LAMONT PUBLIC UTILITY DISTRICT

URBAN WATER MANAGEMENT PLAN

2020 Update

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Acronyms and Abbreviations

%	Percent
20x2020	20% water use reduction in GPCD by year 2020
Act	Urban Water Management Planning Act of 1983
AF	Acre-Feet
AFY	Acre-Feet per Year
AWWA	American Water Works Association
BMP	Best Management Practice
DAC	Disadvantaged Communities
District	Lamont Public Utility District
DMM	Demand Management Measure
DRA	Drought Risk Assessment
DWR	Department of Water Resources
ERP	Emergency Response Plan
FY	Fiscal Year
GPCD	Gallons per Capita per Day
gpf	Gallons per Flush
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
GWRS	Groundwater Replenishment System
KGAGSA	Kern Groundwater Authority Groundwater Sustainability Agency
KRGSA	Kern River Groundwater Sustainability Agency
kWh	Kilowatt-Hour
MAF	Million Acre-Feet
MCL	Maximum Containment Level
MG	Million Gallon
MGY	Million Gallons per Year

MGD	Million Gallons per Day
MHI	Median Household Income
PPB	Parts Per Billion
PPT	Parts Per Trillion
PSA	Public Service Announcement
PUD	Public Utility District
RUWMP	Regional Urban Water Management Plan
SBx7-7	Senate Bill 7 as part of the Seventh Extraordinary Session
SGMA	Sustainable Groundwater Management Act
SJVAPCD	San Joaquin Valley Unified Air Pollution Control District
SSJMUD	Southern San Joaquin Municipal Utility District
SWID	Shafter Wasco Irrigation District
SWP	State Water Project
SWRCB	California State Water Resources Board
TDS	Total Dissolved Solids
UWMP	Urban Water Management Plan
WSCP	Water Shortage Contingency Plan
WUO	Water Use Objection

Executive Summary

Introduction and UWMP Overview

The Lamont Public Utility District (LPUD or District) prepared this 2020 Urban Water Management Plan (UWMP) to submit to the California Department of Water Resources in order to satisfy the UWMP Act of 1983 and subsequent California Water Code requirements. LPUD is a retail water supplier, providing water obtained solely from its groundwater supplies to its residents.

UWMPs are comprehensive documents that present an evaluation of a water supplier's reliability over a long-term (20-25 year) horizon. This UWMP provides an assessment of the present and future water supply sources and demands within the District's service area. This UWMP will present a water reliability assessment, a Drought Risk Assessment (DRA), and a Water Shortage Contingency Plan (WSCP) which will help the District predict and prepare for the future events of water shortages.

UWMP Preparation

In the preparation of this UWMP, the District coordinated with the Kern Groundwater Authority Groundwater Sustainability Agency, the Kern River Groundwater Sustainability Agency, and the Kern Delta Water District.

System Description

The District, located within Kern County, was incorporated in November, 1943. The District was formed with the purpose of providing water and sewer service to residential, municipal, commercial, and industrial developments within its boundaries. The system currently consists of seven (7) operating groundwater wells and five (5) storage tanks. The District operates and maintains its groundwater pumping facilities as well as its water distribution system.

Water Use Characterization

Water use within the District has in general decreased since 2013, with an annual average of 1,153 MG per year over the period from 2013 to 2020. For the year 2020, the District's water use was 1,191 MG of municipal water. By utilizing the population-based gallons per capita per day (GPCD) calculation, the GPCD for 2020 was calculated to be 178 GPCD. The District does not have any recycled or non-potable water utilization within its service area.

5-Year and 20-Year Water Use Projections

Water Use in 2025 is expected to decrease by 4 percent to 1,149 MG by the year 2025, and further decrease to 1,127 MG by the year 2040, which is a 5 percent decrease in water usage. These calculations take into account projected future

population, demographics, housing stocks, general increase in water use efficiency, and total municipal water service connections.

Conservation Target Compliance

Retail suppliers who prepare a UWMP are required to comply with the Water Conservation Act of 2009, also known as SBx7-7, which was signed into law in 2010. This law requires the State of California to reduce urban water use by 20% by the year 2020 when using the year 2013 as a baseline.

Since the District submitted a 2015 UWMP, the SBx7-7 Verification has already been completed. In this UWMP, the SBx7-7 Compliance Form was completed for the year 2020, and was submitted with this UWMP. It was established that the District met its 2020 water use target and thus was in compliance with SBx7-7. The actual 2020 consumption was 178 GPCD and the 2020 target GPCD was 196 GPCD.

Water Supply Characterization

The District meets all of its water demands through its use of groundwater wells. Groundwater is the sole source of water supply for the District. This groundwater supply has always been sufficient to meet the District's water demands. While there are no current plans to change the source of the District's water, more groundwater wells are planned to be drilled in order to maintain a water supply that is sufficient to meet the District's water demand.

Water Service Reliability Assessment and Drought Risk Assessment

A major function of this UWMP is to

demonstrate that the District has adequate water service reliability and is prepared for drought conditions. The District must establish whether it has the ability to meet the needs of the District even during a significant 5-year long extended drought.

For the water service reliability assessment – based on historical data and future projections, the District assessed the future water reliability and its ability to meet the demands of its customers through 2040 during normal, single-dry, and multiple-dry years.

For the DRA, with respect to historical data and future projections, it was established that the District could provide water to its customers even during a 5-year prolonged drought.

Water Shortage Contingency Planning

The Water Shortage Contingency Plan (WSCP) is a strategic process—and a stand-alone document—which helps the District prepare for any sort of water shortage. A water shortage may occur for a myriad of reasons, and it is the responsibility of the WSCP and the District's Emergency Response Plan (ERP) to manage any water shortage.

The WSCP provides for a real-time water supply availability assessment and has measured stages designed to respond to different levels of water shortage.

Demand Management Measures

The District recognizes the need to use its existing water resources in an efficient manner. The District has developed and is implementing plans related to water use prevention, installing water meters, using a water conservation pricing schedule, and utilizing different public education and outreach methods.

Plan Adoption, Submittal, and Implementation

The Water Code requires this UWMP to be adopted by the Lamont Public Utility District. Before this UWMP was adopted, the District notified the public and other interested parties as per the Water Code and also held a public hearing to receive input from the public. Post adoption of this UWMP, the District submitted the UWMP to the DWR and other key agencies and made this document available for public review no later than 30 days after filing with DWR.

1 UWMP Introduction and Lay Description

1.1 Purpose and Summary

This is the 2020 Urban Water Management Plan (UWMP) for the Lamont Public Utility District, prepared in accordance with the Urban Water Management Planning Act (Act) that was enacted in 1983, by the State of California Legislature (Legislature). The law requires an urban water supplier (Supplier), providing water for municipal purposes to more than 3,000 customers or serving more than 3,000 acre-feet annually, to adopt an UWMP every five years that demonstrates water supply reliability in normal, single dry, and multiple dry water years. The Act also requires that the California Department of Water Resources (DWR) provide a report to the California Legislature on the status of water supply planning in California. The UWMP must describe the water supplier's service area, water demands and supplies, water conservation activities, and assess the reliability of water sources over a 20-year planning time frame.

LPUD supplies potable water to a population of approximately 18,339[1] as of 2020 and approximately 3.151 service connections. The sole source of supply is pumped from groundwater wells that are owned and operated by LPUD.

This UWMP provides an assessment of the present and future water supply sources and demands within the District's service area. It is an update to the 2015 UMWP and contains all the elements to comply with the new requirements of the Act as amended since 2015 in accordance with the UWMP 2020 Final Guidebook.

There are several new elements in the 2020 UWMP that are included as required per the most recent amendments to the Act as follows:

- **Five Consecutive Dry-Year Water Reliability Assessment** - The Legislature modified the dry-year water reliability planning from a "multiyear" time period to a "drought lasting five consecutive water years" designation. This statutory change requires a Supplier to analyze the reliability of its water supplies to meet its water use over an extended drought period.
- **Drought Risk Assessment** – The California Legislature created a new UWMP requirement for drought planning in part because of the significant duration of recent California droughts and the predictions about hydrological variability attributable to climate change. The DRA requires a Supplier to assess water supply reliability over a five-year period from 2021 to 2025 that examines water supplies, water uses, and the resulting water supply reliability under a reasonable prediction for five consecutive dry years.

[1] Estimated from US Census Data

- **Seismic Risk** – The Water Code now requires Suppliers to specifically address seismic risk to various water system facilities and to have a mitigation plan.
- **Energy Use Information** – The Water Code now requires Suppliers to include readily obtainable information on estimated amounts of energy for their water supply extraction, treatment, distribution, storage, conveyance, and other water uses. The reporting of this information was previously voluntary in 2015.
- **Water Loss Reporting for Five Years** – The Water Code added the requirement to include the past five years of water loss audit reports as part of this UWMP.
- **Water Shortage Contingency Plan** – In 2018, the Legislature modified the UWMP laws to require a WSCP with specific elements. The WSCP is a document that provides a Supplier with an action plan for a drought or catastrophic water supply shortage.
- **Groundwater Supplies Coordination** – In 2014, the Legislature enacted the Sustainable Groundwater Management Act (SGMA) to address groundwater conditions throughout California. The Water Code now requires Suppliers' 2020 UWMP's to be consistent with Groundwater Sustainability Plans (GSP), in areas where those plans have been completed by Groundwater Sustainability Agencies (GSA).
- **Lay Description** – The Legislature included a new statutory requirement for Suppliers to include a lay description of the fundamental determinations of the UWMP, especially regarding water service reliability, challenges ahead, and strategies for managing reliability risks. This section of the UWMP could be viewed as a go-to synopsis for new staff, new governing members, customers, and the media, and it can ensure a consistent representation of the Supplier's detailed analysis.

1.2 UWMP Organization

This UWMP is organized into 10 Sections in congruence with the DWR Guidebook recommendations as follows:

Section 1 – UWMP Introduction and Lay Description provides an overview with brief descriptions of the new additional requirements by the Legislature in 2020, including the new requirement to provide a lay description of the fundamental determinations of the UWMP.

Section 2 – Plan Preparation provides a description of the processes used for developing the UWMP, including efforts in coordination and outreach.

Section 3 – System Description provides a background on the District and its climate, population projections, demographics, socioeconomics, and current and projected land uses within the water system service area.

Section 4 – Water Use Characterization provides historical, current, and projected water demand within the Supplier's service area.

Section 5 – Conservation Target Compliance describes the Supplier's compliance with the 2020 per-capita water conservation mandate, showing the baseline and target water use calculations in accordance with the Water Conservation Act (SB X7-7) passed in 2009 by the State Legislature.

Section 6 – Water Supply Characterization provides current and projected potable and non-potable water supplies along with a description of each supply source.

Section 7 – Water Service Reliability and Drought Risk Assessment (DRA) evaluates the reliability of the District's water supply service to its customers through a 20-year projection, based on a normal year, single dry year, and five consecutive dry years and also includes the DRA.

Section 8 – Water Shortage Contingency Plan provides a structured plan for dealing with water shortages, incorporating prescriptive information and standardized action levels, along with implementation actions in the event of a catastrophic water supply interruption.

Section 9 – Demand Management Measures provides a description of the District's current and planned measures and programs to help customers in its service area comply with the Water Conservation Act.

Section 10 – Plan Adoption, Submittal, and Implementation provides a description of the process the District followed to adopt and implement the UWMP.

2 Plan Preparation

LPUD prepared this UWMP during the summer of 2021, and the plan was presented to the LPUD Board of Directors in October of 2021 for review and comment. Modifications were made to the UWMP in accordance with the comments received and the UWMP was then approved and adopted by the Board of Directors. The UWMP was prepared in coordination with the Kern County Water Agency, the Kern Delta Water District, and the Kern River Groundwater Sustainability Agency in a transparent manner that provided for public involvement opportunities to allow stakeholders and the public to submit comments and suggest revisions to the Supplier's plan.

2.1 Individual Planning and Compliance

While LPUD prepared its own UWMP individually, the development of the new UWMP involved coordination with other key entities within the region and copies of this plan have been forwarded to the Kern County Water Agency, the Kern River Groundwater Sustainability Agency, and the Kern Delta Water District for their review and comment.

Table 2-1 Public System Water Profile

Submittal Table 2-1 Retail Only: Public Water Systems			
Public Water System Number	Public Water System Name	Number of Municipal Connections 2020	Volume of Water Supplied 2020 *
Add additional rows as needed			
CA1510012	Lamont Public Utility District	3,151	1,191
	TOTAL	3,151	1,191
**** Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*			
NOTES: Volume in MG			

Table 2-2 - Plan Identification

Submittal Table 2-2: Plan Identification			
Select Only One	**Type of Plan**		**Name of RUWMP or Regional Alliance** *if applicable* (select from drop down list)
☑	**Individual UWMP**		
	☐	Water Supplier is also a member of a RUWMP	
	☐	Water Supplier is also a member of a Regional Alliance	
☐	**Regional Urban Water Management Plan (RUWMP)**		
NOTES:			

Table 2-3 - Supplier Identification

Submittal Table 2-3: Supplier Identification	
Type of Supplier (select one or both)	
☐	Supplier is a wholesaler
☑	Supplier is a retailer
Fiscal or Calendar Year (select one)	
☑	UWMP Tables are in calendar years
☐	UWMP Tables are in fiscal years
If using fiscal years provide month and date that the fiscal year begins (mm/dd)	
Units of measure used in UWMP * (select from drop down)	
Unit	MG
**** Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*	
NOTES:	

2.2 Coordination and Outreach

The Lamont PUD coordinated with other key entities in the preparation of this UWMP including: Kern County Water Agency, the Kern Delta Water District, and the Kern River Groundwater Sustainability Agency. However, it should be noted, that LPUD does not receive water supply from any wholesalers.

LPUD held a public hearing and notified key entities and the public per the Water Code requirements in order to actively engage with diverse social, cultural, and economic elements of the population within the District during the preparation of this Plan. In addition, 60 days prior to the public hearing, LPUD provided notice to the County of Kern and other appropriate agencies that the District would be reviewing the plan and considering amendments or changes to the plan.

3 System Description

This section provides information on the Lamont PUD service area, including a description of the system, a description and map of the water system service area, and details about its population and climate.

3.1 General Description of Service Area

The Lamond Public Utility District is a California Public Utility District formed in 1943 pursuant to the California Public Utility District Act (California Public Utilities Code §15701 et seq.), with the purpose of providing water and sewer service to residential, municipal, commercial, and industrial developments within its boundaries. The District is governed by a 5-member Board of Directors, elected to 4-year terms. The District has a population of approximately 17,261.

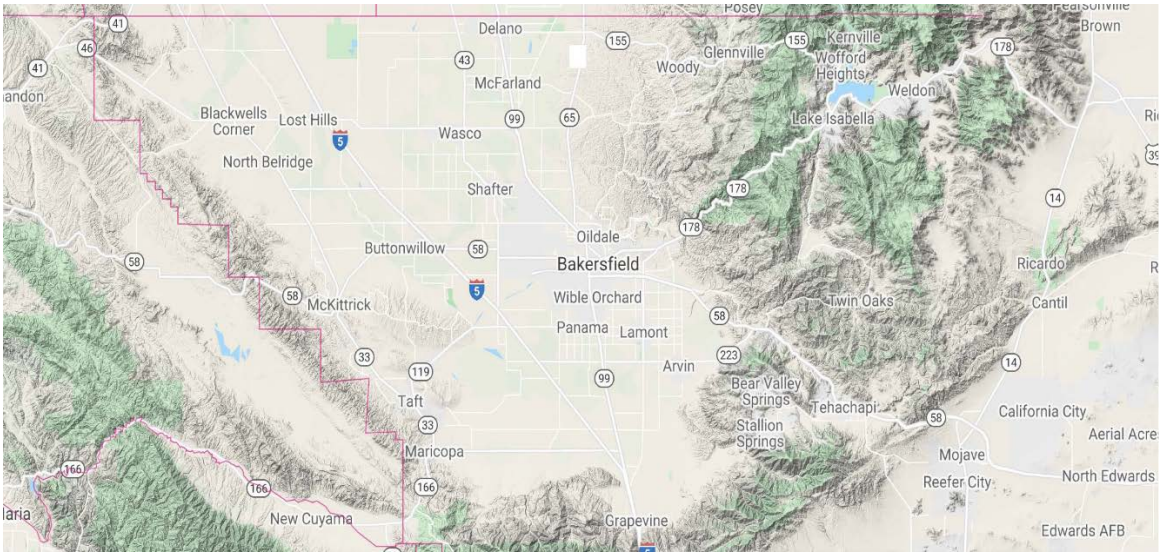
The District is in Kern County, on the southern end of the San Joaquin Valley, about 10 miles south-southwest of the City of Bakersfield. LPUD currently provides water service and wastewater treatment via its wastewater treatment plant (WWTP) and effluent water use areas.

The District's service area is about 2,400 acres, encompassing the communities of Lamont, Weedpatch, and some undeveloped lands in the immediate vicinity. Within its service area, the District provides its customers with potable water and wastewater services. Meters have been installed on all water service connections.

3.2 Water Service Area Boundary Map

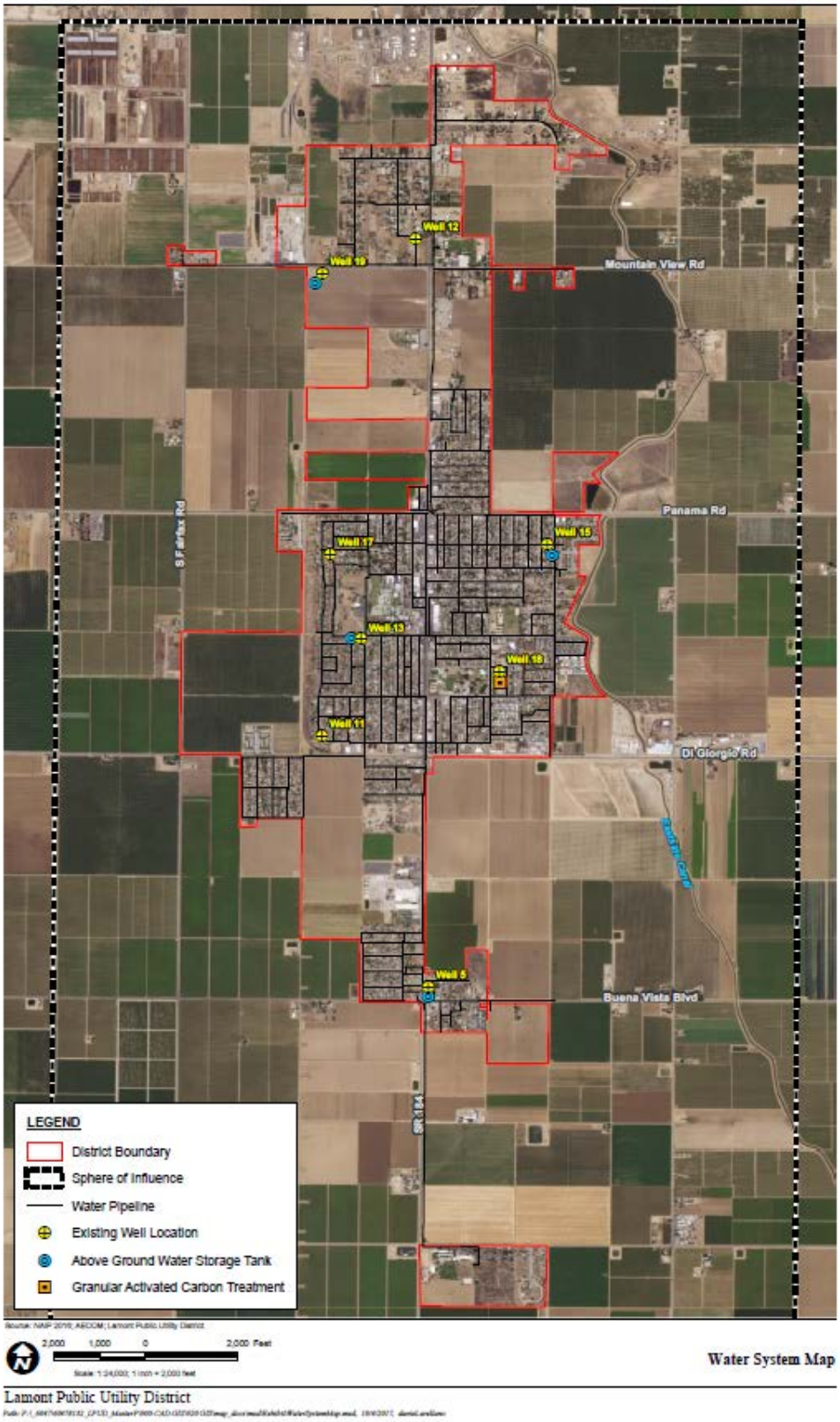
The current service area includes all of the Lamont PUD which is an area of approximately 3.75 square miles, while the District's Sphere of Influence (SOI) is about 21 square miles, located about 10 miles south-southeast of the City of Bakersfield in Kern County.

