for its system water audit evaluations and will use the current software for all future evaluations (subject to AWWA software updates), which includes metrics for evaluating the validity of the system data. LCWD will provide additional staff training for conducting system water audits and validating the data to reduce water system losses to within LCWD targets. LCWD will further develop its work order system that documents leak locations and repair history to provide a solid foundation for prioritizing future water loss control actions.

9.1.6 Water Conservation Program Coordination and Staffing Support

LCWD staff from the water distribution team and utility billing team work together to fill the role of LCWD's water conservation coordinator. LCWD is evaluating teaming with other water suppliers to hire a water conservation coordinator for the Marysville, Linda, and Olivehurst communities. LCWD also hires consultants on as needed basis to provide Water Conservation Program design and implementation services.

LCWD will consider the cost-effectiveness of hiring a dedicated water conservation coordinator based on local and regional factors, as well as budget availability as the service area continues to grow and water use targets remain an important element of future DMM program efforts.

9.1.7 Other Demand Management Measures

LCWD intends to continue to plan and implement other DMM programs in its water system using both LCWD-only programs as well as collaborative regional programs with partners with similar interests. The benefits of regional programs include sharing administrative costs and responsibilities, promoting customer rebate programs, and conducting outreach/education programs offered to LCWD water customers. LCWD will continue to support and engage in regional activities if cost-effective and will focus on improving customer outreach and promoting awareness of available DMM programs. Specific DMM program activities will be implemented that are locally cost-effective and/or economical to implement on a regional scale. At this time, cost-effectiveness for LCWD will be based on the avoided cost of water.

9.1.7.1 Residential Assistance Programs

Water Survey Programs for Single-Family and Multi-Family Residential Customers

LCWD provides water surveys as requested for single and multi-family customers. LCWD provides water surveys based on program demand and staff availability. Program participation is variable; however, LCWD will be evaluating a more targeted program to include in future DMM program budgets that focuses on higher water users. LCWD will evaluate water use records and account characteristics to identify customers with the highest benefit/cost ratio for participation.

Effectiveness for this DMM is quantifiable by the number of water surveys conducted and basis for program participation. Targeting higher water users will improve the overall program effectiveness and result in higher water savings.

Depending upon available resources, LCWD may conduct a survey among participating customers on resulting awareness of water conservation. LCWD may also consider sampling the efficiency of existing customers by collecting meter master data to disaggregate end uses and indicate the saturation of water use efficiency measures on a broad scale. A report of the findings from a survey or end use study would be included with the next UWMP update.

Residential Plumbing Retrofit

Construction within LCWD is subject to Yuba County ordinances and must meet the most recent California Uniform Building Code and California Plumbing Codes. LCWD does not offer low flow water use efficiency kits for free due to budgetary limitations. However, LCWD does make general recommendations to users on types of retrofits that can be purchased at local retailers, which may reduce future customer water use. Since LCWD's service area is considered a severely disadvantaged community, the actual market saturation rates of plumbing fixtures without local incentives available is expected to be below the overall market saturation rates in other areas with highly active programs.

LCWD provides recommendations on plumbing retrofit options that reduce water use as requested but will consider implementing this DMM fully in the future. LCWD also promotes the DWR High Efficiency Toilet Rebate Program available through their website.

LCWD tracks program participation rates and calculates water savings generated from retrofitting older fixtures and appliances. Once installed, high efficiency toilets have a long useful life, usually exceeding 30-years or more. Retrofits that reduce indoor water use may also have wastewater rate and energy reduction benefits.

9.1.7.2 Landscape Water Surveys

LCWD offers large landscape water surveys to high water-use accounts. There are approximately forty (40) irrigation accounts that could be targeted for this program. The focus of the program is on the top ten users in this category based on water use per acre. LCWD provides ideas about how these water intensive accounts can better manage their water use including automating irrigation controllers at the site and installing efficient nozzles on sprinklers. Irrigation scheduling in accordance with local evapotranspiration requirements is also recommended. Surveys are provided based on program demand and available resources.