Figure 3-1 – Regional Map of Kern County



The following page shows a map of the current water system service area boundary.

Figure 3-2 - Lamont Public Utility District Water Service Area



3.3 Service Area Climate

The LPUD service area is located with the San Joaquin Valley Air Pollution Control District which encompasses all of the District. The LPUD is within a cold semi-arid climate with hot, dry summers and cool winters.[2]

Water usage is greatly influenced by local rainfall and temperature in the service area. In the District, the average high temperature ranges from 97.3° F in July to an average low of 56.0° F in December (Table 3-1). The average precipitation is 7.51 inches (Table 3-1) while the average evapotranspiration (ETo) is estimated to be between 58-65 inches per year (Tables 3-2) which is greater than eight times the annual average rainfall. Typically, the rain season extends from November through April. Tule fog is common in the winter, sometimes lasting for extended periods. Prevailing winds are typically out of the northwest and average from 5 to 10 miles per hour. The following five tables provide climate data for the Lamont PUD, including average maximum and minimum temperatures, average rainfall, and average evapotranspiration (ETo).

Table 3-1 – Lamont PUD 30-Year Average Temperature

Average Temperature Climate Data for Lamont PUD, California (1990-2020)[3]													
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg.
Average High (°F)	58.1	63.6	69.4	74.5	82.7	91.0	97.4	96.0	90.3	80.1	67.0	58.9	77.4
Average Low (°F)	38.9	41.2	45.1	49.3	56.6	63.9	70.0	68.7	63.7	53.9	44.0	37.7	52.8
Average Temp (°F)	48.5	52.4	57.3	61.9	69.7	77.4	83.7	82.4	77.3	67.0	55.5	48.3	65.0
Average Precipitation (in)	1.27	1.28	1.24	0.62	0.32	0.01	0.02	0.00	0.11	0.22	0.53	1.03	6.65 (total)

Below is a table comparing the measured ETo values from the Arvin-Edison CIMIS measurement station with the CIMIS Reference ETo values according to the reference zone for the District, Zone “15.”

[2] According to Koppen Climate Classification System

[3] Data from closest NOAA Weather Station (No. USC00040444) in Bakersfield, CA, which is about 13.7 miles from LDUP.

Table 3-2 - Comparison Table of ETo Values from Arvin-Edison, and Average CIMIS ETo for Zone 15

Comparison of Monthly Evapotranspiration (ETo) Aug 2020-July 2021 vs Avg. CIMIS ETo for Zone 15													
Month	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	July	Year
Arvin-Edison[4] Monthly ETo (in)	8.88	6.46	4.80	2.62	1.91	2.45	2.73	4.46	6.47	8.53	8.90	9.23	67.44
Monthly Avg. ETo (in)[5]	7.75	5.7	4.03	2.1	1.24	1.24	2.24	3.72	5.7	7.44	8.10	8.68	57.9

3.4 Population, Demographics, and Socioeconomics

3.4.1 Service Area Population

The Lamont PUD as of 2020 currently serves an estimated total population of 17,261[6] residents. The population is estimated to grow to 21,062 with an estimated annual growth rate of 1.0 percent through 2040.[7]

Table 3-3 – Retail: Population - Current and Projected

Submittal Table 3-1 Retail: Population - Current and Projected					
Population Served	2020	2025	2030	2035	2040
	17,261	18,141	19,067	20,039	21,062
NOTES:					

The growth projections presented here are from the Kern Council of Government (COG) Regional Transportation Plan – 2018. Through the year 2040, they projected

[4] CIMIS Monthly Report from Arvin-Edison Station (CIMIS Station 125), which is about 6.4 miles from LDUP.

[5] CIMIS Monthly Average EvapoTranspiration Data for Zone 15.

[6] Estimates taken from Kern COG Regional transportation Plan – 2018. The RTP's population estimation method is based on US Census Data and a 1 percent annual growth rate for both the Lamont CDP and Weedpatch CDP.

[7] Kern COG Regional Transportation Plan - 2018.

the growth rates for the communities of Lamont and Weedpatch—both contained within the Lamont PUD—to be 1.0 percent.

3.4.2 Demographics and Socioeconomics

The agriculture-based nature of the communities within LPUD impacts their economy, housing, and demographics, which in turn has an impact on the water management planning for the District. The different factors are further broken down below.

3.4.2.1 Economic Factors

The median household income for Lamont CDP is $43,297, and for Weedpatch CDP it is $24,894. The poverty level for Lamont CDP is 26.7 percent, while Weedpatch CDP is 47.6 percent. The unemployment level for Lamont CDP is 7.1 percent and Weedpatch is 8.5 percent.

Table 3-4 - Median Household Income (2019)

	Median Household Income (2019)[8]			
Location	Lamont CDP	Weedpatch CDP	Kern County	California
Household Income (USD)	$43,297	$24,894	$53,350	$80,440

Table 3-5 - Poverty Level

	Poverty Level (2019)[9]			
Location	Lamont CDP	Weedpatch CDP	Kern County	California
Poverty Level (%)	26.7%	47.6%	19.0%	11.8%

Table 3-6 - Unemployment Levels

	Unemployment Levels (2019)[10]			
Location	Lamont CDP	Weedpatch CDP	Kern County	California
Unemployment Level (%)	7.1 %	8.5%	7.7%	4.04%

[8] US Census Data 2019 Estimates

[9] US Census Data 2019 Estimates

[10] State of California Employment Development Department. Using 2019 levels to avoid drastic changes from the norm due to COVID-19

3.4.2.2 Housing Factors

As of 2019, the District has an estimated housing stock of 2,944 units.[11] The District expects continued residential and commercial growth commensurate with previous growth trends and with respect to anticipated growth in the area according to the Kern COG Regional Transportation Plan (2018). In accordance with the projected growth rates for the area, by the year 2040 there will be approximately 3,628 units. Most households are single unit homes (79.8 percent) while multi-unit homes make up 20.2 percent of the residential homes. Additionally, it is worth noting that the average person per household figure of 3.85 is higher than the county, state, and national average. This can be seen in Table 3-7.

Table 3-7 - Persons per Household

Persons per Household (2019)[12]				
Location	LPUD	Kern County	California	United States[13]
Persons per Household	3.85	3.17	2.95	2.53

3.4.2.3 Age Distribution and Other Demographic Factors

In addition to the types and proportions of dwelling units, various socio-economic factors such as age distribution, education levels, and other demographic factors affect the District's water management and planning. Based on the U.S. Census Bureau's American Communities Survey (ACS), 5.0 percent of the population is 65 years and over, 37.3 percent under the age of 18 years, and 9.2 percent under the age of 5 years. Roughly 35 percent of the District's population over the age of 25 years has a minimum of high school graduation. For the population sector with an age of less than 65 years, 4.5 percent has a disability, with 90 percent of those being between the ages of 35 to 64. Lastly, according to SB 535, roughly 50 percent of the developed area within the District is classified as a Disadvantaged Community.[14]

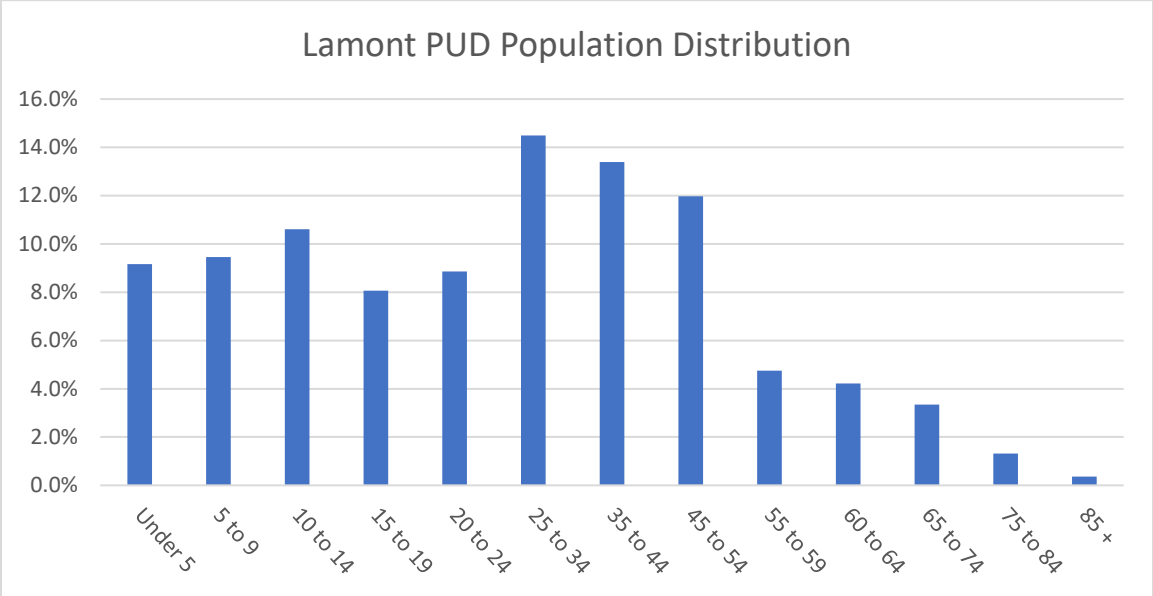
[11] Lamont PUD 2019 Electronic Annual Report. This is based on the number of service connections, assuming that each service connection corresponds to a single household.

[12] US Census Data 2019 Estimates

[13] Statista Figure

[14] All of the information for this paragraph and preceding two figures come from US Census Data 2019 Estimates

Figure 3-3 - Total Population Distribution



In terms of language and ethnicity, 94.5 percent of the District is considered Hispanic or Latino, 5.0 percent white, and 0.5 percent other.[15] It is also reported that Spanish is spoken in 80 percent of the households, while the rest of the households primarily speak in English.

3.4.3 Land Uses

3.4.3.1 Current Land Uses

Most of the land within the District's SOI is comprised of agriculture, comprising approximately 89.8 percent, and the 5.3 percent for single-family homes and 1.4 percent for multi-family residences. Open Space takes up only 0.4 percent of all land use. With growth expectations for the District, this alludes to the need for acquiring more land for the District. While open space within the district is only 0.4 percent, it is about 100 acres of land.

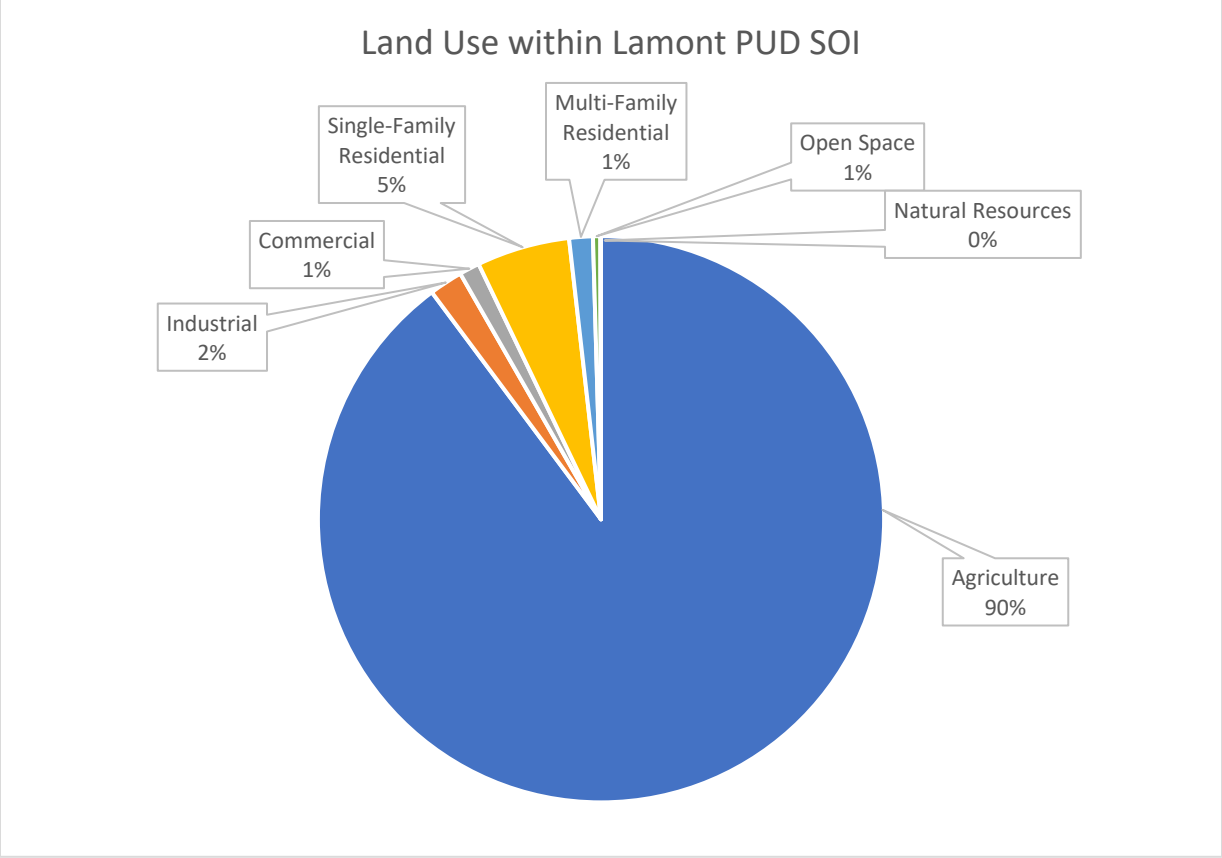
The current land use within the District's service area can be categorized as follows:

[15] US Census ACS data as of 2019.

Table 3-8 - Current Land Use Distribution

Current Land Use Distribution - 2020		
Land Use Type	Acreage	Percentage
Agriculture	21,515.2	89.8%
Industrial	458.6	1.9%
Commercial	278.3	1.2%
Single-Family Residential	1,272.5	5.3%
Multi-Family Residential	323.7	1.4%
Open Space	99.7	0.4%
Natural Resources	8.9	0.0%
	23,956.93	100%

Figure 3-4 - Current Land Use Distribution



3.4.3.2 Projected Land Uses

According to projected growth models for the District, there is a need for expansion in all areas of land use outside of agriculture. Additionally, with increased population also comes an increase in demand for employment. This would represent continued growth for the District's water supply demands.

Below is a table showing growth projections for population, housing, and employment:

Table 3-9 – Projected 2040 Population, Housing, and Employment

LPUD Projected Population, Housing, and Employment with Preferred Growth			
Year	2020	2040[16]	% Increase
Population	18,339[17]	22,378	22.02%
Housing	3,183[18]	3,883	22.02%
Employment	7,256[19]	8,854	22.02%

It should also be noted from the employment figures that due to the relatively young population, there may be a greater need for more employment compared to baseline condition assumptions (refer to Figure 3-3).

3.4.3.2.1 Residential Use

With respect to residential use, we project a continuance of existing development patterns within the District based on historical growth patterns and current land use trends. As most of the houses are classified as low-density, this will continue.

3.4.3.2.2 Commercial and Industrial Use

Commercial Land Use is characterized by two different types: highway and general commercial. Highway commercial will provide service and shopping needs for customers traveling on Highway 184. General commercial is referring to neighborhood stores and big-box stores that will keep shopping within the District and not require residents to travel to Bakersfield for needs.

[16] Assuming 1 percent annual growth for the population, housing, and employment sectors.

[17] Extrapolated from growth projections from Kern COG RTP – 2018.

[18] LPUD Electronic Annual Reports for the years 2013-2019. Extrapolated using Kern COG growth projections.

[19] US Census ACS Tables for the years 2010-2019. Extrapolated using Kern COG growth projections.

4 Water Use Characterization

This section provides guidance for describing and quantifying the District's past, current, and future water use projections through at least the year 2040, to the extent that records are available. A thorough characterization and analysis should provide a realistic prediction of future water use based upon the District's past and current water use, combined with considerations of anticipated growth, new regulations, changing climate conditions, and trends in customer water use behaviors.

The Water Code requires a description of water uses in the service area. This section of the UWMP presents the actual water use over the past 5 years, the current use, and the projected water usage at five-year increments between 2020 and 2040.

4.1 Non-Potable vs. Potable Water Use

Currently, LPUD provides only potable water to its customers. Any non-potable water that comes from the District's wastewater treatment plant does not go back into the municipal water supply but is recharged to the groundwater basin through percolation.

The current water demand was developed using the most current water usage records in combination with the latest census data for the water system service area.

4.2 Past and Current Water Use

4.2.1 Water Use Sectors Listed in Water Code

Table 4-1 shows the breakdown of water use by sector as enumerated in Section 10631(d) of the Water Code. The following sections are not utilized by the District:

(G) Sales to other agencies – the District does not sell potable water to other agencies.

(H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof - The District does not recharge groundwater for the purposes of maintaining a saline water intrusion barrier. The District does conduct groundwater recharging operations in coordination with the KGAGSA and the KRGSA; however, the recharge water is treated wastewater, and is not considered as part of one of the water use sectors.

4.2.1.1 Residential Sector

In the District, most residences (79.8 percent) are of the single-family type, which would typically indicate a higher water usage per capita value, since more water

would be used for outdoor purposes (i.e., grass, gardening, other irrigation, pools, etc.). As of 2020, residential connections averaged 524 gallons per day . This is an improvement over the past 8 years due to water efficiency improvements. The use of the water is becoming more efficient, but with a high population growth projection, this overall water usage will increase.

4.2.1.2 Commercial Sector

The District has a mix of wide variety of commercial establishments which serve the local population. The sector has not seen any growth in the past few years. Although this is expected to change over the next 20 years into the year 2040 with growth forecasting annual net commercial growth.

4.2.1.3 Industrial Sector

The District has a small industrial sector, primarily centered on agriculture related industry. Industrial growth is primarily along the northern side of LPUD and that is expected to continue.

4.2.1.4 Institutional/Governmental Sector

The District has a stable institutional/governmental sector, primarily local and county government, schools, public facilities, and health care facilities. This sector will keep pace with the growth of the District.

4.2.1.5 Landscape/Recreational Sector

There are three (3) parks within LPUD. These large landscape water users are supplied with landscape water by the District. Landscape and Recreational customer demand is expected to increase approximately 1 percent per year for the next 20 years, due to continued growth in population. Although this growth in water usage may be realized over a single year, whichever year the newly constructed park goes into use. However, increased efficiency and landscape conversions at existing parks should help offset new demand resulting from projected increases in this sector.

4.2.1.6 Agricultural Sector

For a smaller community in the San Joaquin Valley such as the communities of Lamont and Weedpatch, agriculture is a vital source of employment. A little over half (56 percent) of the employed population works in the agriculture industry.

With respect to water supply, the District does not supply any of its system supply to agriculture.

4.2.1.7 Sales to Other Agencies

The District does not sell any potable water to other agencies.

4.2.1.8 Conjunctive Use

The District works in coordination with the Kern River Groundwater Sustainability Agency (GSA) and the Kern Groundwater Authority GSA to manage their water

resources and conserve groundwater usage. Seventy (70) percent of the District's service area overlies portions of the Kern River GSA.

The District currently has a fifty-year (50) purchase agreement with the Kern Delta Water District for water they pump out of the ground, over and above that which they recharge via effluent at the wastewater plant.

4.2.1.9 Groundwater Recharge

The District is not actively utilizing any groundwater recharge methods within its own service area.

4.2.1.10 Saline Water Intrusion Barriers

The District Service Area is geographically and geologically located far enough away from the Pacific Ocean or any other body of water to not require any saline water intrusion barrier.

4.2.1.11 Distribution System Losses

The District's distribution system losses are further discussed in Section 4.2.5.

4.2.2 Current Water Use

The District's retail demands for potable water in 2020 totaled 1,191 MG (Table 4-1). The District does not provide non-potable water to any of its customers.

Table 4-1 - Submittal Table for Potable and Non-Potable Water - Actual 2020

Submittal Table 4-1 Retail: Demands for Potable and Non-Potable[1] Water - Actual			
Use Type	2020 Actual		
Drop down list May select each use multiple times These are the only Use Types that will be recognized by the WUEdata online submittal tool	Additional Description (as needed)	Level of Treatment When Delivered Drop down list	Volume[2]
Add additional rows as needed			
Other Potable	Total Revenue Water	Drinking Water	1,072
Losses	Non-Revenue Water	Drinking Water	119
		TOTAL	1,191
[1] Recycled water demands are NOT reported in this table. Recycled water demands are reported in Table 6-4. *[2] Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.*			
NOTES: Volume in MG			

4.2.3 Past Water Use

As shown below (Figure 4-1Figure 4-1 – District's Service Area Historical Water Use vs. Population), we can see that the water usage is loosely dependent on the population. As population decreases, so does the water use on a District-wide scale. The largest factor affecting water demand over the previous decade has mostly been due to drought restrictions and increases in water efficiency. An overall decrease in water usage between 2013 and 2019 of 12 percent was recorded. When the total volume is broken up into gallons per capita per day (GPCD), we see that the population-based method GPCD value of 176 GPCD in 2019 is slightly lower compared to other local values (see Table 4-5 for further detail). Projecting into the future, we can assume, in general, that as the population increases the water usage will as well. The decrease in water usage is also seen on a per capita basis (Figure 4-2). This demonstrates that the average water used by each resident has decreased on average over the past 7 years by 9.3 percent.

Figure 4-1 – District's Service Area Historical Water Use vs. Population

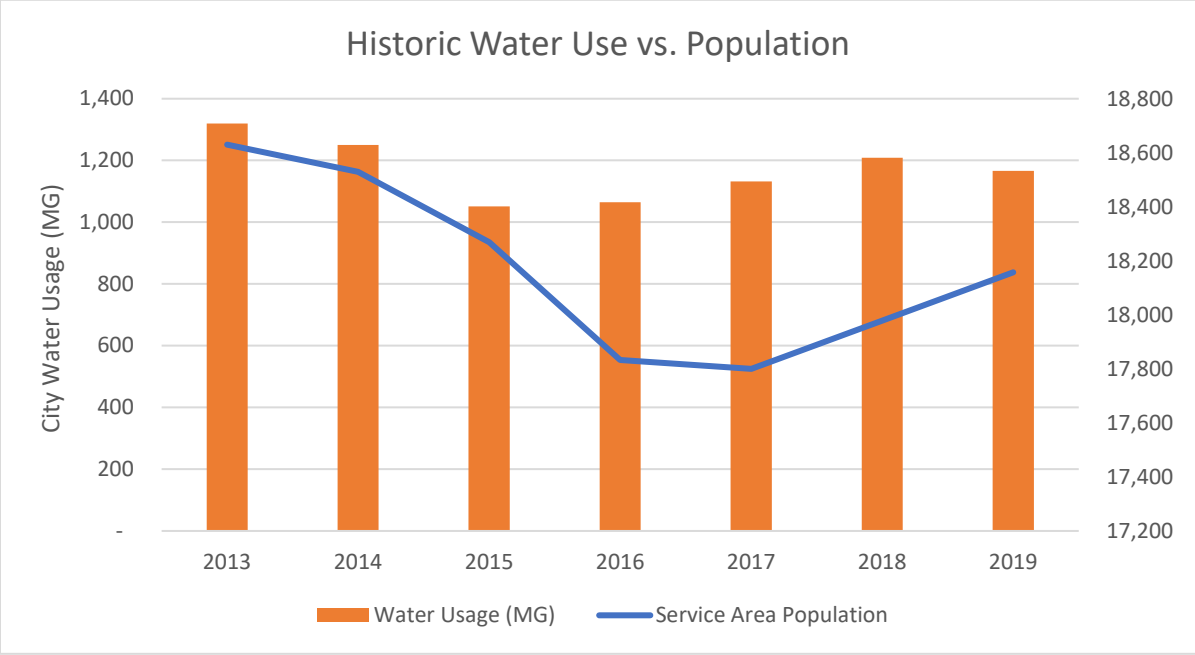
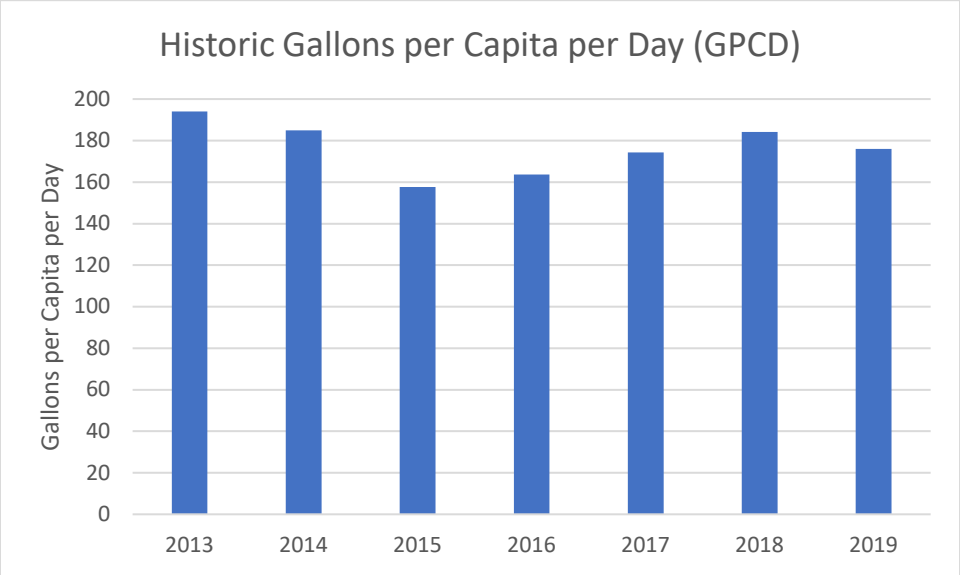


Figure 4-2 - Historic Gallons per Capita per Day



4.2.4 Additional Water Use Sectors Not Listed in the Water Code

The District is not a wholesale supplier; therefore, this section will not be utilized.

4.2.5 Distribution System Water Loss

The District submitted AWWA Water Loss Audits with each reporting period being between the timeframe of July to the following June of the next year. The average water loss over the four-year measured period was 130 MG, which on average is 10 percent of the total water supplied by the District every year.

Table 4-2 - AWWA Water Loss Audits

Period		Losses (MG)
Jul-16	Jun-17	113
Jul-17	Jun-18	106
Jul-18	Jun-19	96
Jul-19	Jun-20	206
Average:		130
NOTES: Volume in MG		

4.3 Water Use Projections

This section discusses the projected water demand over the next 5 years and the next 20 years, during normal, dry, and multiple dry water years.

4.3.1 Projected Water Use

Overall, the water demand is projected to slightly decrease over the next 20 years up to the year 2040. Although the population is projected to increase, the

residential water demand is expected to decrease. This is due to increases in water efficiencies both indoor and outside the home. The primary increase in water usage will come from commercial/institutional and industrial growth. It is expected that landscape irrigation will mostly grow in line with the population over the next 20 years with the opening up of new parks and schools within new residential developments. Although outdoor irrigation water demand growth may drop due to a decrease in irrigation and an increase in utilization of water efficient plants and trees.

The projections were calculated using data from municipal service connections and a combination of population, housing, land use and the persons per household statistics to calculate future water demand. Population projections came from US Census ACS data, the Kern COG Regional Transportation Plan (2018 Update), and the District's submitted Electronic Annual Reports (EARs). Appendix K of the Urban Water Management Plan Guidebook 2020 was utilized to estimate demand factors for different categories with the unit count strategy for residential projections.

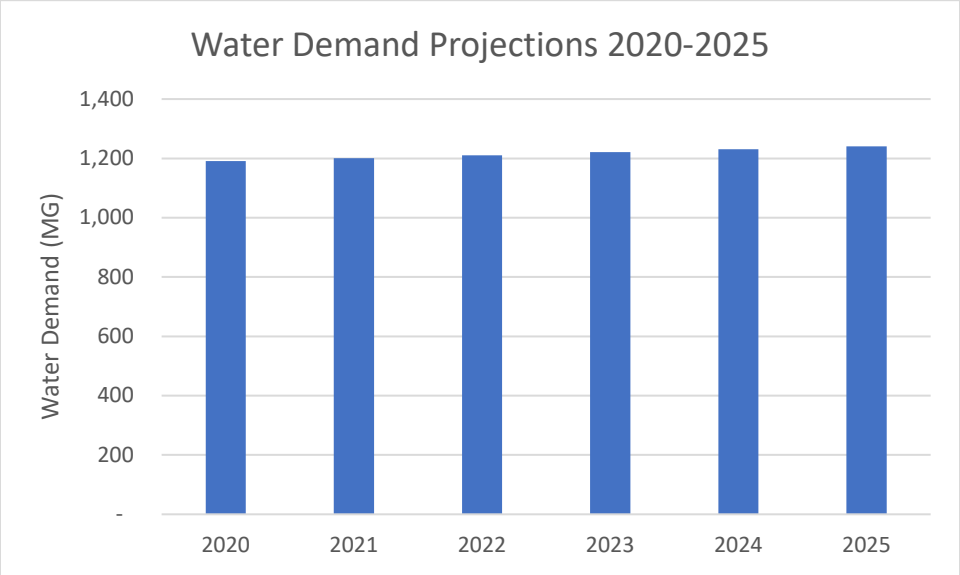
4.3.2 Characteristic Five-Year Water Use

Over the next 5 years, the water demand for the District will mostly be the same in the year 2025 as it was in 2020. The demand projects to be 1,232 MG in 2025, representing a 3.4 percent increase in water demand from 2020. Residential homes will increase, but they will be more efficient than the current homes due to increases in water efficiency standards. The water use efficiency within the homes will also increase, while the number of residents per household is expected to decrease. A significant factor in outdoor water use efficiency comes from the Model Water Efficient Landscape Ordinance (MWELO). MWELO was updated in 2015 by the DWR's Water Use and Efficiency (WUE) branch. MWELO established standards to reduce outdoor water use by 25 percent for any new home constructions by the year 2025. These three factors contribute to the decreasing water usage per household. Lastly, with population growth, commercial and institutional growth is expected to grow at a similar rate as the population.

Table 4-3 - Water Demand Projections for 2020-2025

5-Year Water Demand Projections						
Calendar Year	2020	2021	2022	2023	2024	2025
Total Water Demand	1,191	1,201	1,211	1,221	1,231	1,241
NOTES: Volumes in MG						

Figure 4-3 - Water Demand 2020-2025



4.3.3 Characteristic 20-Year Water Demand

Total water demand for the District is projected to increase by 18 percent up to the year 2040. However, because of increases in water efficiency, construction of newer and more water efficient homes, the Gallons per Capita per Day (GPCD) will decrease over time. With population and housing growth over time, the overall water demand will increase to 1,404 MG in 2040. There are passive savings included in the projections which are a result of codes, standards, ordinances, and public outreach with respect to water conservation and higher efficiency fixtures. Population will increase, yet existing homes and newly constructed homes will be more water efficient. Another factor that mitigates the population growth is the decrease in estimated persons per household to the year 2040. Another significant factor is the MWELO ordinance, as mentioned in Section 4.3.2.

Table 4-4 - Submittal Table 4-3 Retail: Total Water Projected

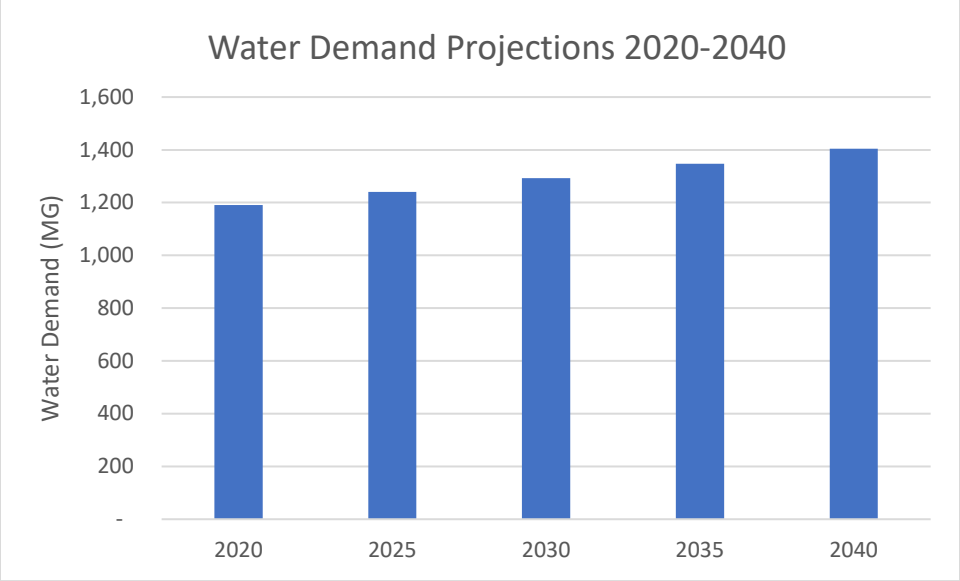
Submittal Table 4-3 Retail: Total Water Use (Potable and Non-Potable)					
	2020	2025	2030	2035	2040
Potable Water, Raw, Other Non-potable *From Tables 4-1R and 4-2 R*	1,191	1,241	1,293	1,348	1,404
Recycled Water Demand[1] *From Table 6-4*	0	0	0	0	0

Optional Deduction of Recycled Water Put Into Long-Term Storage[2]					
TOTAL WATER USE	1,191	1,241	1,293	1,348	1,404

[1]Recycled water demand fields will be blank until Table 6-4 is complete
*[2] Long term storage means water placed into groundwater or surface storage that is not removed from storage in the same year. Supplier **may** deduct recycled water placed in long-term storage from their reported demand. This value is manually entered into Table 4-3.*

NOTES: Volume in MG

Figure 4-4 - 2040 Water Demand Projections - Comparison



4.4 Water Use for Lower Income Households

The UWMP Act requires retail water suppliers to include water use projections for single-family and multi-family residential housing for lower income and affordable households. It should be noted that 50 percent of the developed area within the District boundary is classified as a Disadvantaged Community in accordance with SB 535. With that in mind, the residential demands for lower income housing were included in the water demand projections. This is apparent when the GPCD value of 178 for the District in 2020 is compared to other localities in the San Joaquin Valley. See Section 5 for further information regarding Sbx7-7.

Table 4-5 - GPCD Comparison

GPCD Comparison from 2020 UWMP	
City of Shafter	217
City of Fresno	198
City of Modesto	175
City of Turlock	250
Bakersfield – California Water Service	182
Lamont PUD	178

4.5 Climate Change Considerations

With the projected impacts of global warming trends, California may be on the receiving end of severe and long enduring droughts that may critically damage the water supply for California residents, and specifically those in the District. Since the District obtains all of its water from groundwater sources, changes in the water table depth may require lowering of groundwater pumps, or sanctioning the drilling of newer and deeper groundwater wells.

It should further be noted that the District's groundwater source is within the San Joaquin Valley – Kern Country Groundwater Subbasin, which is in the category of "Critical overdraft" according to the Sustainable Groundwater Management Act (SGMA). This classification of "Critical Overdraft" requires the formation of a Groundwater Sustainability Agency (GSA) to present a groundwater management plan. The District coordinates with the Kern River GSA in the establishment of their area management plan, as the District lies within Kern Delta Water District boundary.

Further climate considerations related to groundwater and water demand are further explained below.

4.5.1 Groundwater

Variation in weather year over year in California has and will continue to have a substantial impact on the water demands in the future. Since the District obtains its water from the San Joaquin Valley Groundwater Basin, it is import to note how the groundwater basin is affected with changes in weather. In dry years, the snowpack levels in the Sierra Nevada Mountain range decreases, which affects the groundwater levels in the basin, as less snowmelt correlates to lower groundwater recharge rates. This also affects the surface water, as the snowmelt also flows into the Sacramento Delta and into the State Water Project (SWP) in Northern California. This has a direct impact on the Central and San Joaquin Valley groundwater basin. In drought years, those contractors who distribute the water

from the SWP receive reduced allocations of water, and they pass this reduction onto their customers. This is important for the San Joaquin Valley as 80 percent of water consumption is allocated to agriculture. In these dry years, farmers are forced to pump groundwater to obtain the water needed for their crops. This correspondingly decreases the groundwater levels in the basin. With less groundwater recharge in the drought years, and more groundwater pumping, this has a significant impact on the District and other localities in the area relying solely on groundwater.

The most recent sustained drought from 2011-2016 resulted in former Governor Brown declaring a state of emergency and directing state officials to take all necessary actions to prepare for water shortages. To help reduce the effects of the drought, an executive order was signed in April 2015 which mandated a 20 percent reduction in residential water use. The reduction in water use as a result of the prolonged drought and corresponding executive order is evident as shown in Figure 4-2, where per capita system demand decreased sharply from 2011 to 2016.

In the event of a normal year or a single dry year, the District's groundwater supplies remain reliable. However, in the event of prolonged droughts lasting several years, such as the last drought mentioned above, groundwater levels decrease. Depending on the amount of groundwater level decrease, this can necessitate lowering of well pumps or the drilling and construction of new, deeper groundwater wells.

The NOAA and EPA both forecast for the duration and severity of droughts to increase in California over the next century, with a corresponding increase in average temperature. This will affect the supply of water for the District and may affect the demand if the drought conditions are severe and restrictive policies are put into place.

Another indirect potentially significant impact is the current damage to the Friant-Kern Canal (FKC). Because of subsidence in some areas of the FKC, full water deliveries are not possible. In some places, the canal has lost more than half of its capacity. If subsidence around the FKC increases, then so will the water delivery volume. If deliveries for local farmers decrease, then groundwater pumping will increase. In 2020, the federal government announced about $5 million to study and begin pre-construction work on repairing the FKC.[20]

4.5.2 Water Demand

In general, warmer temperatures correlate to higher water usage. With the average temperature projected to continue increasing over the next 20 years, so will the demand for water. However, it should be noted that these water demands will

[20] https://www.watereducation.org/aquapedia/friant-kern-canal#:~:text=Decades%20of%20groundwater%20overdraft%20near,repairing%20the%20Friant%2DKern%20Canal.

experience a mitigating effect with the transition to drought efficient plants and irrigation methods as the average temperature rises and the duration and severity of droughts increase.

5 SB X7-7 Baselines, Targets, & 2020 Compliance

5.1 Water Conservation Overview

With the adoption of the Water Conservation Act of 2009, also known as SB X7-7, the State of California is required to reduce urban per capita water use by 20 percent by the year 2020. In order to achieve this statewide objective, the Legislature required each Retail Supplier to develop an urban water use target to help the state collectively achieve a 20 percent reduction.

For the District to follow the guidelines outlined in SB X7-7, an SBX7-7 Verification Form must be submitted as well as an SB X7-7 Compliance Form. The SB X7-7 Verification Form was completed with submittal of the 2015 UWMP, which is attached in Appendix C.

After comparing baseline water use targets for the SB X7-7 Verification Form, it was calculated in the SB X7-7 Compliance Form that the District was compliant with SB X7-7 per capita water usage requirements. The 2020 Target GPCD was 196, and the District's Service Area GPCD for 2020 was 178.

5.2 Baseline Water Use

The baseline water use was calculated following the steps in the SB X7-7 Verification Form. Two different baseline periods were utilized: a 10 to 15-year baseline period and a 5-year baseline period. The former period is used to establish a baseline GPCD, while the latter is to confirm the 2020 target requirements. Appendix P of the 2020 UWMP Guidebook was utilized to establish these baseline numbers. For baseline water use considerations, the time period remains the same as for the previous SB X7-7 Verification Form.

5.2.1 10 to 15-Year Baseline Period (Baseline GPCD)

The 10 to 15-year Baseline water use was calculated and obtained from the period between 2000-2009. The District's baseline water use is 245 GPCD.

5.2.2 5-Year Baseline Period (Target GPCD)

The 5-year baseline was also calculated for the SB X7-7 Verification Form. This number is used to confirm that the selected 2020 target meets the minimum water use reduction requirements. The District's 5-year baseline water use was calculated to be 244 GPCD from the period of 2003-2007.

5.3 SB X7-7 Water Use Targets

The water use targets were calculated in preparation of the 2015 UWMP for the District. The 2015 Interim Target GPCD was 221, and the Confirmed 2020 Target was 196.

5.3.1 SB X7-7 Target Methods

There are four target calculation methods to choose from when calculating the target 2020 usage reductions. The District chose "Option 1" – requiring a simple 20 percent reduction from the baseline usage calculated.

5.3.2 2020 Targets and Compliance

Under Compliance Option 1, the 20 percent reduction, the District's 2020 target is 196 GPCD as shown in the table below.

Table 5-1 - Submittal Table 5-1 Baselines and Targets Summary

Submittal Table 5-1 Baselines and Targets Summary From SB X7-7 Verification Form *Retail Supplier or Regional Alliance Only*				
Baseline Period	Start Year *	End Year *	Average Baseline GPCD*	Confirmed 2020 Target*
10-15 year	*2000*	*2009*	*245*	*196*
5 Year	*2003*	*2007*	*244*	
**All cells in this table should be populated manually from the supplier's SBX7-7 Verification Form and reported in Gallons per Capita per Day (GPCD)*				
NOTES:				

As previously noted, the District's actual 2020 usage was 178 GPCD, which is below the 2020 target of 196 GPCD. The District met its 2020 water use target and is in compliance with SB X7-7.

Table 5-2 - Submittal Table 5-2: Compliance Form SB X7-7

Submittal Table 5-2: 2020 Compliance From SB X7-7 2020 Compliance Form *Retail Supplier or Regional Alliance Only*				
2020 GPCD			2020 Confirmed Target GPCD*	Did Supplier Achieve Targeted Reduction for 2020? Y/N
Actual 2020 GPCD*	2020 TOTAL Adjustments*	Adjusted 2020 GPCD* *(Adjusted if applicable)*		
178	*0*	*178*	*196*	*Y*
**All cells in this table should be populated manually from the supplier's SBX7-7 2020 Compliance Form and reported in Gallons per Capita per Day (GPCD)*				
NOTES:				

6 Water Supply Characterization

This section is a counterpart to Section 4 – Water Use Characterization, which characterizes the District's water usage. This section requires detail related to the current sources of water supply and the projected water supply sources through 2040. This section also includes energy intensity calculations of the water service, a new requirement in the 2020 UWMP.