9.1.7.3 High-Efficiency Toilets/Clothes Washers

High-Efficiency Washing Machines (HECW)

LCWD does not provide customers with High Efficiency Clothes Washer (HECW) rebates. LCWD will consider HECW rebates in the future if local funding can be supplemented using state or federal grants whenever possible. LCWD may also consider leveraging other utility programs such as PG&E who provides rebates for HECW and dishwashers. The water efficiency of clothes washers is represented by the "water factor," which is a measure of the amount of water used to wash a standard load of laundry. Washers with a lower water factor save more water. Generally, programs target HECW rebate programs set eligibility requirements at water factor 4.0 or less which can save over 10,000 gallons per year per washer over a conventional top loading washer. LCWD does not currently contribute any funds toward a HECW rebate program.

A HECW rebate program would track customer participation rates by user class and type of user (low, median, or high usage). Water savings can be monitored and calculated annually and seasonally. HECW rebate programs provide water savings over the useful life of the product, which is typically 12 years. HECW rebate programs may also result in wastewater savings from indoor use reduction if rates are consumption based and energy savings from reduced pumping.

Residential High Efficiency Toilet Replacement Program

LCWD does not currently provide customers with High Efficiency Toilet (HET) rebates. LCWD may consider HET rebates in the future during state-drought conditions or if local funding can be supplemented using state or federal grants whenever possible. LCWD may also consider leveraging other utility programs such as DWR's High Efficiency Toilet Rebate Program or regional programs if available. The water efficiency of toilets is represented by gallons per flush (gpf). Products that use 1.28 gpf or less are considered HET models and would be eligible for future rebate programs. More efficient products are in the market including the Stealth model, which uses 0.8 gpf or less. Generally, program water savings with 1.28 gpf or less models can exceed 10,000 gallons per household depending on the number of occupants and other factors.

9.1.7.4 Commercial, Industrial, and Institutional (CII) DMMs

LCWD has very few commercial, industrial, and institutional (CII) accounts resulting in very low potential water savings from implementing this DMM. This DMM program would target high water users only and may become more important as the number of CII accounts grows over time. LCWD may implement a CII program in the future considering the cost-effectiveness of providing conservation programs for CII accounts as well whether or not LCWD is meeting its future water targets. Leak reduction would be a consideration for these accounts with larger leak losses possible. Focusing on the benefits of a CII program to customers including water, wastewater and energy savings would be included in the marketing to encourage program participation. LCWD would consider regional coordination with surrounding communities in considering this program in the future.

9.1.7.5 Large Landscape

There are currently 39 irrigation landscape users that account for approximately five (5) percent of LCWD's total annual water usage. LCWD does not currently have any conservation programs or incentives to reduce water use for landscape irrigation users. However, LCWD can offer irrigation landscape users advice and suggest products to reduce their water use such as weather-based irrigation controllers (WBIC) and precision spray nozzles. Only the highest water users on a gallons/acre basis are offered landscape water audit services. Water use patterns are monitored for participating and non-participating accounts. LCWD will consider implementing DMM programs for large landscape accounts based on cost-effectiveness and need to reliably meet future water use targets.

9.1.7.6 Financial Incentives

LCWD will consider additional financial incentives in the future that would be offered directly to customers or in partnership with other agencies to improve DMM Program cost-effectiveness as follows:

- HECWs rebates: High-Efficiency Clothes Washer rebates are already being implemented by PG&E and other agencies in the region and may be considered by LCWD to provide reliable water savings.
- Zero and low-flow urinal rebates: Rebates would include CII fixtures such as zero consumption and ultra-low volume urinals as well as CII-specific HETs.
- Offer fixture rebates to CII and multi-family customers: LCWD would consider offering toilet rebate programs to CII and multi-family customers as a means to meet future water use targets. LCWD will evaluate these incentives as part of updating its overall DMM program.

- Larger variety of fixture rebates: LCWD may consider other rebate programs including hot water distribution tanks and high-pressure spray nozzles.
- Cash-for-Grass rebates: LCWD has not offered this program to date however will evaluate whether or not it fits in with its updated DMM program considering cost-effectiveness and ability to meet future water use targets on a reliable basis. Customers would receive an incentive based on dollars per square-foot of turf removed and replaced with California-Friendly landscape. LCWD promotes the current DWR Turf Replacement Program.
- Expansion of large landscape program: LCWD will be evaluating the effectiveness of various landscape DMM programs to determine if they are necessary to meet future water use targets. These programs would target devices such as precision nozzles and weather based irrigation controllers.