6.1 Water Supply Overview

The objective of this overview is to identify and quantify, to the extent feasible, the existing and planned sources of water available to the District for normal, dry, and extended drought periods. If there are to be new projects, a description of the measures that are being undertaken to acquire and develop those water supplies is required.

The District meets all its water demands through local groundwater pumping. The District does not provide water to agricultural lands; agricultural water is provided by the Central Valley Project/Kern Delta Water District or from private landowner groundwater wells.

Currently, at a 50 percent utilization rate, the District can provide 2,221 MG of groundwater supply annually. This amount of groundwater is characterized as the available water supply for the District with the currently active groundwater wells. After Well No.13 is replaced, which is currently ongoing, the District supply capacity will be 9,950 GPM and 2,615 MG annually.

There is no projected change for the source of water supply by 2040. The water will continue to be supplied by groundwater. The following tables characterize the current water supply sources, future water supply sources, and projected supply. Well No.13 is currently being replaced as the well casing failed, and there is need to replace Wells No.5, 11, and 12, also due to age. These three wells are proposed to be replaced in the next two (2) years. The projected water demand for 2040 is 1,404 MG, which is within the groundwater supply capabilities of the District given the existing and planned water supply sources.

Table 6-1 – Retail Water Supplies – Actual

Submittal Table 6-8 Retail: Water Supplies — Actual			
Water Supply	Additional Detail on Water Supply	2020	
Drop down list May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool		Actual Volume*	Water Quality Drop Down List
Add additional rows as needed			
Groundwater (not desalinated)	San Joaquin Valley Groundwater Basin	2,221	Drinking Water
	Total	2,221	
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*			
NOTES: Volume in MG			

Table 6-2 - Projected Water Supplies

Submittal Table 6-9 Retail: Water Supplies — Projected					
Water Supply	Additional Detail on Water Supply	Projected Water Supply * Report to the Extent Practicable			
Drop down list May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool		**2025** Reasonably Available Volume	**2030** Reasonably Available Volume	**2035** Reasonably Available Volume	**2040** Reasonably Available Volume
Add additional rows as needed					
Groundwater (not desalinated)	San Joaquin Valley Groundwater Basin	2,615	2,615	2,615	2,615
	Total	2,615	2,615	2,615	2,615
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*					
NOTES: Volume in MG					

6.2 Groundwater

The District has historically utilized local groundwater sources as their sole water supply. This is true for most other localities in the San Joaquin Valley. The groundwater source is located within the Kern County Subbasin which is within the Tulare Lake Hydrologic Region of the San Joaquin Valley Basin. The District water supply is managed by the Kern River Groundwater Sustainability Agency (GSA).

This section also provides information related to historic groundwater projections as well as 20-year projections of District groundwater demand.

Figure 6-1 - Kern County Subbasin

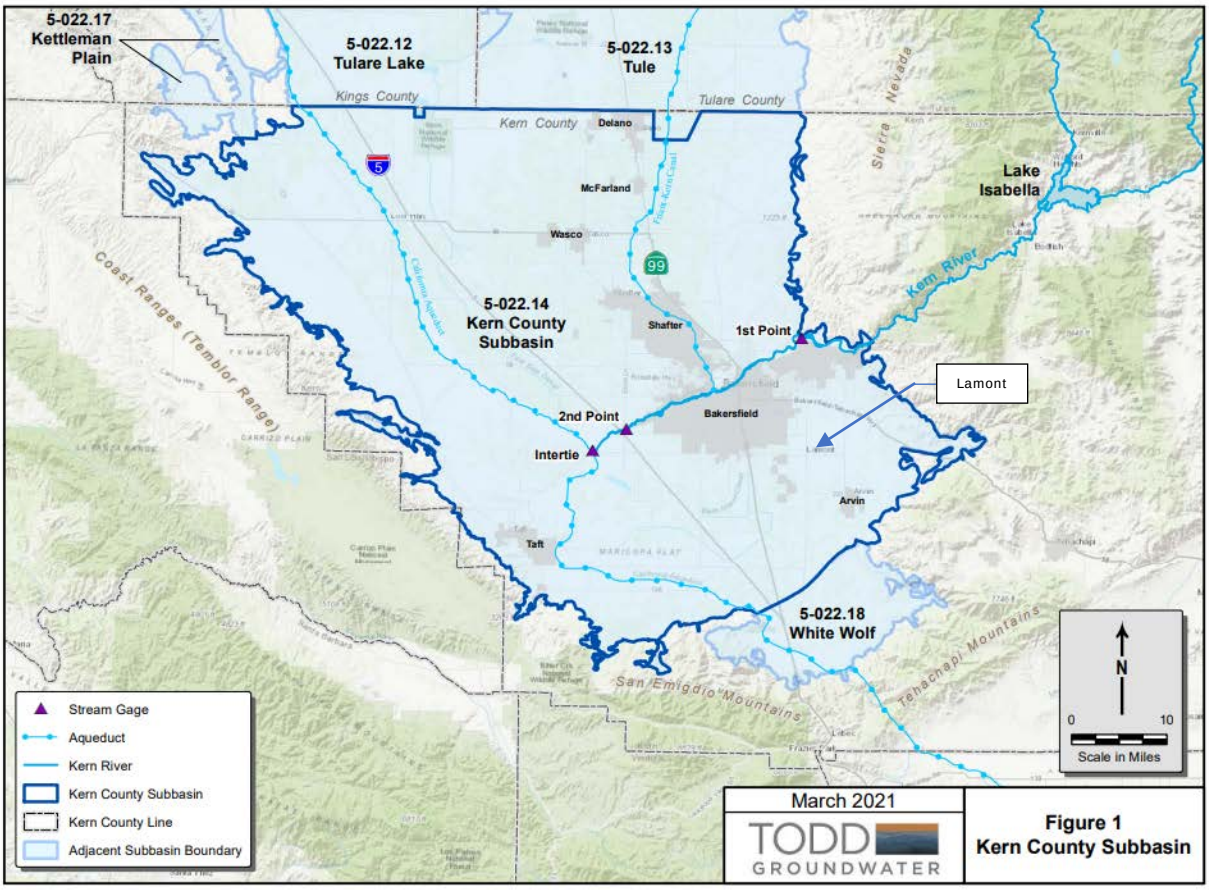


Figure 6-2 - Kern County Subbasin Groundwater Sustainability Agencies Map

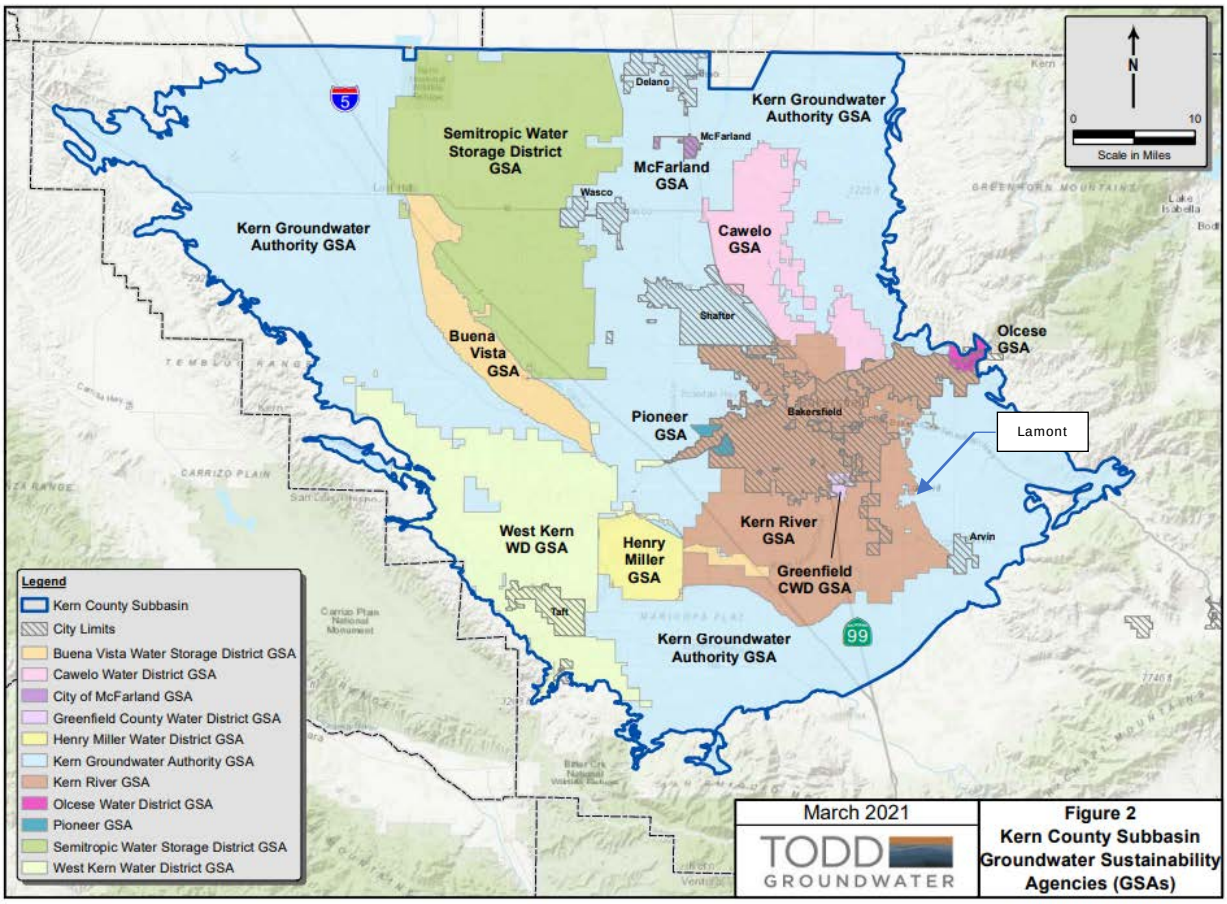


Figure 6-3 - Groundwater Sustainability Plan Areas

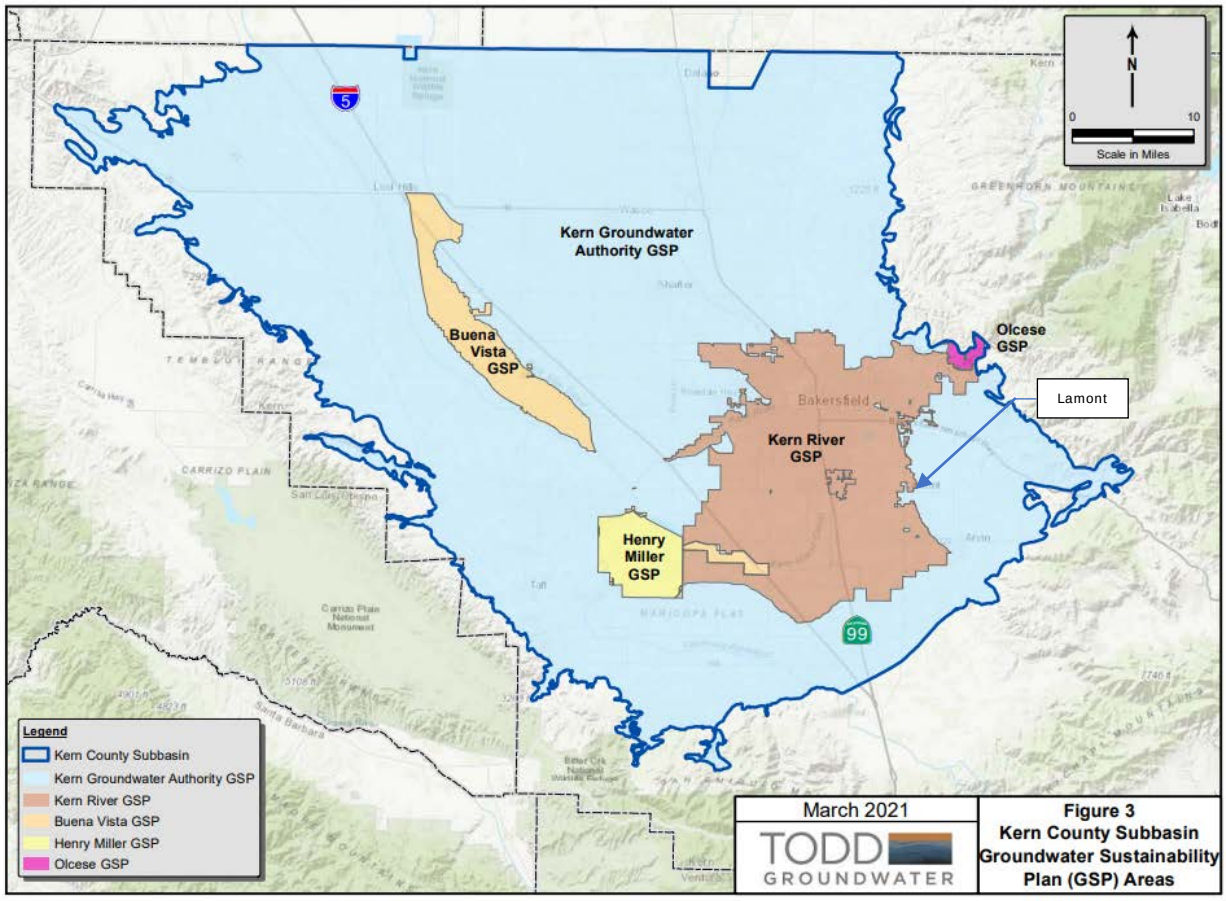
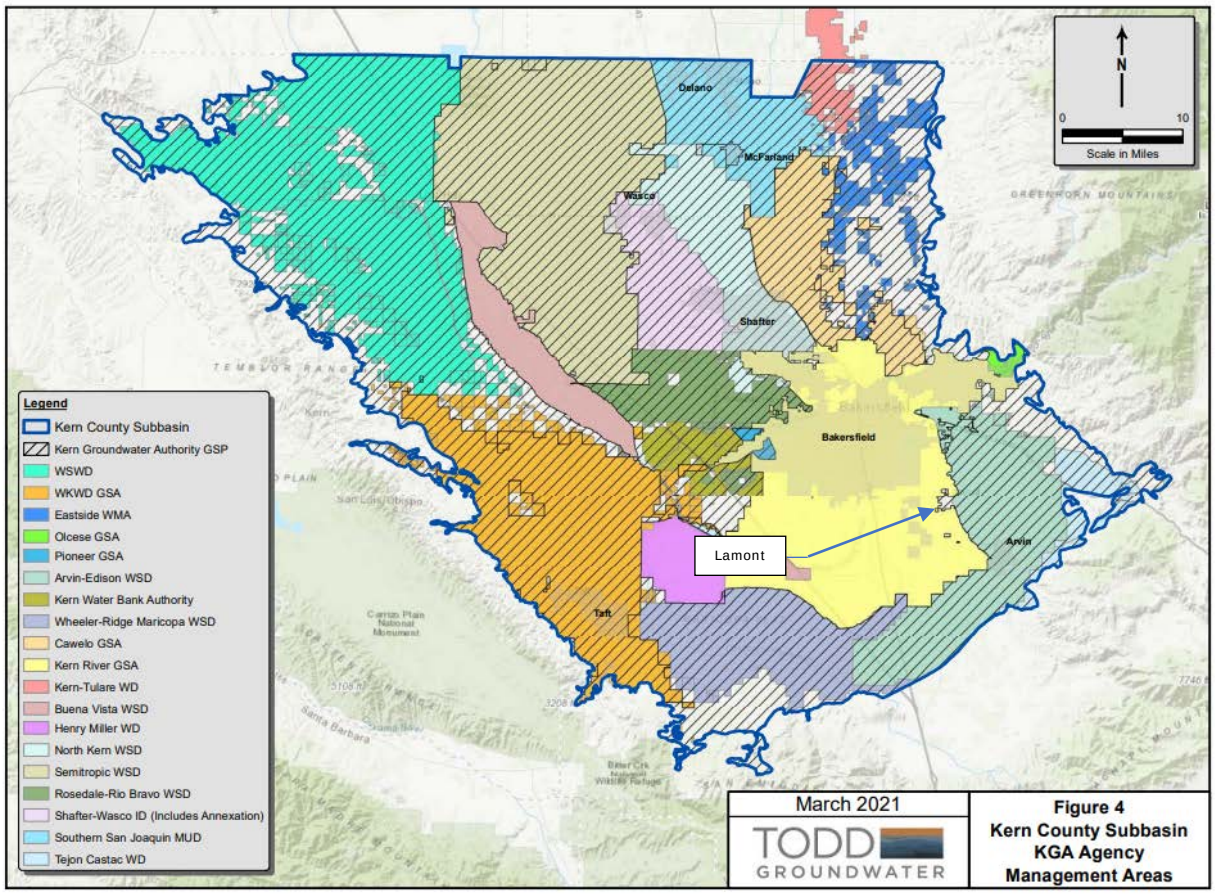


Figure 6-4 - Kern County Subbasin Agency Management Areas



6.2.1 Historical Groundwater Production

The table below shows the amount of groundwater pumped by the Lamont PUD between the years 2016 to 2020. The average volume of groundwater pumped over this 5-year period is 1,153 MG. These values do not represent the groundwater supply available, only the water demand. This distinction in water demand and available supply is further discussed in Section 6.1. Over the five-year period shown in Table 6-3, the annual groundwater supply value of 2,221 MG was more than adequate to meet the overall water demand.

Table 6-3 - Groundwater Volume Pumped 2016-2020

Submittal Table 6-1 Retail: Groundwater Volume Pumped						
☐	Supplier does not pump groundwater. The supplier will not complete the table below.					
☐	All or part of the groundwater described below is desalinated.					
Groundwater Type ***Drop Down List*** *May use each category multiple times*	Location or Basin Name	2016*	2017*	2018*	2019*	2020*
Add additional rows as needed						
Alluvial Basin	San Joaquin Valley Groundwater Basin - Kern County Subbasin	1065	1132	1208	1167	1191
	TOTAL	1,065	1,132	1,208	1,167	1,191
**** Units of measure (AF, CCF, MG)*** *must remain consistent throughout the UWMP as reported in Table 2-3.*						
NOTES: Volume in MG						

6.2.2 Kern County Subbasin Characteristics

The Kern County Subbasin is within the Tulare Lake HR and comprises an area of approximately 1,945,000 acres (3,040 mi^2) in Kern County. The subbasin is bounded to the north by the Tulare Lake and Tule Subbasin, to the east and south by crystalline bedrock of the Sierra Nevada and San Emigdio Mountains, and to the west by the marine sediments of the San Emigdio Mountains and Coastal Ranges.

The Kern County Subbasin is managed by 11 different GSA's. A map of the Kern County Subbasin is shown in Figure 6-1. The Kern County Water Agency estimates the total water in storage to be 40,000,000 acre-feet and dewatered aquifer storage to be 10,000,000 acre-feet.

Natural recharge is primarily from stream seepage along the eastern subbasin and the Kern River; however, recharge of applied irrigation water is the largest contributor.

The San Joaquin Valley represents the southern portion of the Great Central Valley of California. The San Joaquin Valley is a structural trough up to 200 miles long and 70 miles wide filled with up to 32,000 feet of marine and continental sediments

deposited during periodic inundation by the Pacific Ocean and by erosion of the surrounding mountains, respectively. Continental deposits shed from the surrounding mountains form an alluvial wedge that thickens from the valley margins toward the axis of the structural trough. This depositional axis is below to slightly west of the series of rivers, lakes, sloughs, and marshes that mark the current and historic axis of surface drainage in the San Joaquin Valley.

6.2.2.1 Water Bearing Formations

Sediments that comprise the shallow to intermediate depth water-bearing deposits in the groundwater subbasin are primarily continental deposits of Tertiary and Quaternary age. From oldest to youngest the deposits include the Olcese and Santa Margarita Formations; the Tulare Formation (western subbasin) and its eastern subbasin equivalent, the Kern River Formation; older alluvium/stream deposits; and younger alluvium and coeval flood basin deposits. Specific yield values for the unconfined aquifer (Tulare and Kern River Formations and overlying alluvium) were compiled from two sources. The DWR's San Joaquin District office estimates (unpublished) ranges from 5.3 to 19.6 percent and averages 11.8 percent for the interval from surface to 300 feet below grade. The DWR (1977) groundwater model of Kern County lists the range as 8.0 to 19.5 percent with an average value of 12.4 percent representing an interval thickness of 175 to 2,900 feet and averaging approximately 600 feet. The greatest thickness of unconfined aquifer occurs along the eastern subbasin margin. The highest specific yield values are associated with sediments of the Kern River fan west of Bakersfield.