9.1.7.7 Building Code/New Standards

LCWD supports adoption of the CAL Green Building Code standards (adopted January 2011) and SB407 provisions (Plumbing Retrofit on Resale) that improve the water use efficiency of new accounts and older accounts that retrofit fixtures and appliances with efficient products. These code changes will assist LCWD in meeting future water use targets on a reliable basis.

9.1.7.8 Information/Tracking

LCWD monitors the results of its DMM programs and tracks progress and results on participating account water use patterns. The following methods will be used to track DMM implementation efforts depending on availability of water system tools or technology.

1. Automatic Meter Reading (AMR): LCWD will continue to implement and utilize AMR in its water system as a priority to obtain real time data for water usage and to identify customer-side leaks. This information can also help LCWD monitor the impacts of existing DMM programs, make adjustments where necessary and develop new programs. As of 2021, LCWD has 99 percent AMR saturation and expects to be 100 percent AMR upgraded by 2025.
2. Water Use Tracking Tools: Another priority, LCWD will continue to improve DMM program database tracking tools for water savings associated with its DMM programs and increase flexibility in adding or changing program elements to improve results.

LCWD plans to continue to implement and track DMM programs in its water system and will partner with other entities when available to increase DMM participation levels by leveraging regional public outreach and marketing materials, administrative costs, and outside funding sources.

9.2 Implementation over the Past 5 Years

This section requires the supplier to provide a description of all DMMs that have been implemented over the past 5 years from 2016 through 2020. LCWD has been actively implementing DMMs over the past 5 years through local programs. A description including budget, narrative, and water savings information follows for DMMs implemented during the 2016-2020 period in accordance with the Act.

The District’s 2017 Master Plan evaluated current and future water savings from the implementation of DMMs that were described in the District’s 2015 UWMP. Water demand projections were also estimated for two additional conservation scenarios: SBX7-7’s 20% conservation by 2020 and the SWRCB’s “Conservation as a Way of Life” (assumed indoor water use budget of 55 gpcd and allocation for outdoor irrigation). The Master Plan provided a basis for optimizing the development of the District’s DMM programs and budgets, assessing new and emerging DMM programs, and focusing on DMMs that are cost-effective, appropriate for each district depending on cost-effectiveness, funding availability, local wholesaler and regional participation levels, and SBX7-7 target objectives.

9.2.1 Past DMM Program Budget Expenditures (2016-2020)

Table 9-1 summarizes LCWD’s actual DMM expenditures over the past five (5) years including staffing, programmatic, and consultant costs required for DMM program planning, implementation, and monitoring. LCWD’s DMM budget is constrained by annual budgets approved by the Board and availability of outside funding sources to augment LCWD budget approvals. This establishes the allowable DMM expenditures for LCWD’s water system. DMM expenditures that show a value of zero (0) are provided through YWA—the District is partnered with YWA on the rebate programs. School Education Programs will likely be carried forward in conjunction with YWA by 2025.

Program/Item	2016	2017	2018	2019	2020
School Education Program	-	-	-	-	-
Public Information Program	\$48,241	\$49,886	\$51,530	\$53,175	\$54,820
Residential Water Audits	\$10,460	\$10,817	\$11,173	\$11,530	\$11,887
Rebate Program Supplies	0	0	0	0	0
HET/HECW Rebate Programs	0	0	0	0	0
Landscape Rebate Programs	0	0	0	0	0
CII Water Audits/Surveys	\$2,972	\$3,061	\$3,153	\$3,247	\$3,345
DMM Program Staff Costs	\$42,191	\$43,629	\$45,067	\$46,506	\$47,944
Total	\$103,507	\$107,036	\$110,565	\$114,093	\$117,622

The annual budget is established by the LCWD Board, which is approved as part of the annual budget adoption process. Actual DMM program expenditures are based on program activity levels experienced each year, which is tracked and monitored to assess overall program effectiveness. During the recent prolonged drought period, LCWD has experienced higher annual expenditures as cutback targets became more challenging to achieve. Annual expenditures vary by year depending on budget availability, DMM participation rates, outreach and marketing efforts, impacts from regional programs, and state-wide issues and concerns.

9.2.2 Past DMM Narrative Summary (2016-2020)

Table 9-2 summarizes LCWD’s DMM program implementation over the past 5 years. Current LCWD rebate programs are being implemented in collaboration with DWR rebate programs as

noted below. LCWD plans to continue existing DMM programs. A narrative description of past DMM programs is provided below.

Table 9-2: DMM Narrative Summary Table (2016-2020)					
Program/Item	2016	2017	2018	2019	2020
School Education Program	-	-	-	-	-
Public Information/Outreach Program	Yes	Yes	Yes	Yes	Yes
Residential Water Audits	Yes	Yes	Yes	Yes	Yes
HET Rebate Program (*)	Yes	Yes	Yes	Yes	Yes
HECW Rebate Program	No	No	No	No	No
Landscape Rebates/Programs (*)	Yes	Yes	No	No	No
CII Water Audits	Yes	Yes	Yes	Yes	Yes
Conservation Kits/Devices (Partnered with Yuba Water Agency)	Yes	Yes	Yes	Yes	Yes
DMM Program Staff Costs	Yes	Yes	Yes	Yes	Yes
NOTE: (*) = joint LCWD/DWR DMM Programs (Toilet and Turf Removal Rebate Programs).					

LCWD DMMs are described in more detail in section 9.1.7.

DMMs implemented over the past 5 years have helped LCWD meet its SBX7-7 2020 water use target of 172 GPCD along with the SWRCB drought water use reduction regulations.

9.2.3 Past DMM Water Savings Over the Past 5 Years

Table 9-3 summarizes the estimated water savings from the District's DMMs that were evaluated in the 2017 Master Plan.

Table 9-3: 2017 Estimation of Water Savings from DMM Implementation				
DMM	Unit	Unit Saving	Quantity	Total Saving (AFY)
Water Survey Program ¹	# of single family housing	15 gal/day	3,987	34
	# of multifamily housing	6.6 gal/day	253	1
HET Rebate Program ¹	# of families	13,000 gal/yr	4,240	85
Conservation Kits/ Devices ^{1,2}	# of families	2,900 gal/yr	4,240	19
CII Water Audit ³	AFY	30%	239	72
Total Estimated Savings				211
NOTE: 1. The program is carried out in both single-family housings and multi-family housings. 2. The Conservation kits/ devices are primarily considered to be WaterSense showerheads. 3. Only high-water users are targeted, General Commercial, Commercial Mixed Use and General Commercial/High Density Residential.				

Table 9-4 summarizes the estimated water savings on both an annual and lifetime (i.e., over the useful life of the device) basis for the DMMs implemented over the past 5 years in the LCWD water system. The annual water savings are based on commonly used end use savings factors, customer behavior assumptions, and number of program participants in a given program. Lifetime savings take the annual savings and project lifetime savings based on the useful life of the measure. The water savings summary generated below represents an average savings calculation on a programmatic scale.

Table 9-4: DMM Program Water Savings Summary Table (2016-2020)					
Savings Period	2016	2017	2018	2019	2020
Annual Water Savings	21	22	23	25	26
Lifetime Water Savings	375	379	386	390	397
NOTE: 4. Volume is in units of AFY.					

The DMM program water savings achieved by LCWD water customers improves the District's overall water use efficiency and enables LCWD to reliably meet established water use targets during normal and dry years. LCWD will continue to monitor water savings to ensure that per capita water use reductions are reliable for future planning efforts.

9.3 Planned Implementation to Achieve Water Use Targets

In planning for future DMM programs, LCWD would consider the following factors: current Board-approved water conservation program funding levels, current efficiency level of LCWD water customers and user classes, cost-effective program design and implementation, sustainability of water savings, and ability to meet future water use targets. DMM programs are an important long-term strategy to enable LCWD to provide affordable water service to customers. While meeting water use targets is important, it is not the only consideration in planning future DMM programs.

LCWD's ability to obtain funding and implement DMM programs is contingent on approval of the District's annual budget, which covers a one (1) year fiscal year term. LCWD has met its conservation goals and will maintain DMM programs to sustain reasonable water use.

9.3.1 Planned DMM Budget (2021-2025)

Table 9-5 summarizes LCWD's projected DMM annual budget based on averaging the actual 2016-2020 annual DMM program expenditures to serve as a planning baseline. The DMM program budget is consistent with expenditures approved by the LCWD Board in its most recent approved annual budgets. The expenditures include LCWD staffing costs required to implement the full slate of DMM programs as well as the programmatic costs associated with implementing DMM programs including materials, supplies, rebates, or other associated costs.