6.2.2.2 Olcese and Santa Margarita Formations

The origin of these Miocene-age deposits varies from continental to marine from east to west across the subbasin (Bartow and McDougall 1984). The Olcese and Santa Margarita Formations are current or potential sources of drinking water only in the northeastern portion of the subbasin where they occur as confined aquifers. The Olcese Formation is primarily sand, ranging in thickness from 100 to 450 feet. The Santa Margarita Formation is from 200 to 600 feet thick and consists of coarse sand (Hilton and others 1963).

6.2.2.3 Tulare and Kern River Formations

These units are both Plio-Pleistocene age and represent a west/east facies change across the subbasin. The Tulare Formation (western subbasin) contains up to 2,200 feet of interbedded, oxidized to reduced sands; gypsiferous clays and gravels derived predominantly from Coast Range sources. The formation includes the Corcoran Clay Member, which is present in the subsurface from the Kern River Outlet Channel on the west through the central and much of the eastern subbasin at depths of 300 to 650 feet (Croft 1972), groundwater beneath the Corcoran Clay is confined. The Kern River Formation includes from 500 to 2,000 feet of poorly sorted, lenticular deposits of clay, silt, sand, and gravel derived from the Sierra

Nevada. Both units are moderately to highly permeable and yield moderate to large quantities of water to wells (Hilton and others 1963).

6.2.2.4 Older Alluvium/Stream and Terrace Deposits

This unit is composed of up to 250 feet of Pleistocene-age lenticular deposits of clay, silt, sand, and gravel that are loosely consolidated to cemented and are exposed mainly at the subbasin margins. The unit is moderately to highly permeable and yields large quantities of water to wells (Hilton and others 1963; Wood and Davis 1959; Wood and Dale 1964). This sedimentary unit is often indistinguishable from the Tulare and Kern Formations below and together with these underlying formations, forms the principal aquifer body in the Kern County Groundwater subbasin.

6.2.2.5 Younger Alluvium/Flood Basin Deposits

This Holocene-age unit varies in character and thickness about the subbasin. At the eastern and southern subbasin margins the unit is composed of up to 150 feet of interstratified and discontinuous beds of clay, silt, sand, and gravel. In the southwestern subbasin it is finer grained and less permeable as it grades into fine-grained flood basin deposits underlying the historic beds of Buena Vista and Kern Lakes in the southern subbasin (Hilton and others 1963; Wood and Dale 1964). The flood basin deposits consist of silt, silty clay, sandy clay, and clay interbedded with poorly permeable sand layers. These flood basin deposits are difficult to distinguish from underlying fine-grained older alluvium and the total thickness of both units may be as much as 1,000 feet (Wood and Dale 1964).

6.2.2.6 Groundwater Levels

In general, groundwater levels for the entirety of the Lake Tulare Hydrologic Region are trending lower than historic levels. Between 1998 and 2018, about 78 percent of monitoring wells in the entire Tulare Lake Hydrologic Region experienced a declining trend. Furthermore, over 51 percent of all the monitoring wells showed a water level drop of 2.5 feet / year, which over a 20-year period, is a drop of 50 feet in groundwater levels. A stable trend was observed in 20 percent of the monitoring wells.

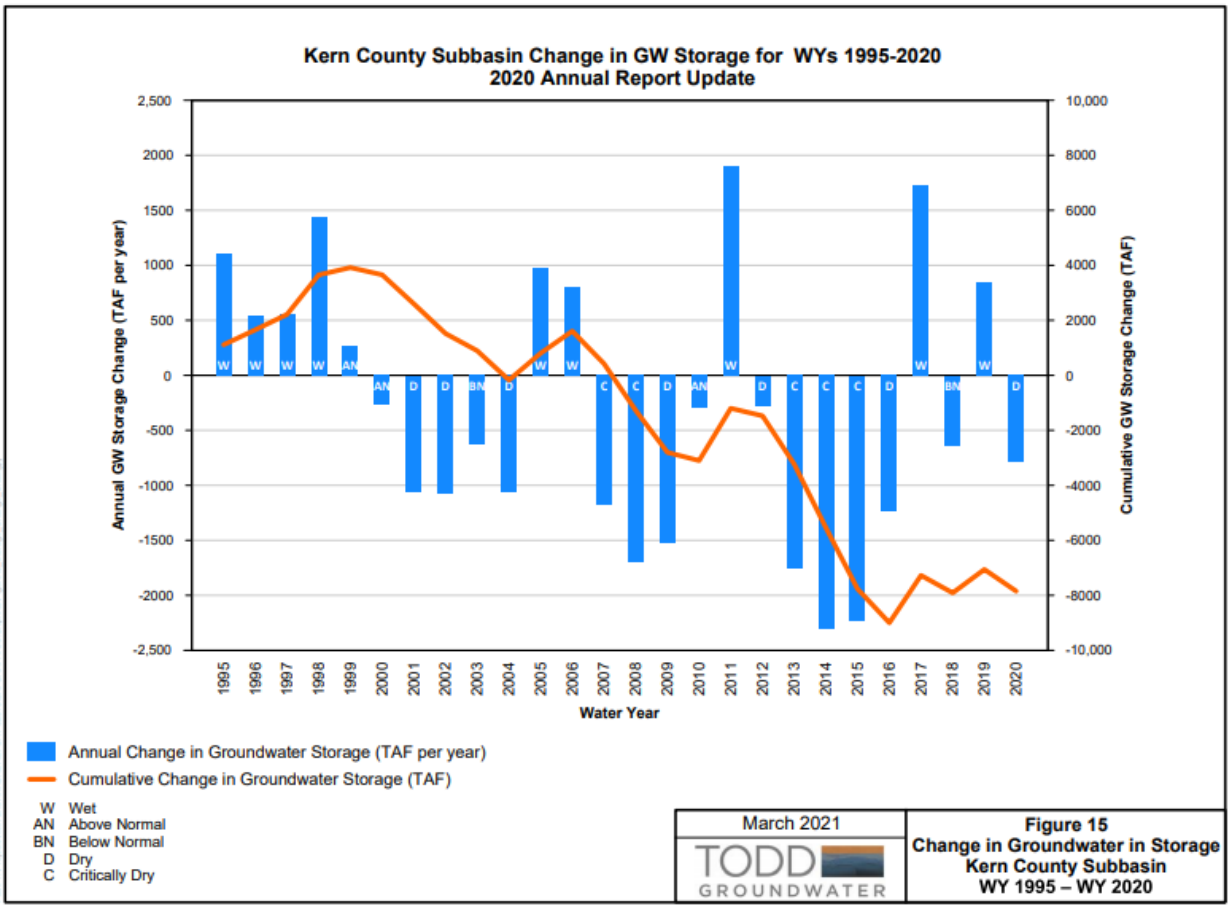
Over the past 25 years, the Kern County Subbasin has seen a total storage capacity decrease of 2,607 MG (8000 TAF). The largest decreases have been attributed to a major drought in the years 2012-2016. This water storage loss is the primary reason that the Kern County Subbasin is designated as “Critically Overdrafted” according to the Sustainable Groundwater Management Act (SGMA).

It should be noted, with respect to the focus of the report in the District, that only 5.41 percent of all groundwater use in the entire Tulare Lake HR (143,000 MG out of 2,650,000 MG) is under urban usage. The rest is considered under agricultural use. Urban water use changes will have only a diminished effect on the total water usage in the region.

Table 6-4 - Groundwater Use Tulare Lake Hydrologic Region

Groundwater Use in Tulare Lake Hydrologic Region[21]			
Water Use Type	Million Acre-Foot (MAF)	Million Gallons (MG)	Percentage
Agriculture	7.70	2,652,000	94.9%
Urban	0.44	143,000	5.1%

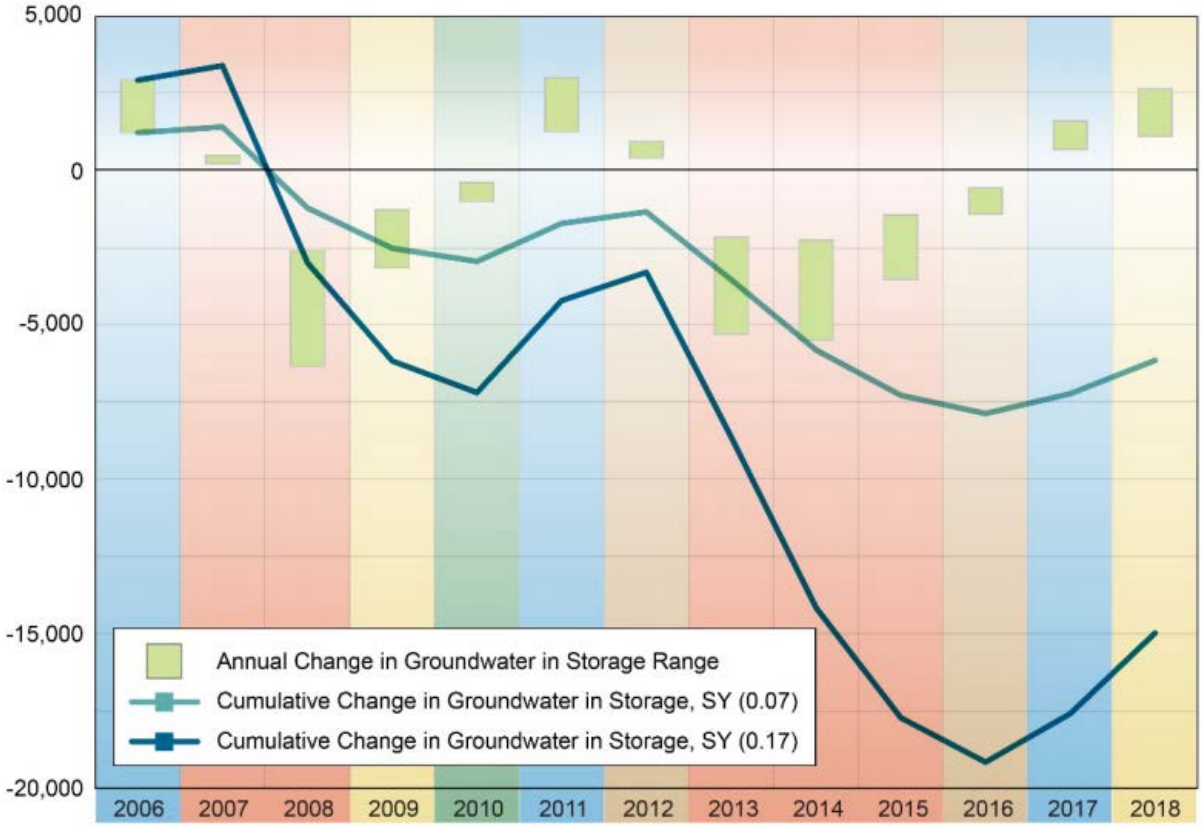
Figure 6-5 – Kern County Subbasin: Groundwater Storage Levels Year-Over-Year[22]



[21] California Groundwater Update 2020.

[22] Kern County Subbasin Groundwater Sustainability Plan 2021.

Figure 6-6 - Tulare Lake Hydrologic Region Change in Storage[23]



6.2.2.7 Groundwater Quality

The most commonly detected chemical above a regulatory limit in the region was 1,2,3-TCP, with 22.6 percent of the wells reporting above the primary MCL.

[23] California Groundwater Update 2020

Table 6-5 - Top 10 Chemicals Detected in Tulare Lake Hydrologic Region[24]

Top 10 Chemicals Detected in Hydrologic Region by Percentage Samples Greater than MCL	
Chemical	Percentage Detected in Monitoring Wells
1,2,3 Trichloropropane (1,2,3-TCP)	22.6%
Iron	17.8%
Nitrate	12.6%
Uranium	11.9%
Arsenic	11.6%
Manganese	10.5%
Gross Alpha	10.2%
1,2-Dibromo, 3-Chloropropane (DBCP)	4.5%
Specific Conductivity	2.6%
Radon-222	2.5%

Shallow groundwater presents problems for agriculture in the western portion of the basin. High TDS, sodium chloride, and sulfate are associated with the axial trough of the subbasin. In addition, shallow groundwater presents problems for drinking water as it often exceeds the MCL for Nitrate, 1,2,3-TCP, and EDB/DBCP. The District constructs its wells deep to avoid Nitrate and DBCP, however not too deep in order to avoid Arsenic.

6.2.3 Groundwater Sustainability

In 2014, the State of California implemented the Sustainable Groundwater Management Act (SGMA) to help manage the state's groundwater resources during a five-year drought in California from 2012 to 2016. It is focused on limiting the adverse effects of groundwater overextraction: groundwater-level declines, land subsidence, and water quality degradation. SGMA is built on the premise that groundwater is best managed at the local level. However, SGMA recognizes the legacy and necessity of state's support to locals for successful groundwater management because the complexities of groundwater management require the reliance on advanced management tools, where the state can play a major and effective role. As a result, SGMA allows the Department of Water Resources (DWR) to provide assistance to the localities in addition to its regulatory role in the implementation of the SGMA.

[24] California Groundwater Update 2020

SGMA requires all high- and medium-priority basins, designated by DWR, to be sustainably managed. The Kern County Subbasin is designated as a high-priority basin. To comply with SGMA, the Kern County Subbasin has been organized into several Groundwater Sustainability Agencies (GSAs), which coordinated on five Groundwater Sustainability Plans (GSPs) that cover the entire subbasin. The Lamont PUD is covered under the Kern River GSA.

6.2.4 Groundwater Production

The District currently has 7 active groundwater wells: Wells No. 5, 11, 12, 15, 17, 18, 19. Well No. 13 is currently offline due to a casing failure and the project to replace the well is currently ongoing. In addition, all of these wells, with the exception of Well No. 15, are impacted by Arsenic or 1,2,3-TCP that exceeds the MCL. TCP treatment is installed at Well No. 5, 17, and 18. The seven (7) combined wells provide a total production capacity of 8,450 gallons per minute (GPM). Additionally, the District has a 1.1 million gallons available for water storage through the use of four (4) water storage tanks that can provide additional capacity during peak hours if necessary. Assuming a 50 percent utilization rate, where the wells are operated for 12 hours per day, the annual available active groundwater supply volume is 2,221 MG – or 6,815 acre-feet. At a 75 percent utilization rate, the annual available supply is 3,331 MG – or 10,222 acre-feet. The amount of groundwater produced for 2020 is shown in Table 6-1, and the historical production data is shown below in Table 6-3.

6.2.5 Projected Groundwater Supplies

The highest annual volume of groundwater pumped in the previous five years is 1,208 MG. This volume equates to a continuous average production rate of 2,298 GPM, which is lower than the available pumping capacity in GPM and the annual pumping capacity at conservative utilization rates. The total pumping capacity of the District's groundwater wells is 8,450 GPM or 2,221 MG per year at a 50 percent utilization rate.

Projecting into the future, groundwater supply in 2040 is expected to increase by 18 percent from 2020 supply levels to 1,404 MG. This amount remains less than the 2,221 MG/year that can be supplied by the seven groundwater wells provided the wells do not encounter mechanical or maintenance issues.

According to Section 64554 of the California Waterworks Standards, community water systems must be capable of meeting the maximum daily demand (MDD) with its highest capacity source offline. The highest capacity source will be the replacement well for Well No.13, which has a pumping capacity of 1,500 GPM. With this replacement well offline, the system pumping capacity is 8,450 GPM. Additionally, for water systems with over 1,000 or more service connections, the system shall be able to meet four hours of peak hourly demand. According to the calculations shown in Table 6-6, it can be established that there will be enough active pumping capacity for the District through 2040 with the current groundwater

well sources. For the four-hour peak demand requirement, the active groundwater pumps and the 1.1 MG storage tank can provide adequate supply through the year 2040.

Table 6-6 - Projected System Demand

Projected System Demand				
Year	Annual Production (MG)	Average Day Demand gpm	Maximum Day Demand gpm	Peak Hour Demand gpm
2020	1,191	2,266	5,098	7,648
2025	1,241	2,361	5,313	7,969
2030	1,293	2,461	5,536	8,305
2035	1,348	2,564	5,769	8,654
2040	1,404	2,672	6,012	9,018
Notes: Max Day Demand (MDD) Peak Factor = 2.25, Peak Hour Demand = 1.5 * MDD				

6.3 Future Water Supply Projects

To help with system demand as the District continues its growth, the District expects to replace three (3) older groundwater wells (Well's No. 5, 11, 12) over the next few years. This will help the District to have a more reliable water supply during peak hour demand.

Table 6-7 - Expected Future Water Supply Projects

Submittal Table 6-7 Retail: Expected Future Water Supply Projects or Programs						
☐	No expected future water supply projects or programs that provide a quantifiable increase to the agency's water supply. Supplier will not complete the table below.					
☐	Some or all of the supplier's future water supply projects or programs are not compatible with this table and are described in a narrative format.					
47	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 *Drop Down List*	Expected Increase in Water Supply to Supplier* *This may be a range*
	Drop Down List (y/n)	*If Yes, Supplier Name*				
Add additional rows as needed						
New Municipal Well	No		New Water Supply Well	2022-2024	All Year Types	0
New Municipal Well	No		New Water Supply Well	2022-2024	All Year Types	0
New Municipal Well	No		New Water Supply Well	2022-2024	All Year Types	0
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*						
NOTES: Volume in MG						

6.4 Wastewater and Recycled Water

The District's wastewater is sent to the District's Wastewater Treatment Plant. The treated water does not come back into the District's water service area, but is primarily accepted by the Recology Blossom Valley Organics South for land application and recharge. There are no current plans to change this arrangement, nor does the District have any plans to expand to recycled water use in the future.

Table 6-8 - Wastewater Collected 2020

Submittal Table 6-2 Retail: Wastewater Collected Within Service Area in 2020						
Wastewater Collection			**Recipient of Collected Wastewater**			
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated? *Drop Down List*	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? *Drop Down List*	Is WWTP Operation Contracted to a Third Party? *(optional)* *Drop Down List*
Lamont Public Utility District	Metered	423	Lamont Public Utility District	Wastewater Treatment Plant	Yes	No
Total Wastewater Collected from Service Area in 2020:		423				
**** Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*						
NOTES: Volume in MG						

Table 6-9 - Wastewater treatment and Discharge within Service Area 2020

Submittal Table 6-3 Retail: Wastewater Treatment and Discharge Within Service Area in 2020										
☐	**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 *Drop down list*	Does This Plant Treat Wastewater Generated Outside the Service Area? *Drop down list*	Treatment Level *Drop down list*	**2020 volumes [1]**				
						Waste-water Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area	Instream Flow Permit Requirement
LPUD WWTP	Recology Blossom Valley Organics - South	Green Waste Composting facility, and farmland	Land disposal	No	Secondary, Undisinfected	423	423	0	0	0
					Total	423	423	0	0	0

[1] **Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.
[2] If the **Wastewater Discharge ID Number** is not available to the UWMP preparer, access the SWRCB CIWQS regulated facility website at https://ciwqs.waterboards.ca.gov/ciwqs/readOnly/CiwqsReportServlet?inCommand=reset&reportName=RegulatedFacility

NOTES: Volume in MG

Table 6-10 - Recycled Water Direct Beneficial Uses Within Service Area

Submittal Table 6-4 Retail: Recycled Water Direct Beneficial Uses Within Service Area	
☑	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.

Table 6-11 - 2015 UWMP Recycled Water Use Projection Compared to 2020

Submittal Table 6-5 Retail: 2015 UWMP Recycled Water Use Projection Compared to 2020 Actual	
☑	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.

Table 6-12 - Methods to Expand Future Recycled Water Use

Submittal Table 6-6 Retail: Methods to Expand Future Recycled Water Use	
☑	Supplier does not plan to expand recycled water use in the future. Supplier will not complete the table below but will provide narrative explanation.
	Provide page location of narrative in UWMP

6.5 Energy Use

A new requirement for the 2020 UWMP is an energy intensity analysis of the District's water, wastewater, and recycled water systems, where applicable for a 12-month period. Water and energy sources are directly related to one another. It is incumbent upon the District to include any and all energy use related to the water supply system and the wastewater treatment plant.

The table shown below is a reflection of the District's energy intensity with respect to the District's potable water distribution system:

Table 6-13 - Table O-1B: Recommended Energy Reporting - Water Supply Process Approach

Urban Water Supplier: *Lamont Public Utility District*

Water Delivery Product (If delivering more than one type of product use Table O-1C)

Retail Potable Deliveries

Table O-1B: Recommended Energy Reporting - Total Utility Approach				
Enter Start Date for Reporting Period	1/1/2020	**Urban Water Supplier Operational Control**		
End Date	12/31/2020			
☐ Is upstream embedded in the values reported?		**Sum of All Water Management Processes**	**Non-Consequential Hydropower**	
Water Volume Units Used	*MG*	Total Utility	Hydropower	Net Utility
Volume of Water Entering Process (volume unit)		*1191*		*1191*
Energy Consumed (kWh)		*2666965*		*2666965*
Energy Intensity (kWh/vol. converted to MG)		*2239.3*	*0.0*	*2239.3*

Quantity of Self-Generated Renewable Energy

0 kWh

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

Metered Data

Data Quality Narrative:

The data was recorded from the electricity meters at each of the well sites.
Narrative:
All of the electricity usage, for the year 2020, was collected from each of the well sites and utilized to establish the energy intensity. Since the water source is groundwater, the storage tanks are at the well sites, and any water filtration takes place at the well sites, all of the energy consumed at the well sites constitutes the total energy consumed to extract, store, convey, treat, and distribute the groundwater is recorded at the well sites.