Table 9-5: DMM Program Budget – Projected Expenditures Summary Table (2021-2025)					
Program/Item	2021	2022	2023	2024	2025
School Education Program	\$515	\$530	\$546	\$563	\$580
Public Information Program	\$63,551	\$65,458	\$67,421	\$69,444	\$71,527
Residential Water Audits	\$13,780	\$14,194	\$14,620	\$15,058	\$15,510
Rebate Program Supplies	TBD	TBD	TBD	TBD	TBD
HET/HECW Rebate Programs	TBD	TBD	TBD	TBD	TBD
Landscape Rebate Programs	TBD	TBD	TBD	TBD	TBD
CII Water Audits/Surveys	\$3,445	\$3,549	\$3,655	\$3,765	\$3,878
DMM Program Staff Costs	\$56,142	\$57,826	\$59,561	\$61,348	\$63,189
Total	\$136,918	\$141,025	\$145,256	\$149,614	\$154,102
NOTES: 1. The 2021-2025 projected DMM program expenditures include a 3% annual escalation factor and are based on the FY20-21 actual annual DMM costs. 2. The actual 2021-2025 DMM expenditures will be based on Board-approved DMM budgets and actual DMM expenditures. 3. TBD (to be determined) programs will be implemented in conjunction with the SWRCB drought water use reduction regulations.					

The actual annual budgets for 2021 through 2025 will be established by what is included in the annual budgets approved by the LCWD Board. In addition, what the actual DMM expenditures will be based on DMM program activity levels experienced each year, which can be highly variable depending on local, regional, and state-wide issues and conditions. LCWD DMM program expenditures could be augmented through outside funding opportunities to facilitate meeting DMM program target participation rates, providing adequate public information and marketing outreach, and creating synergies from regional programs. Programs that are listed as TBD (to be determined) will be considered for implementation during statewide drought conditions and/or in conjunction with the SWRCB drought water use reduction regulations.

9.3.2 Planned DMM Narrative Summary (2021-2025)

Table 9-6 summarizes LCWD’s planned DMM program implementation over the next five (5) years (as determined by currently approved LCWD DMM programs). For LCWD, this includes only the local LCWD DMM programs (not including any regional DMM collaborations).

Table 9-6: DMM Narrative Summary Table (2021-2025)					
Program/Item	2021	2022	2023	2024	2025
School Education Program	YES	YES	YES	YES	YES
Public Information/Outreach Program	YES	YES	YES	YES	YES
Residential Water Audits	YES	YES	YES	YES	YES
HET Rebate Program Supplies	NO	TBD	TBD	TBD	TBD
HET(*)/HECW Rebate Program	NO	TBD	TBD	TBD	TBD
Landscape Programs (*)	YES	TBD	TBD	TBD	TBD
CII Water Audits/Surveys	YES	YES	YES	YES	YES
District DMM Program Staff Costs	YES	YES	YES	YES	YES
NOTES: (*) = LCWD promotion of DWR HET and Turf Removal rebate programs, to continue in accordance with DWR program offerings over the 5 year period.					

LCWD’s other DMMs are described in more detail in section 9.1.7.

Chapter 10: Plan Adoption, Submittal, and Implementation

CWC 10621

(f) Each urban water supplier shall update and submit its 2020 plan to the department by July 1, 2021.

This chapter describes the District's actions to meet the requirements of the Act pertaining to public review and availability. LCWD must provide at least 60-day notice prior to changing or adopting the plan, must conduct a public hearing prior to adoption, must properly notice the public hearing, must make the UWMP document available for public review, and make the final adopted plan available to the public, cities and counties, and DWR within 30-days of adoption. Further, the adopted plan must be submitted to DWR, cities and counties, and State Library within 30-days of adoption.

10.1 Inclusion of All 2020 Data

LCWD is reporting on a calendar year basis and has included all water use and planning data for the entire 2020 calendar year. LCWD's Distribution System Water Audit was based on calendar year 2019 data and information, followed the AWWA M36 methodology, and used the AWWA Water Audit Software (version 5.0) to conduct the water audit in accordance with 2020 UWMP requirements.

10.2 Notice of Public Hearing

LCWD held a Public Hearing prior to adopting its 2020 UWMP to provide the public with an opportunity to review and comment on LCWD's 2020 UWMP. The main audiences to be noticed are local water agencies, cities, counties, and the public. The efforts to properly notice its Public Hearing are described below.

CWC 10642

Each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of both the plan and the water shortage contingency plan...The urban water supplier shall provide notice of the time and place of a hearing to any city or county within which the supplier provides water supplies...

10.2.1 Notice to Cities and Counties

CWC 10621

- (b) *Every urban water supplier required to prepare a plan shall... at least 60 days prior to the public hearing on the plan ... notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan.*

CWC 10642

...The urban water supplier shall provide notice of the time and place of hearing to any city or county within which the supplier provides water supplies. A privately owned water supplier shall provide an equivalent notice within its service area.

Notifications indicating preparation of the 2020 UWMP were provided to cities and counties within which LCWD provides water at least 60 days in advance of the Public Hearing as required by the Act. Copies of the draft plan were available to the public for review at LCWD's office. Appendix H contains the following:

- Copy of the public hearing notice from the local newspaper,
- Notifications and follow-up correspondence provided to cities and counties, and
- A copy of the Board resolution adopting the 2020 UWMP.
- The following cities and counties were notified as indicated in Table 10-1 below:

Table 10-1: Notification to Cities and Counties		
City Name	60 Day Notice	Notice of Public Hearing
None		
County Name	60 Day Notice	Notice of Public Hearing
Sutter County	Yes	Yes
Yuba County	Yes	Yes
NOTES:		

10.2.2 Notice to the Public

CWC 10642

...Prior to adopting either, the urban water supplier shall make both the plan and the water shortage contingency plan available for public inspection and shall hold a public hearing or hearings thereon. Prior to any of these hearings, notice of the time and place of the hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code.

Government Code 6066

Publication of notice pursuant to this section shall be once a week for two successive weeks. Two publications in a newspaper published once a week or oftener, with at least five days intervening between the respective publication dates not counting such publication dates, are sufficient. The period of notice commences upon the first day of publication and terminates at the end of the fourteenth day, including therein the first day.

LCWD conducted a Public Hearing and adopted the 2020 UWMP on June 14, 2021. The District filed two legal public notices in the Appeal Democrat, including time and place, to inform the public of the upcoming Public Hearing and to make the 2020 UWMP available for public review and comment. The first notice was published on **May 28, 2021**, and the second notice was published on **June 7, 2021**. A copy of the public notice filed in the Appeal Democrat is included in Appendix H.

10.3 Public Hearing and Adoption

CWC 10642

...Prior to adopting a plan, the urban water supplier shall hold a public hearing thereon.

CWC 10608.26

- (a) In complying with this part, an urban retail water supplier shall conduct at least one public hearing to accomplish all of the following:*
- (1) Allow community input regarding the urban retail water supplier's implementation plan for complying with this part.*
 - (2) Consider the economic impacts of the urban retail water supplier's implementation plan for complying with this part.*
 - (3) Adopt a method, pursuant to subdivision (b) of Section 10608.20 for determining its urban water use target.*

LCWD conducted a virtual Public Hearing on June 14, 2021 prior to adopting its 2020 UWMP. The purpose of the Public Hearing was to allow community input regarding the District's implementation plan and to consider the economic impacts of the District's implementation plan. The Public Hearing was opened and closed, with public comments documented and considered for inclusion into the Final 2020 UWMP.

10.3.1 Adoption

CWC 10642

... After the hearing or hearings, the plan or water shortage contingency plan shall be adopted as prepared or as modified after the hearing or hearings.

LCWD conducted a Public Hearing on June 14, 2021 regarding its 2020 UWMP to receive public comment on the plan before adoption. LCWD considered the public comments received at the Public Hearing in the Final 2020 UWMP adopted by the LCWD Board at its June 14, 2021 meeting. A copy of the Board resolution adopting the 2020 UWMP is included in Appendix H.

LCWD is committed to implementing the projects and plans provided within this document. However, it is important to note that execution of the plan is contingent upon the regulatory limitations and approval of state agencies and local approval of annual budgets supporting implementation efforts. LCWD shall not be responsible for changed or unforeseen conditions affecting any of the above factors after adoption of the plan.