7 Water Service Reliability and Drought Risk Assessment

7.1 Overview of Water Service Reliability Assessment and the Drought Risk Assessment

Assessing water service reliability is the fundamental purpose for the District to prepare a UWMP. Having evaluated the water supply and future water supply projections in Section 6, this key section examines the District's water supplies, water uses, and the resulting water supply reliability. Water supply reliability reflects the District's ability to meet the water needs of its customers under varying conditions during normal, single-dry, and multiple-dry water years. With respect to this UWMP, this water supply reliability is evaluated in two different assessments: The Water Service Reliability Assessment and the Drought Risk Assessment (DRA) are discussed herein.

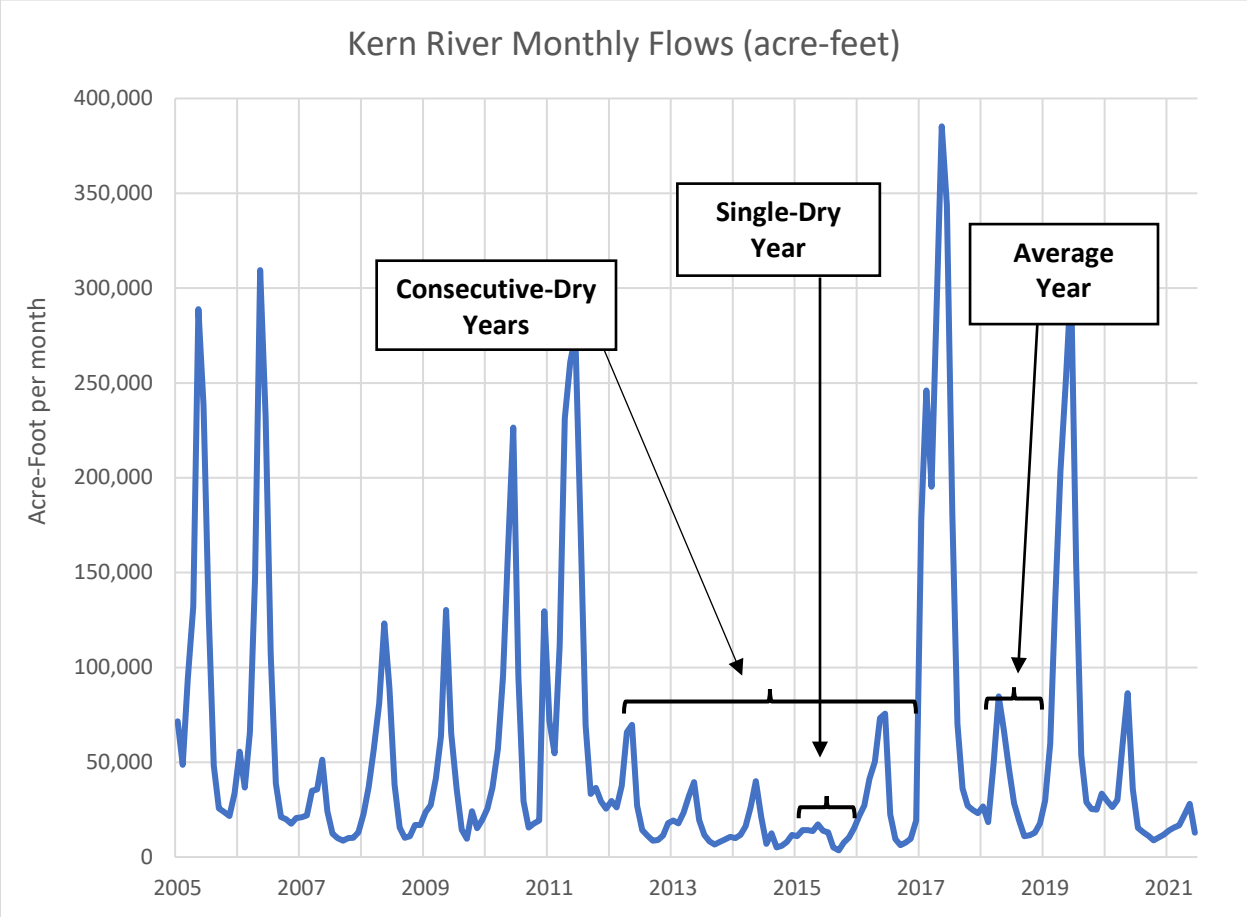
7.2 Water Service Reliability Assessment

Reliability is a measure of the District's ability to manage water shortages. Since the District relies solely on groundwater supplies, most water service reliability issues are related to groundwater availability, groundwater quality, and environmental effects.

As the year 2020 was considered a dry year per the San Joaquin Valley Index (CDEC 2021), and considering that the Kern County Subbasin has been designated to be in critical over-draft, the need for the District to properly understand its ability to reliably supply water to its customers is especially relevant.

In order to establish years from which the groundwater reliability may be calculated, the monthly inflows of the Kern River were utilized. This is because the Kern River is one the largest sources of natural recharge into the Tulare Lake Hydrologic Region and a good indicator of the climate for any year in question for the region. The Kern River flow data is also a good indicator of annual rainfall and snow pack levels. Data can be seen in Figure 7-1.

Figure 7-1 - Kern River Monthly Flows[25]



Based on the historical data and future projections, the District was able to assess the future water reliability and was able to determine that the District will be able to meet the demands of its customers through 2040 during normal, single-dry, and multiple-dry years.

7.2.1 Constraints on Water Resources

7.2.1.1 Groundwater Availability

Groundwater for the District is pumped from the Kern County Subbasin, and this supply has always been sufficient to meet the District's demands. As mentioned previously in more detail in Section 4.5 of this UWMP, there are several adverse effects that can impact the groundwater supply. Environmental concerns will be considered in Section 7.2.1.3. It should be noted again that only 5.1 percent of all water usage in the Tulare Lake Hydrologic Region is under urban usage – Lamont PUD accounts for a small percentage of urban use (0.83 percent of all water use). Therefore, the District's water supply availability is heavily dependent on the

[25] CDEC data for Kern River Monitoring Station "KRB"

groundwater usage of other municipalities and the groundwater demand for agriculture. In addition, the District's wells are constructed deep such that they may maintain proper water supply through the year 2040 even in the event of declining water levels.

The District water supply relies upon groundwater sources. These sources are protected against short-term outages that may arise from natural disasters (i.e., earthquakes) or from electricity outages with the use of emergency generators that are available for the District's use.

Long term water shortages (resulting from catastrophic failures or climate change related) will require the drilling of new water wells, or result in lowering groundwater pumps. This would also result in an increase in cost for extracting water.

7.2.1.2 Groundwater Quality

A further constraint for the groundwater availability would be groundwater quality. Groundwater supplies which contain chemicals or certain minerals which exceed the Maximum Contaminant Levels (MCLs) set by the State Water Resources Control Board may result in the need to install water treatment systems. The District's active groundwater wells utilize continuous chlorination treatment for disinfection and four (4) wells (Well No. 5, Well No. 13, Well No. 17, Well No.18) are treated to remove 1,2,3-TCP. The District plans to replace Well No.'s 5, 11, and 12 within the next few years with new Wells No. 21-23.

In light of these water quality issues, and the commitment to monitor and manage the District's water quality, the water reliability is not expected to be impacted by groundwater quality.

7.2.1.3 Environmental

While most of the environmental considerations have been discussed previously in Section 4.5 of this UWMP, it is worth discussing the environmental impacts related to groundwater reliability.

As groundwater levels decrease due to over-extraction and drought conditions, the amount of energy required to pump the groundwater water into the District's system will increase. This power increase will increase the cost of water production, which will be passed on to District residents. As roughly 50% of the District is classified as an "economically disadvantaged community," this is a crucial issue.

Another issue with decreasing groundwater levels is pump submergence and the potential need for the District to lower the well pumps. This is a costly operation which will also necessitate for the groundwater well to be shut down during the lowering operation.

7.2.2 Reliability by Type

Using Figure 7-1, the periods for a Normal Year reliability assessment, single-dry year, and 5-year drought were ascertained and assessed for the District's ability to reliably supply water to its customers during the prescribed conditions.

Although there have been severe and frequent droughts during this time period, the District has not had any issue with their water supply – the District has consistently been able to supply water to its customers. Therefore, the District's water supplies are expected to remain adequate and capable of meeting the projected water demands of its customers under all conditions.

An important note to make for Submittal Table 7-1 Retail Table 7-1 - Basis of Water Year Data for Reliability Assessmentis that the water volume available is representative of the total groundwater supply that is available to the District within that specific year. This groundwater supply is calculated based on active groundwater wells at a conservative 50 percent utilization rate.

Table 7-1 - Basis of Water Year Data for Reliability Assessment

Submittal Table 7-1 Retail: Basis of Water Year Data (Reliability Assessment)			
Year Type	**Base Year** If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 2019-2020, use 2020	**Available Supplies if Year Type Repeats**	
		☐	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location_____
		☑	Quantification of available supplies is provided in this table as either volume only, percent only, or both.
		Volume Available *	**% of Average Supply**
Average Year	2018	2,483	
Single-Dry Year	2015	2,483	
Consecutive Dry Years 1st Year	2012	2,142	
Consecutive Dry Years 2nd Year	2013	2,142	
Consecutive Dry Years 3rd Year	2014	2,142	
Consecutive Dry Years 4th Year	2015	2,483	
Consecutive Dry Years 5th Year	2016	2,483	
Supplier may use multiple versions of Table 7-1 if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If a Supplier uses multiple versions of Table 7-1, in the "Note" section of each table, state that multiple versions of Table 7-1 are being used and identify the particular water source that is being reported in each table.			
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*			
NOTES: Volume in MG. Supply based on 50% utilization of active groundwater wells. 341 MG / year of water supply capacity was added in 2014 with the addition of Well No.19.			

7.2.2.1 Normal-Year

This condition represents the water supply availability for the District during a normal year. A normal hydrological year occurred in 2018, where the total volumetric flow from the Kern River was similar to the average volumetric flow from the Kern River from 2005 to 2021.

7.2.2.2 Single-Dry Year Reliability

This is defined as the year that represents the lowest water supply available to the District. The year used for the single-year analysis was 2015, which had the lowest volumetric flow from the Kern River in the recorded period shown in Figure 7-1 -

Kern River Monthly Flows. It happened to be near the tail-end of a 5-year drought that stretched from 2012 to 2016.

7.2.2.3 5-Year Drought

This represents the driest five-year historical sequence for the District (Water Code Section 10612). This period was recorded to be from 2012 to 2016 – the driest period on record over the past 30 years.

7.3 Supply and Demand Assessment

Groundwater supply and demand may vary from year-to-year under normal conditions as well as under single-dry years and multiple-dry years.

7.3.1 Normal-Year

The overall water demands and supply under normal conditions have already been shown in Section 4 and 6 respectively. Table 7-2 below shows the projected supply and demand totals for a normal year.

Table 7-2 - Normal Year Supply and Demand

Submittal Table 7-2 Retail: Normal Year Supply and Demand Comparison				
	2025	2030	2035	2040
Supply totals (*autofill from Table 6-9*)	2,615	2,615	2,615	2,615
Demand totals (*autofill from Table 4-3*)	1,241	1,293	1,348	1,404
Difference	1,374	1,322	1,267	1,211
NOTES: Volume in MG				

7.3.2 Single Dry Year

For a single dry year, the District has estimated a 5 percent increase over the normal projected demand, as shown below in Table 7-3. This 5 percent increase is taking into account higher water use due to less rainfall and a greater reliance on applied irrigation water by customers. The District is capable of meeting its customers' demand through the year 2040.

Table 7-3 - Single Dry Year Supply and Demand

Submittal Table 7-3 Retail: Single Dry Year Supply and Demand Comparison				
	2025	2030	2035	2040
Supply totals*	2,615	2,615	2,615	2,615
Demand totals*	1,303	1,358	1,415	1,474
Difference	1,312	1,257	1,200	1,141
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*				
NOTES: Volume in MG				

7.3.3 Multiple Dry Year

Typically, during a prolonged drought, an increase in demand is realized. However, as the drought continues, cities and municipalities introduce measures (higher water usage rates, ban on outdoor watering, etc.) that decrease the water demand as the drought continues. However, for this UWMP, during multiple dry years, a conservative approach is used to estimate a 5 percent increase in demand for five consecutive years.

Table 7-4 - Multiple Dry Years Supply and Demand

Submittal Table 7-4 Retail: Multiple Dry Years Supply and Demand Comparison					
		2025*	2030*	2035*	2040*
First year	Supply totals	2,615	2,615	2,615	2,615
	Demand totals	1,368	1,426	1,486	1,548
	Difference	1,247	1,189	1,129	1,067
Second year	Supply totals	2,615	2,615	2,615	2,615
	Demand totals	1,314	1,369	1,427	1,487
	Difference	1,301	1,246	1,188	1,128
Third year	Supply totals	2,615	2,615	2,615	2,615
	Demand totals	1,325	1,381	1,439	1,499
	Difference	1,290	1,234	1,177	1,116
Fourth year	Supply totals	2,615	2,615	2,615	2,615
	Demand totals	1,336	1,392	1,450	1,512
	Difference	1,279	1,223	1,165	1,103
Fifth year	Supply totals	2,615	2,615	2,615	2,615
	Demand totals	1,347	1,404	1,463	1,524
	Difference	1,268	1,211	1,152	1,091
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*					
NOTES: Volume in MG; Demand Totals = Normal Year Demand x 105%					

7.3.4 Management Tools and Options

Existing and planned water management tools and options for the District that seek to maximize local resources are discussed here. The District is its own water supplier, but it coordinates its water management in conjunction with the Kern River GSA. This coordination is directly for the purpose of managing groundwater supplies: current practices and existing plans, current groundwater conditions and future sustainability plans required to comply with SGMA regulations.

A desirable outcome for the District and the Kern River GSA is for a year-over-year positive net groundwater storage increase. According to the 2020 Kern Groundwater Authority Groundwater Sustainability Plan, the area under KGA's jurisdiction has an annual overdraft of 256,281 acre-feet (83,509 MG), and an overdraft of 324,326 acre-feet (105,682 MG) for the entire Subbasin. In coordination with other GSAs in the Subbasin, more than 150 projects and management actions have been identified to reduce the overdraft deficit. The sustainability goal of the District and other localities within the Kern County Subbasin is to balance the average annual inflow and outflow of water within the District so that a negative change in groundwater storage does not occur by 2040. To achieve this measurable objective, projects and management actions are being planned. The projects included are spreading and recovery facilities, recharge facilities, and intertie pipelines between other water districts. Achievement of this objective will provide many benefits: continuity of groundwater resources, protection of water quality, and decreases in the occurrence of land subsidence. If these identified projects and management were to be implemented in the Subbasin, it would result in an average surplus of 85,568 acre-feet per year (27,882 MG per year) by the year 2040.

With respect to drought conditions, the District has within its Water Shortage Contingency Plan different levels of restrictions based on the severity of the water shortage.

7.4 Drought Risk Assessment

In accordance with Water Code Section 10612, the Drought Risk Assessment (DRA) is based on the five driest consecutive years on record. The DRA provides the District with an opportunity to contemplate management of their water supplies during stressed hydrologic conditions. Furthermore, the DRA will help test the functionality of its Water Shortage Contingency Plan (WSCP) and understand the levels of response necessary for the management of water supplies. Together, the water service reliability assessment, the DRA, and the WSCP allow the District to evaluate a comprehensive picture of its short and long-term water service reliability. Lastly, this assessment considers historical water use and potential changes with respect to future supply and demand due to regulatory changes and effects from climate change.

7.4.1 Data, Methodology, and Basis

Since the District's sole supply of water comes from groundwater sources, the data used for the DRA will largely be the same as calculated in the water service reliability assessment; which obtained its data from the water use and water supply sections (Sections 4 and 6 respectively). Accordingly, the methodology and basis will largely be the same for DRA as it was for the water service reliability assessment. The methodology is unchanged because the groundwater supply for

the District is sufficient to meet its needs through 2040 even under 5-year drought conditions.

During a dry year, an increase in water demand is typically seen because of the effects of the drought: higher temperatures and less precipitation. These two effects lead to a higher water usage. But as a drought continues for several years, regulatory effects and water shortages will typically lead to a decline in the increase in water demand. As with the water service reliability assessment, the same methodology will be used for the DRA: a conservative 5 percent increase in water usage for every year over the baseline water demand assumptions.

7.4.2 Water Source Reliability

For the District, the only supply of water comes from groundwater sources. As discussed in Section 7.3, the groundwater supply is sufficient to provide for the District's customers through 2040. Impacts that could affect the reliability of the groundwater sources could be classified as short-term and long-term. With respect to short-term impacts: power outages, a natural disaster such as an earthquake, or any required pump maintenance. Longer term impacts could be due to pump failure or anything requiring a groundwater well to be taken offline for any period of time, subsidence that damages the well casing, or water quality changes.

7.4.3 DRA Total Water Supply and Use Characterization

Table 7-5 below shows the tables for the District's DRA for the years 2021 to 2025. This table shows the total projected water use and the total supply available to the District for an assumed drought period from 2021 to 2025. These values include considerations related to climate change, regulatory, and other mitigating factors. It should also be noted that the District only pumps the amount of groundwater necessary to meet its demands and that the supply values shown in Table 7-5 are representative of the total groundwater pumping capacity at a 50% utilization rate.

Table 7-5 - Drought Risk Assessment Tables

Submittal Table 7-5: Five-Year Drought Risk Assessment Tables to address Water Code Section 10635(b)	
2021	**Total**
Total Water Use	1,261
Total Supplies	2,221
Surplus/Shortfall w/o WSCP Action	960
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	960
Resulting % Use Reduction from WSCP action	0%

2022	Total
Total Water Use	1,272
Total Supplies	2,615
Surplus/Shortfall w/o WSCP Action	1,343
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	1,343
Resulting % Use Reduction from WSCP action	0%

2023	Total
Total Water Use	1,282
Total Supplies	2,615
Surplus/Shortfall w/o WSCP Action	1,333
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	1,333
Resulting % Use Reduction from WSCP action	0%

2024	Total
Total Water Use	1,293
Total Supplies	2,615
Surplus/Shortfall w/o WSCP Action	1,322
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	1,322
Resulting % Use Reduction from WSCP action	0%

2025	Total
Total Water Use	1,303
Total Supplies	2,615
Surplus/Shortfall w/o WSCP Action	1,312
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	

WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	1,312
Resulting % Use Reduction from WSCP action	0%
NOTES: Volume in MG	

8 Water Shortage Contingency Plan

8.1 Lay Description

Water shortages may happen at any time for a myriad of reasons. In order to prepare for any water shortage, including a catastrophic water shortage, the California Water Code Section 10632 requires that every urban retail supplier prepare and adopt a Water Shortage Continency Plan (WSCP). This WSCP is a detailed proposal for how the District plans to act in the case of an actual water shortage condition. The updated and adopted WSCP is in Appendix F.

A water shortage is when water supply available is insufficient to meet the normally expected customer water use at a given point in time, for any specific reason. These specific reasons could be from, but are not limited to: earthquake, severe drought, fire, or regulatory action. The District had previously adopted a WSCP in 2014, but according to updated standards in the California Water Code, a new WSCP has been updated and drafted. This update provides new information related to real-time water supply availability including structured steps designed to respond to any water shortage conditions.

In conjunction with the District's Emergency Response Plan, this WSCP will be utilized as an operating manual for the District to prevent catastrophic service disruptions through proactive, rather than reactive, mitigation of water shortages. This WSCP is not intended to provide absolute direction, but rather provides options for how to manage water supply shortages. Official water shortage declarations by the District can include any combination of components described within this WSCP.

The UWMP Act requires that the WSCP include an urban water shortage contingency analysis that addresses different stages of action to be taken by the District in response to water supply shortages, including more than a 50 percent reduction in supply.

Consistent with California Water Code §10632, this WSCP includes six levels to address shortage conditions ranging from a water shortage up to 10 percent to a shortage greater than 50 percent.

8.2 WSCP Submittal Tables

A summary of the WSCP including the six stages of water shortage levels and the prescribed demand reduction actions can be found in Table 8-1 and Table 8-2 below. Given the District's sufficient water supply, there are no immediate plans to implement any stages of the water shortage contingency plan.