10.4 Plan Submittal

CWC 10644

- (a)(1) An urban water supplier shall submit to the department, the California State Library, and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption.*
- (a)(2) The plan, or amendments to the plan, submitted to the department pursuant to paragraph (1) shall be submitted electronically and shall include any standardized forms, tables, or displays specified by the department.*

CWC 10635

- (c) The urban water supplier shall provide that portion of its urban water management plan prepared pursuant to this article to any city or county within which it provides water supplies no later than 60 days after the submission of its urban water management plan.*

A copy of LCWD's Final 2020 UWMP shall be submitted to DWR, the California State Library, and any city or county within the supplier's service area within 30 days of adoption.

10.4.1 Submitting an UWMP to DWR

LCWD will submit the adopted 2020 UWMP to DWR through the DWR online submittal process, including completed DWR Tables within 30-days of when the 2020 UWMP was adopted by the LCWD Board. The DWR Tables not used within the body of this Plan can be found in Appendix D.

10.4.2 Electronic Data Submittal

LCWD submitted completed DWR Tables included in its adopted 2020 UWMP through the DWR online submittal process established by DWR to receive all UWMP submittals.

10.4.3 Submitting a UWMP to the California State Library

CWC 10644

- (a)(1) An urban water supplier shall submit to the department, the California State Library, and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption.*

LCWD prepared and submitted a copy of its adopted 2020 UWMP to the California State Library within 30 days of adopting its 2020 UWMP.

10.4.4 Submitting a UWMP to Cities and Counties

CWC 10644

- (a)(1) An urban water supplier shall submit to the department, the California State Library, and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption.*

LCWD prepared and submitted a copy of its adopted 2020 UWMP to all cities and counties receiving water service within 30 days of adopting its 2020 UWMP.

10.5 Public Availability

CWC 10645

- (a) Not later than 30 days after filing a copy of its plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours.*
- (b) Not later than 30 days after filing a copy of its water shortage contingency plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours.*

LCWD's adopted Final 2020 UWMP was made available to the public in hard copy at the District's Administration Office located at 1280 Scales Avenue, Marysville, CA 95901. This plan includes all information necessary to meet the applicable requirements of California Water Code. Appendix I includes copies of the transmittals included with the adopted plan as supporting documentation.

10.6 Amending an Adopted UWMP

CWC 10621

(d) The amendments to, or changes in, the plan shall be adopted and filed in the manner set forth in Article 3 (commencing with Section 10640).

CWC 10644

(a)(1) Copies of amendments or changes to the plans shall be submitted to the department, the California State Library, and any city or county within which the supplier provides water supplies within 30 days after adoption.

Significant changes or amendments to LCWD's adopted 2020 UWMP will require the steps for notification, public hearing, adoption, and submittal to DWR, the California State Library, and any city or county within which the supplier provides water supplies within 30 days after adoption by LCWD.

10.7 Implementation

CWC 10643

An urban water supplier shall implement its plan adopted pursuant to this chapter in accordance with the schedule set forth in its plan.

LCWD is committed to the implementation of this UWMP concurrent with the scheduled activities identified herein as required by Section 10643 of the Act. LCWD is able to properly plan and implement the actions identified in this document and other key planning efforts to proactively address water supply reliability challenges.

LCWD is committed to the implementation of its 2020 UWMP as indicated with a proven commitment to funding and implementing DMM programs to improve long-term water use efficiency and manage its limited resources. LCWD will continue to support the planning and implementation of its DMM programs.

LCWD is committed to implementation of the projects, plans, and discussions provided within this document. Importantly, the execution of the plan is contingent upon the approval of annual budgets, level of DMM program participation, impact of regional collaborative efforts, availability of outside funding sources, and policy and regulatory factors that may influence DMM implementation over time. This document presents the water supply, reliability, DMM, and water shortage planning programs known to be in effect at the time of plan adoption.

LCWD will also be considering emerging water conservation technologies, new requirements (e.g., SB 555), baseline studies to determine DMM effectiveness, and better defining the role of DMM programs in managing water supplies during normal and dry year conditions. LCWD will continue to be engaged in regional water planning processes, promote the efficient use of water supplies, and support steps to procure local reliable resources wherever feasible and cost-effective to maintain long-term supply reliability.

LCWD will be evaluating existing DMM programs and refining future efforts when necessary to improve DMM program cost effectiveness and savings reliability. LCWD will consider regional participation in DMM programs through partnerships with other water suppliers, energy utilities, and other agencies in the region that support DMM programs.

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1280 Scales Ave
Marysville, CA 95901

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