Table 8-1 - Water Shortage Contingency Plan Levels

Submittal Table 8-1 Water Shortage Contingency Plan Levels		
Shortage Level	**Percent Shortage Range**	**Shortage Response Actions** (***Narrative description***)
1	Up to 10%	Demand Reduction (see Table 8-2)
2	Up to 20%	Demand Reduction (see Table 8-2)
3	Up to 30%	Demand Reduction (see Table 8-2)
4	Up to 40%	Demand Reduction (see Table 8-2)
5	Up to 50%	Demand Reduction (see Table 8-2)
6	>50%	Demand Reduction (see Table 8-2)
NOTES:		

Table 8-2 - Demand Reduction Actions (Stage #1)

Submittal Table 8-2: Demand Reduction Actions (Shortage Stage #1)				
Shortage Level	Demand Reduction Actions ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.*	How much is this going to reduce the shortage gap?	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? ***For Retail Suppliers Only*** *Drop Down List*
Add additional rows as needed				
1	Prohibition on Waste of Water	2%	Prohibition on the Uses of water which allows substantial and unreasonable amounts of water to run into a gutter, ditch, or drain.	No
1	Prohibition on Waste of Water	3%	The excessive use, loss, or escape of water through breaks, leaks, or malfunctions in the water user's plumbing or distribution facilities for any period of time after such escape of water should reasonably have been discovered and corrected. It shall be presumed that a period of forty-eight hours	No

			after discovery is a reasonable time within which to correct such leak or break.	
1	Expand Public Information Campaign	-	Maintain on ongoing public information campaign consisting of distribution of literature, speaking engagements, bill inserts, and conversation messages printed in local newspapers	No
1	Prohibition on Waste of Water	3%	The washing of vehicles, building exteriors, sidewalks, driveways, parking areas, tennis courts, patios or other paved areas without the use of a positive shut-off nozzle on the hose.	No
1	Estimated water Savings (%)	8%		
NOTES:				

Table 8-3 - Demand Reduction Actions (Stage #2)

Submittal Table 8-2: Demand Reduction Actions (Shortage Stage #2)				
Shortage Level	Demand Reduction Actions ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.*	How much is this going to reduce the shortage gap?	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? ***For Retail Suppliers Only*** *Drop Down List*
Add additional rows as needed				
2	Landscape - Limit landscape irrigation to specific days	6%	Irrigation utilizing individual sprinklers or sprinkler systems of lawns, gardens, landscaped areas, trees, shrubs, or other plans is permitted on the "odd/even" protocol between the hours of 8 p.m. and five a.m. on designated days.	No

2	Landscape - Restrict or prohibit runoff from landscape irrigation	2%	Water shall not spray or flow to any impermeable private or public surface, including but not limited to, walkways, driveways, sidewalks, alleys, streets, or storm drains.	No
2	Other	1%	The washing of automobiles, trucks, trailers, boats, airplanes, and other types of mobile equipment is permitted only on designated irrigation days based on the "odd/even" protocol, between the hours of 8 a.m. and 6 p.m.. Such washing, when allowed, shall be done with a hand-held bucket, or a hand-held hose equipped with a positive shut-off nozzle for quick rinses.	No
2	Other water feature or swimming pool restriction	0.5%	The emptying and refilling of water to swimming pools / spas is permitted only on designated irrigation days between the hours of 7 p.m. and 10 a.m.	No
2	Water Features - Restrict water use for decorative water features, such as fountains	0.5%	The operation of any ornamental fountain or other structure making similar use of water is prohibited unless the fountain uses a recycling system.	No
2	Other	1%	The washing of sidewalks, driveways, parking areas, courts, patios, or other paved areas is absolutely prohibited, unless it is necessary for the health and safety, and welfare of the public.	No
2	CII - Restaurants may only serve water upon request	0-1%	All new or substantially re-modeled eating and drinking establishments of any kind shall only provide drinking water to any person upon receipt of an express request. They shall also install water conserving pre-rinse nozzles.	No

2	CII - Commercial kitchens required to use pre-rinse spray valves	0-1%	All new or substantially re-modeled eating and drinking establishments of any kind shall install water conserving pre-rinse nozzles.	No
2	CII - Lodging establishment must offer opt out of linen service	0-1%	All new or substantially re-modeled hotels, motels, and bed and breakfast establishments shall provide customers the option of choosing not to have towels laundered daily. They must also have the best available technology low flow toilets.	No
2	CII - Other CII restriction or prohibition	0-1%	All new or substantially re-modeled new carwash system shall have a water recirculation system.	No
2	Other - Require automatic shut of hoses	2%	No person shall allow water to flow freely from a hose that is not equipped with a positive action quick release shutoff valve or nozzle.	No
2	Expand Public Information Campaign	-	Utility aggressively continues its public information and education programs	No
2	Estimated water Savings (%)	12%		
NOTES:				

Table 8-4 - Demand Reduction Actions (Stage #3)

Submittal Table 8-2: Demand Reduction Actions (Shortage Stage #3)				
Shortage Level	Demand Reduction Actions ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.*	How much is this going to reduce the shortage gap?	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? ***For Retail Suppliers Only*** *Drop Down List*
Add additional rows as needed				
3	Other - Prohibit vehicle washing except at facilities using recycled or recirculating	2%	Washing of vehicles is prohibited except at commercial car washes or by	Yes

	water		mobile high pressure / low volume commercial services.	
3	Landscape - Limit landscape irrigation to specific days	8%	Landscape watering with potable water shall be limited to one time per week for not more than fifteen minutes per watering zone from 6 p.m. Wednesday and 9 a.m. the following Thursday.	Yes
3			This subsection shall not apply to any drop irrigation system, irrigation system maintenance, leak repair or new planting of low water usage plants or if reclaimed water is utilized as permitted by law.	
3	Other	-	Introduction of a permanent water meter on existing non-metered services and/or flow restrictors on existing metered services at customer's expense upon receipt of the second water violation	Yes
3	Estimated water Savings (%)	10%		
NOTES:				

Table 8-5 - Demand Reduction Actions (Stage #4)

Submittal Table 8-2: Demand Reduction Actions (Shortage Stage #4)				
Shortage Level	Demand Reduction Actions ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.*	How much is this going to reduce the shortage gap?	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? ***For Retail Suppliers Only*** *Drop Down List*
Add additional rows as needed				
4	Other	1%	Home reverse osmosis treatment units and water softeners shall be disconnected or turned off.	Yes
4	Landscape - Other landscape restriction or prohibition	1%	Watering of nonpublic playing fields with potable water is	Yes

			prohibited.	
4	Landscape - Prohibit certain types of landscape irrigation	8%	Landscape watering with potable water shall be limited to one time per week from 6 p.m. on Wednesday and 9 a.m. the following Thursday by only drop irrigation, hand-held hoses, or if reclaimed water is utilized as permitted by law.	Yes
4			This subsection shall not apply to any drip irrigation systems, irrigation system maintenance, leak repair or new planting of low water usage plants or if reclaimed water is utilized as permitted by law.	
4	Estimated water Savings (%)	10%		
NOTES:				

Table 8-6 - Demand Reduction Actions (Stage #5)

Submittal Table 8-2: Demand Reduction Actions (Shortage Stage #5)				
Shortage Level	Demand Reduction Actions ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.*	How much is this going to reduce the shortage gap?	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? ***For Retail Suppliers Only*** *Drop Down List*
Add additional rows as needed				
5	Other water feature or swimming pool restriction	1%	Filling of residential swimming pools or spas with potable water is prohibited.	Yes
5	Landscape - Prohibit certain types of landscape irrigation	9%	Landscape irrigation with potable water is prohibited except with a watering can using water captured from indoor use.	Yes
			This subsection shall not apply to any drop irrigation system, irrigation system maintenance, leak repair or new planting of low water usage plants or if reclaimed water is utilized as permitted by law.	
5	Estimated water Savings (%)	10%		
NOTES:				

Table 8-7 - Demand Reduction Actions (Stage #6)

Submittal Table 8-2: Demand Reduction Actions (Shortage Stage #6)				
Shortage Level	Demand Reduction Actions ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.*	How much is this going to reduce the shortage gap?	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? ***For Retail Suppliers Only*** *Drop Down List*
Add additional rows as needed				
6	Other	as needed	Any additional water conservation measures adopted by the director of public works or his or her designee deemed necessary for the preservation of public health, safety, and welfare.	Yes
NOTES:				

9 Demand Management Measures

9.1 Demand Management Measures for Wholesale Suppliers

The District is considered a retail water supplier, so this section does not apply.

9.2 Demand Management Measure for Retail Suppliers

The following sections are a description of the water demand management measures the District has put into effect, in accordance with Water Code section 10631:

i. Water waste prevention ordinances

ii. Metering

iii. Conservative pricing

iv. Public education and outreach

v. Programs to assess and manage distribution system real loss

vi. Water conservation program coordination and staffing support

9.2.1 Water Waste Prevention Ordinances

The District's enforcement of water waste prevention and water use restrictions has not been implemented with a standalone waste policy. In the 2014 Water Shortage Conservation Plan, the Board authorized Rationing Stages, where the District monitors water usage and possible water waste among its customers. The District continues to implement these conservations measures, which were updated this year per Section 8.

9.2.2 Metering

The service area for LPUD is fully metered for all customer sectors, including single-family residential, commercial, large irrigation connections, and all institutional and governmental facilities. Each customer pays a fixed monthly charge and pays for water by volume. Separate meters are installed for water sprinklers that are required for some of the commercial/industrial/institutional customers, with associated monthly service charges. The District has made the effort to install meters to improve water usage accuracy and supply feedback of water use data to customers. Reviewing the water use data can present possible leaks for customer's connections or in the system. Per the Water Shortage Conservation Plan (WSCP), the District may also use the data to assure customers are reaching the

conservation goals outline for each conservation stage. LPUD will continue to install meters on all new services.

9.2.3 Conservation Pricing

As previously stated, each customer pays a fixed monthly charge and pays for water by volume. The District believes that having all customers metered is an effective conservation method as customers tend to watch the consumption when charged for volume on top of the fixed rate. LPUD will continue to install and read meters on all new services.

9.2.4 Public Education and Outreach

Along with the monthly statements, the District distributes public information through bill inserts and brochures via the mail. These educational brochures are also available at the District office. The District will continue this practice as it has proven effective getting the District's message of conservation out to the public. The District continues to research educational programs to promote water conservation and other resources to educate students at the Lamont School District. Along with printed media, the District will review their outreach program for digital media, utilizing email, social media, and their website to further educate the public on conservation efforts.

9.2.5 Programs to Assess and Manage Distribution System Water Loss

The LPUD conducts water audits and leak detection as a part of its utility operations. Monthly pumping rates are compared to water sales to identify average system loss. Unusual water loss is investigated for possible leaks in the system, or customer connections. The District has authorized the maintenance staff to review the system losses and find the possible leaks in the system. Any leaks that the staff comes across are inspected and promptly repaired.

9.2.6 Water Conservation Program Coordination and Staffing Support

The General Manager, in conjunction with the Board of Directors, acts in the role of water conservation coordinator for the District. The General Manager's job description includes the determination of appropriate groundwater pumping and therefore the General Manager is best suited to help lead conservation efforts. Along with the General Manager, the staff is also trained to inspect the system for any water waste to help with conservation efforts.

9.2.7 Water Conservation Program Coordination and Staffing Support

The District has implemented water survey programs for all residential, commercial, industrial, and institutional customers. The LPUD offers water use surveys when requested by the customer. LPUD has specifically focused on any customer who has experienced elevated water usage. It is LPUD's goal to complete surveys for all customers who make such requests. Surveys take about one hour to complete and

are conducted by the LPUD operations staff. Approximately 5 to 15 surveys are completed each year.

During the Landscape portion of the survey, LPUD personnel do the following:

1. Show the customer the location of the water meter and how to read it
2. Measure the landscaped areas
3. Test the sprinkler system for irrigation efficiency and distribution uniformity
4. Teach the customer how to set the irrigation controller
5. Develop a three-season irrigation schedule (based on soil type, evapotranspiration, and irrigation system)
6. Recommend sprinkler system repairs for improvements
7. Provide brochures on water efficient landscaping, design, and plants

The District intends to continue this program indefinitely.

9.3 Reporting Implementation

9.3.1 Implementation Over the Past Five Years

Please see Section 9.2 for descriptions on current DMM implemented.

9.3.2 Implementation to Achieve Water Use Targets

With this program and measure, the District has not seen the drop in demand since the last UWMP in 2015. The District will continue to research future measures that may help increase efforts, along with those suggestion mentioned in Section 9.2.

10 Plan Adoption, Submittal, And Implementation

10.1 Inclusion of All Data

This section of the UWMP includes the water use and planning data for the calendar year of 2020.

10.2 Notice of Public Hearing

The water code states that cities, counties, other relevant agencies, and the public must be notified that the Lamont Public Utility District will be reviewing the UWMP and considering amendments to the plan. These notices were sent at least 60 days prior to the public hearing. The notice to the public and letters to relevant agencies can be found in Appendix B – Notice of Public Hearing.

10.2.1 Notice to Cities and Counties

Table 10-1 lists the city, counties, and relevant agencies that were notified. Copies of the letters are provided in Appendix B – Notice of Public Hearing.

Table 10-1 - Notification to Cities and Counties

Submittal Table 10-1 Retail: Notification to Cities and Counties		
City Name	60 Day Notice	Notice of Public Hearing
Add additional rows as needed		
County Name *Drop Down List*	60 Day Notice	Notice of Public Hearing
Add additional rows as needed		
Kern County	Yes	Yes
Other Agency Name	60 Day Notice	Notice of Public Hearing
Kern Delta Water District	Yes	Yes
Kern County Board of Supervisors	Yes	Yes
Kern River GSA	Yes	Yes
Kern County Planning Department	Yes	Yes
Kern County Water Agency	Yes	Yes
NOTES:		

10.2.2 Notice to the Public

A public notice for the Public to view to 2020 UWMP and WSCP prior to the hearing was published in the Bakersfield Californian on _, 2021 and _,2021. The notice included the date of the hearing, location, and contact information for the public to access a copy of the draft of the 2020 UWMP. A copy of the notice is included in Appendix B.

10.3 Public Hearing and Adoption

The deadline for public comments on the UWMP was ___. The final Plan was formally adopted by the Board of Directors of the Lamont Public Utility District on

November 23, 2021. The Plan was submitted to the California Department of Water Resources (DWR) within 30 days of approval. Appendix A presents a copy of the signed Resolution of Plan Adoption.

10.4 Plan Submittal

The UWMP and WSCP were submitted to DWR within 30 days of the Plan's adoption. The UWMP was submitted electronically through the Water Use Efficiency Data Portal, an online submittal tool. Copies of the UWMP were sent to the California State Library and to the cities, counties, and the public agencies listed in Table 10-1 within 30 days of adoption.

10.5 Public Availability

An electronic copy of the UWMP and WSCP were made available for review on the District's website, along with a physical copy available at the District's office.

10.6 Notification to Public Utilities Commission

The District is an urban water supplier regulated by the California Public Utilities Commission. The District included the 2020 UWMP and WSCP as part of its general rate case filings.

10.7 Amending an Adopted UWMP or Water Shortage Contingency Plan

If the 2020 UWMP and WSCP is amended, each of the steps for notification, public hearing, adoption, and submittal will be followed.

Appendix A – Adopted UWMP Resolutions

Appendix B – Notice of Public Hearing

Appendix C – Water Code Checklist

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (Optional Column for Agency Review Use)
x	x	Chapter 1	10615	A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, reclamation and demand management activities.	Introduction and Overview	Executive Summary; Section 1.2
x	x	Chapter 1	10630.5	Each plan shall include a simple description of the supplier's plan including water availability, future requirements, a strategy for meeting needs, and other pertinent information. Additionally, a supplier may also choose to include a simple description at the beginning of each chapter.	Summary	Executive Summary
x	x	Section 2.2	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.	Plan Preparation	Section 2.1; Appendix F (Adopted Resolution)
x	x	Section 2.6	10620(d)(2)	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.	Plan Preparation	Section 2.2
x	x	Section 2.6.2	10642	Provide supporting documentation that the water supplier has encouraged active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the	Plan Preparation	Section 2.2

				preparation of the plan and contingency plan.		
x		Section 2.6, Section 6.1	10631(h)	Retail suppliers will include documentation that they have provided their wholesale supplier(s) - if any - with water use projections from that source.	System Supplies	N/A - no wholesale suppliers
	x	Section 2.6	10631(h)	Wholesale suppliers will include documentation that they have provided their urban water suppliers with identification and quantification of the existing and planned sources of water available from the wholesale to the urban supplier during various water year types.	System Supplies	N/A
x	x	Section 3.1	10631(a)	Describe the water supplier service area.	System Description	Section 3.1
x	x	Section 3.3	10631(a)	Describe the climate of the service area of the supplier.	System Description	Section 3.3
x	x	Section 3.4	10631(a)	Provide population projections for 2025, 2030, 2035, 2040 and optionally 2045.	System Description	Section 3.4.1
x	x	Section 3.4.2	10631(a)	Describe other social, economic, and demographic factors affecting the supplier's water management planning.	System Description	Section 3.4.2
x	x	Sections 3.4 and 5.4	10631(a)	Indicate the current population of the service area.	System Description and Baselines and Targets	Section 3.4.2
x	x	Section 3.5	10631(a)	Describe the land uses within the service area.	System Description	Section 3.4.3
x	x	Section 4.2	10631(d)(1)	Quantify past, current, and projected water use, identifying the uses among water use sectors.	System Water Use	Section 4.2; 4.3
x	x	Section 4.2.4	10631(d)(3)(C)	Retail suppliers shall provide data to show the distribution loss standards were met.	System Water Use	Section 4.2.5

x	x	Section 4.2.6	10631(d)(4)(A)	In projected water use, include estimates of water savings from adopted codes, plans and other policies or laws.	System Water Use	Section 4.3
x	x	Section 4.2.6	10631(d)(4)(B)	Provide citations of codes, standards, ordinances, or plans used to make water use projections.	System Water Use	Section 4.3
x	optional	Section 4.3.2.4	10631(d)(3)(A)	Report the distribution system water loss for each of the 5 years preceding the plan update.	System Water Use	Section 4.2.5
x	optional	Section 4.4	10631.1(a)	Include projected water use needed for lower income housing projected in the service area of the supplier.	System Water Use	Section 4.4
x	x	Section 4.5	10635(b)	Demands under climate change considerations must be included as part of the drought risk assessment.	System Water Use	Section 4.5
x		Chapter 5	10608.20(e)	Retail suppliers shall provide baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.	Baselines and Targets	Section 5.2; 5.3.1
x		Chapter 5	10608.24(a)	Retail suppliers shall meet their water use target by December 31, 2020.	Baselines and Targets	Section 5.2; 5.3
	x	Section 5.1	10608.36	Wholesale suppliers shall include an assessment of present and proposed future measures, programs, and policies to help their retail water suppliers achieve targeted water use reductions.	Baselines and Targets	N/A
x		Section 5.2	10608.24(d)(2)	If the retail supplier adjusts its compliance GPCD using weather normalization, economic adjustment, or extraordinary events, it shall provide the basis for, and data supporting the adjustment.	Baselines and Targets	N/A

x		Section 5.5	10608.22	Retail suppliers' per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use of the 5 year baseline. This does not apply if the suppliers base GPCD is at or below 100.	Baselines and Targets	N/A
x		Section 5.5 and Appendix E	10608.4	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.	Baselines and Targets	Section 5.1; 5.2; Appendix C
x	x	Sections 6.1 and 6.2	10631(b)(1)	Provide a discussion of anticipated supply availability under a normal, single dry year, and a drought lasting five years, as well as more frequent and severe periods of drought.	System Supplies	Section 7.3
x	x	Sections 6.1	10631(b)(1)	Provide a discussion of anticipated supply availability under a normal, single dry year, and a drought lasting five years, as well as more frequent and severe periods of drought, *including changes in supply due to climate change.*	System Supplies	Section 7.3
x	x	Section 6.1	10631(b)(2)	When multiple sources of water supply are identified, describe the management of each supply in relationship to other identified supplies.	System Supplies	N/A
x	x	Section 6.1.1	10631(b)(3)	Describe measures taken to acquire and develop planned sources of water.	System Supplies	Section 6.2.5; 6.3
x	x	Section 6.2.8	10631(b)	Identify and quantify the existing and planned sources of water available for 2020, 2025, 2030, 2035, 2040 and optionally 2045.	System Supplies	Section 6.1; 6.2.5
x	x	Section 6.2	10631(b)	Indicate whether groundwater is an existing or planned source of water available to the supplier.	System Supplies	Section 6.1
x	x	Section 6.2.2	10631(b)(4)(A)	Indicate whether a groundwater sustainability plan or groundwater management plan has been adopted by the water supplier or if there is any other specific authorization for	System Supplies	Section 6.2.3; Appendix G; H

				groundwater management. Include a copy of the plan or authorization.		
x	x	Section 6.2.2	10631(b)(4)(B)	Describe the groundwater basin.	System Supplies	Section 6.2.2
x	x	Section 6.2.2	10631(b)(4)(B)	Indicate if the basin has been adjudicated and include a copy of the court order or decree and a description of the amount of water the supplier has the legal right to pump.	System Supplies	N/A - not adjudicated
x	x	Section 6.2.2.1	10631(b)(4)(B)	For unadjudicated basins, indicate whether or not the department has identified the basin as a high or medium priority. Describe efforts by the supplier to coordinate with sustainability or groundwater agencies to achieve sustainable groundwater conditions.	System Supplies	Section 6.2.3
x	x	Section 6.2.2.4	10631(b)(4)(C)	Provide a detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years	System Supplies	Section 6.2.1
x	x	Section 6.2.2	10631(b)(4)(D)	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	System Supplies	Section 6.1
x	x	Section 6.2.7	10631(c)	Describe the opportunities for exchanges or transfers of water on a short-term or long- term basis.	System Supplies	Section 2.2
x	x	Section 6.2.5	10633(b)	Describe the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.	System Supplies (Recycled Water)	Section 6.4
x	x	Section 6.2.5	10633(c)	Describe the recycled water currently being used in the supplier's service area.	System Supplies (Recycled Water)	Section 6.4
x	x	Section 6.2.5	10633(d)	Describe and quantify the potential uses of recycled water and provide a determination of the technical and economic feasibility of those	System Supplies (Recycled	Section 6.4

				uses.	Water)	
x	x	Section 6.2.5	10633(e)	Describe the projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected.	System Supplies (Recycled Water)	Section 6.4
x	x	Section 6.2.5	10633(f)	Describe the actions which may be taken to encourage the use of recycled water and the projected results of these actions in terms of acre-feet of recycled water used per year.	System Supplies (Recycled Water)	Section 6.4
x	x	Section 6.2.5	10633(g)	Provide a plan for optimizing the use of recycled water in the supplier's service area.	System Supplies (Recycled Water)	Section 6.4
x	x	Section 6.2.6	10631(g)	Describe desalinated water project opportunities for long-term supply.	System Supplies	Section 4.2.1
x	x	Section 6.2.5	10633(a)	Describe the wastewater collection and treatment systems in the supplier's service area with quantified amount of collection and treatment and the disposal methods.	System Supplies (Recycled Water)	Section 6.4
x	x	Section 6.2.8, Section 6.3.7	10631(f)	Describe the expected future water supply projects and programs that may be undertaken by the water supplier to address water supply reliability in average, single-dry, and for a period of drought lasting 5 consecutive water years.	System Supplies	Section 6.2; 6.3
x	x	Section 6.4 and Appendix O	10631.2(a)	The UWMP must include energy information, as stated in the code, that a supplier can readily obtain.	System Suppliers, Energy Intensity	Section 6.5
x	x	Section 7.2	10634	Provide information on the quality of existing sources of water available to the supplier and the manner in which water quality affects water management strategies and supply reliability	Water Supply Reliability Assessment	Section 7.2.1.2

x	x	Section 7.2.4	10620(f)	Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	Water Supply Reliability Assessment	Section 7.2.1.1
x	x	Section 7.3	10635(a)	Service Reliability Assessment: Assess the water supply reliability during normal, dry, and a drought lasting five consecutive water years by comparing the total water supply sources available to the water supplier with the total projected water use over the next 20 years.	Water Supply Reliability Assessment	Section 7.2.2; 7.3
x	x	Section 7.3	10635(b)	Provide a drought risk assessment as part of information considered in developing the demand management measures and water supply projects.	Water Supply Reliability Assessment	Section 7.4.3
x	x	Section 7.3	10635(b)(1)	Include a description of the data, methodology, and basis for one or more supply shortage conditions that are necessary to conduct a drought risk assessment for a drought period that lasts 5 consecutive years.	Water Supply Reliability Assessment	Section 7.4.1
x	x	Section 7.3	10635(b)(2)	Include a determination of the reliability of each source of supply under a variety of water shortage conditions.	Water Supply Reliability Assessment	Section 7.4.2
x	x	Section 7.3	10635(b)(3)	Include a comparison of the total water supply sources available to the water supplier with the total projected water use for the drought period.	Water Supply Reliability Assessment	Section 7.4.3
x	x	Section 7.3	10635(b)(4)	Include considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.	Water Supply Reliability Assessment	Section 7.2; 7.4.1
x	x	Chapter 8	10632(a)	Provide a water shortage contingency plan (WSCP) with specified elements below.	Water Shortage Contingency Planning	Section 8; Appendix D
x	x	Chapter 8	10632(a)(1)	Provide the analysis of water supply reliability (from Chapter 7 of Guidebook) in the WSCP	Water Shortage	Appendix D; Section 1 of

					Contingency Planning	WSCP
x	x	Section 8.10	10632(a)(10)	Describe reevaluation and improvement procedures for monitoring and evaluation the water shortage contingency plan to ensure risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented.	Water Shortage Contingency Planning	Section 2.2.1 of WSCP
x	x	Section 8.2	10632(a)(2)(A)	Provide the written decision-making process and other methods that the supplier will use each year to determine its water reliability.	Water Shortage Contingency Planning	Section 2.1; 2.2 of WSCP
x	x	Section 8.2	10632(a)(2)(B)	Provide data and methodology to evaluate the supplier's water reliability for the current year and one dry year pursuant to factors in the code.	Water Shortage Contingency Planning	Section 2.2 of WSCP
x	x	Section 8.3	10632(a)(3)(A)	Define six standard water shortage levels of 10, 20, 30, 40, 50 percent shortage and greater than 50 percent shortage. These levels shall be based on supply conditions, including percent reductions in supply, changes in groundwater levels, changes in surface elevation, or other conditions. The shortage levels shall also apply to a catastrophic interruption of supply.	Water Shortage Contingency Planning	Section 3 of WSCP
x	x	Section 8.3	10632(a)(3)(B)	Suppliers with an existing water shortage contingency plan that uses different water shortage levels must cross reference their categories with the six standard categories.	Water Shortage Contingency Planning	Section 3 of WSCP
x	x	Section 8.4	10632(a)(4)(A)	Suppliers with water shortage contingency plans that align with the defined shortage levels must specify locally appropriate supply augmentation actions.	Water Shortage Contingency Planning	N/A
x	x	Section 8.4	10632(a)(4)(B)	Specify locally appropriate demand reduction actions to adequately respond to shortages.	Water Shortage Contingency	Section 3; 4.1 of WSCP

					Planning	
x	x	Section 8.4	10632(a)(4)(C)	Specify locally appropriate operational changes.	Water Shortage Contingency Planning	Section 4.3 of WSCP
x	x	Section 8.4	10632(a)(4)(D)	Specify additional mandatory prohibitions against specific water use practices that are in addition to state-mandated prohibitions are appropriate to local conditions.	Water Shortage Contingency Planning	Section 4.4 of WSCP
x	x	Section 8.4	10632(a)(4)(E)	Estimate the extent to which the gap between supplies and demand will be reduced by implementation of the action.	Water Shortage Contingency Planning	Section 2.2.3 of WSCP
x	x	Section 8.4.6	10632.5	The plan shall include a seismic risk assessment and mitigation plan.	Water Shortage Contingency Plan	Section 4.6 of WSCP
x	x	Section 8.5	10632(a)(5)(A)	Suppliers must describe that they will inform customers, the public and others regarding any current or predicted water shortages.	Water Shortage Contingency Planning	Section 5 of WSCP
x	x	Section 8.5 and 8.6	10632(a)(5)(B) 10632(a)(5)(C)	Suppliers must describe that they will inform customers, the public and others regarding any shortage response actions triggered or anticipated to be triggered and other relevant communications.	Water Shortage Contingency Planning	Section 5 of WSCP
x		Section 8.6	10632(a)(6)	Retail supplier must describe how it will ensure compliance with and enforce provisions of the WSCP.	Water Shortage Contingency Planning	Section 6 of WSCP
x		Section 8.7	10632(a)(7)(A)	Describe the legal authority that empowers the supplier to enforce shortage response actions.	Water Shortage Contingency Planning	Section 7; 7.1 of WSCP

x	x	Section 8.7	10632(a)(7)(B)	Provide a statement that the supplier will declare a water shortage emergency Water Code Chapter 3.	Water Shortage Contingency Planning	Section 7.1 of WSCP
x	x	Section 8.7	10632(a)(7)(C)	Provide a statement that the supplier will coordinate with any city or county within which it provides water for the possible proclamation of a local emergency.	Water Shortage Contingency Planning	Section 5; 7; 7.1 of WSCP
x	x	Section 8.8	10632(a)(8)(A)	Describe the potential revenue reductions and expense increases associated with activated shortage response actions.	Water Shortage Contingency Planning	Section 8.1 of WSCP
x	x	Section 8.8	10632(a)(8)(B)	Provide a description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions.	Water Shortage Contingency Planning	Section 8.2 of WSCP
x		Section 8.8	10632(a)(8)(C)	Retail suppliers must describe the cost of compliance with Water Code Chapter 3.3: Excessive Residential Water Use During Drought	Water Shortage Contingency Planning	Section 8.3 of WSCP
x		Section 8.9	10632(a)(9)	Retail suppliers must describe the monitoring and reporting requirements and procedures that ensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance.	Water Shortage Contingency Planning	Section 9 of WSCP
x		Section 8.11	10632(b)	Analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas.	Water Shortage Contingency Planning	Section 11 of WSCP
x	x	Sections 8.12 and 10.4	10635(c)	Provide supporting documentation that Water Shortage Contingency Plan has been, or will be, provided to any city or county within which it provides water, no later than 30 days after the submission of the plan to DWR.	Plan Adoption, Submittal, and Implementation	Section 12 of WSCP
x	x	Section 8.12	10632(c)	Make available the Water Shortage Contingency Plan to customers and any city or	Water Shortage	Section 12 of WSCP

				county where it provides water within 30 after adopted the plan.	Contingency Planning	
	x	Sections 9.1 and 9.3	10631(e)(2)	Wholesale suppliers shall describe specific demand management measures listed in code, their distribution system asset management program, and supplier assistance program.	Demand Management Measures	N/A
x		Sections 9.2 and 9.3	10631(e)(1)	Retail suppliers shall provide a description of the nature and extent of each demand management measure implemented over the past five years. The description will address specific measures listed in code.	Demand Management Measures	Section 9.2.1
x		Chapter 10	10608.26(a)	Retail suppliers shall conduct a public hearing to discuss adoption, implementation, and economic impact of water use targets (recommended to discuss compliance).	Plan Adoption, Submittal, and Implementation	Section 10.2
x	x	Section 10.2.1	10621(b)	Notify, at least 60 days prior to the public hearing, any city or county within which the supplier provides water that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. Reported in Table 10-1.	Plan Adoption, Submittal, and Implementation	Section 10.2.1; 10.2.2
x	x	Section 10.4	10621(f)	Each urban water supplier shall update and submit its 2020 plan to the department by July 1, 2021.	Plan Adoption, Submittal, and Implementation	Section 10
x	x	Sections 10.2.2, 10.3, and 10.5	10642	Provide supporting documentation that the urban water supplier made the plan and contingency plan available for public inspection, published notice of the public hearing, and held a public hearing about the plan and contingency plan.	Plan Adoption, Submittal, and Implementation	Section 10.3; 10.4; 10.5
x	x	Section 10.2.2	10642	The water supplier is to provide the time and place of the hearing to any city or county within which the supplier provides water.	Plan Adoption, Submittal, and Implementation	Section 10.2
x	x	Section 10.3.2	10642	Provide supporting documentation that the plan and contingency plan has been adopted as prepared or modified.	Plan Adoption, Submittal, and Implementation	Section 10.3

x	x	Section 10.4	10644(a)	Provide supporting documentation that the urban water supplier has submitted this UWMP to the California State Library.	Plan Adoption, Submittal, and Implementation	Section 10.4
x	x	Section 10.4	10644(a)(1)	Provide supporting documentation that the urban water supplier has submitted this UWMP to any city or county within which the supplier provides water no later than 30 days after adoption.	Plan Adoption, Submittal, and Implementation	Section 10.2.1; 10.5
x	x	Sections 10.4.1 and 10.4.2	10644(a)(2)	The plan, or amendments to the plan, submitted to the department shall be submitted electronically.	Plan Adoption, Submittal, and Implementation	Section 10.4
x	x	Section 10.5	10645(a)	Provide supporting documentation that, not later than 30 days after filing a copy of its plan with the department, the supplier has or will make the plan available for public review during normal business hours.	Plan Adoption, Submittal, and Implementation	Section 10.4; 10.5
x	x	Section 10.5	10645(b)	Provide supporting documentation that, not later than 30 days after filing a copy of its water shortage contingency plan with the department, the supplier has or will make the plan available for public review during normal business hours.	Plan Adoption, Submittal, and Implementation	Section 12 of WSCP
x	x	Section 10.6	10621(c)	If supplier is regulated by the Public Utilities Commission, include its plan and contingency plan as part of its general rate case filings.	Plan Adoption, Submittal, and Implementation	Section 10.6
x	x	Section 10.7.2	10644(b)	If revised, submit a copy of the water shortage contingency plan to DWR within 30 days of adoption.	Plan Adoption, Submittal, and Implementation	N/A

Appendix D – DWR Submittal Tables

Submittal Table 2-1 Retail Only: Public Water Systems			
Public Water System Number	Public Water System Name	Number of Municipal Connections 2020	Volume of Water Supplied 2020 *
Add additional rows as needed			
CA1510012	Lamont Public Utility District	3,151	1,191
	TOTAL	3,151	1,191
**** Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*			
NOTES: Volume in MG			

Submittal Table 2-2: Plan Identification			
Select Only One	**Type of Plan**		**Name of RUWMP or Regional Alliance** *if applicable* (select from drop down list)
☑	**Individual UWMP**		
	☐	Water Supplier is also a member of a RUWMP	
	☐	Water Supplier is also a member of a Regional Alliance	
☐	**Regional Urban Water Management Plan (RUWMP)**		
NOTES:			

Submittal Table 2-3: Supplier Identification	
Type of Supplier (select one or both)	
☐	Supplier is a wholesaler
☑	Supplier is a retailer
Fiscal or Calendar Year (select one)	
☑	UWMP Tables are in calendar years
☐	UWMP Tables are in fiscal years
If using fiscal years provide month and date that the fiscal year begins (mm/dd)	
Units of measure used in UWMP * (select from drop down)	
Unit	MG
**** Units of measure (AF, CCF, MG)*** *must remain consistent throughout the UWMP as reported in Table 2-3.*	
NOTES:	

Submittal Table 2-4 Retail: Water Supplier Information Exchange
The retail Supplier has informed the following wholesale supplier(s) of projected water use in accordance with Water Code Section 10631.
Wholesale Water Supplier Name
Add additional rows as needed
NOTES: The District does not have any wholesale suppliers. The District supplies its own water.

Submittal Table 3-1 Retail: Population - Current and Projected

Population Served	2020	2025	2030	2035	2040
	17,261	18,141	19,067	20,039	21,062
NOTES:					

Submittal Table 4-1 Retail: Demands for Potable and Non-Potable[1] Water - Actual			
Use Type	2020 Actual		
Drop down list May select each use multiple times These are the only Use Types that will be recognized by the WUEdata online submittal tool	Additional Description (as needed)	Level of Treatment When Delivered Drop down list	Volume[2]
Add additional rows as needed			
Other Potable	Total Revenue Water	Drinking Water	1,072
Losses	Non-Revenue Water	Drinking Water	119
		TOTAL	1,191

[1] Recycled water demands are NOT reported in this table. Recycled water demands are reported in Table 6-4.
[2] Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.

NOTES:

Submittal Table 4-2 Retail: Use for Potable and Non-Potable[1] Water - Projected						
Use Type	Additional Description (as needed)	Projected Water Use[2] *Report To the Extent that Records are Available*				
Drop down list May select each use multiple times These are the only Use Types that will be recognized by the WUEdata online submittal tool		2025	2030	2035	2040	2045 (opt)
Add additional rows as needed						
Other Potable	Total Revenue Water	1,117	1,164	1,213	1,264	
Losses	Non-Revenue Water	124	129	135	140	
TOTAL		1,241	1,293	1,348	1,404	0

[1] Recycled water demands are NOT reported in this table. Recycled water demands are reported in Table 6-4. *[2] Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.*

NOTES: Volume MG

Submittal Table 4-4 Retail: Last Five Years of Water Loss Audit Reporting	
Reporting Period Start Date (mm/yyyy)	Volume of Water Loss [1,2]
07/2016	113
07/2017	106
07/2018	96
07/2019	206
[1] Taken from the field "Water Losses" (a combination of apparent losses and real losses) from the AWWA worksheet. *[2] **Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*	
NOTES:	

Submittal Table 4-5 Retail Only: Inclusion in Water Use Projections	
Are Future Water Savings Included in Projections? (Refer to Appendix K of UWMP Guidebook) *Drop down list (y/n)*	Yes
If "Yes" to above, state the section or page number, in the cell to the right, where citations of the codes, ordinances, or otherwise are utilized in demand projections are found.	Section 8 and 9
Are Lower Income Residential Demands Included In Projections? *Drop down list (y/n)*	Yes
NOTES:	

Submittal Table 5-1 Baselines and Targets Summary
From SB X7-7 Verification Form
Retail Supplier or Regional Alliance Only

Baseline Period	Start Year *	End Year *	Average Baseline GPCD*	Confirmed 2020 Target*
10-15 year	*2000*	*2009*	*245*	*196*
5 Year	*2003*	*2007*	*244*	

**All cells in this table should be populated manually from the supplier's SBX7-7 Verification Form and reported in Gallons per Capita per Day (GPCD)*

NOTES:

Submittal Table 5-2: 2020 Compliance
From SB X7-7 2020 Compliance Form
Retail Supplier or Regional Alliance Only

2020 GPCD			2020 Confirmed Target GPCD*	Did Supplier Achieve Targeted Reduction for 2020? Y/N
Actual 2020 GPCD*	2020 TOTAL Adjustments*	Adjusted 2020 GPCD* *(Adjusted if applicable)*		
178	*0*	*178*	*196*	*Y*

**All cells in this table should be populated manually from the supplier's SBX7-7 2020 Compliance Form and reported in Gallons per Capita per Day (GPCD)*

NOTES:

Submittal Table 6-1 Retail: Groundwater Volume Pumped						
☐	Supplier does not pump groundwater. The supplier will not complete the table below.					
☐	All or part of the groundwater described below is desalinated.					
Groundwater Type ***Drop Down List*** *May use each category multiple times*	Location or Basin Name	2016*	2017*	2018*	2019*	2020*
Add additional rows as needed						
Alluvial Basin	San Joaquin Valley Groundwater Basin - Kern County Subbasin	1065	1132	1208	1167	1191
	TOTAL	1,065	1,132	1,208	1,167	1,191
**** Units of measure (AF, CCF, MG)*** *must remain consistent throughout the UWMP as reported in Table 2-3.*						
NOTES: Volume in MG						

Submittal Table 6-2 Retail: Wastewater Collected Within Service Area in 2020						
Wastewater Collection			**Recipient of Collected Wastewater**			
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated? *Drop Down List*	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? *Drop Down List*	Is WWTP Operation Contracted to a Third Party? *(optional)* *Drop Down List*
Lamont Public Utility District	Metered	423	Lamont Public Utility District	Wastewater Treatment Plant	Yes	No
Total Wastewater Collected from Service Area in 2020:		423				
**** Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*						
NOTES:						

Submittal Table 6-3 Retail: Wastewater Treatment and Discharge Within Service Area in 2020

☐ **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 *Drop down list*	Does This Plant Treat Wastewater Generated Outside the Service Area? *Drop down list*	Treatment Level *Drop down list*	2020 volumes [1]				
						Waste-water Treated	Discharged Treated Waste-water	Recycled Within Service Area	Recycled Outside of Service Area	Instream Flow Permit Requirement
LPUD WWTP	Recology Blossom Valley Organics - South	Green Waste Composting facility, and farmland	Land disposal	No	Secondary, Undisinfected	423	423	0	0	0
					Total	423	423	0	0	0

[1] **Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.
[2] If the **Wastewater Discharge ID Number** is not available to the UWMP preparer, access the SWRCB CIWQS regulated facility website at https://ciwqs.waterboards.ca.gov/ciwqs/readOnly/CiwqsReportServlet?inCommand=reset&reportName=RegulatedFacility

NOTES:

Submittal Table 6-4 Retail: Recycled Water Direct Beneficial Uses Within Service Area	
☑	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.

Submittal Table 6-5 Retail: 2015 UWMP Recycled Water Use Projection Compared to 2020 Actual	
☑	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.

Submittal Table 6-6 Retail: Methods to Expand Future Recycled Water Use	
☑	Supplier does not plan to expand recycled water use in the future. Supplier will not complete the table below but will provide narrative explanation.

Submittal Table 6-7 Retail: Expected Future Water Supply Projects or Programs						
☐	No expected future water supply projects or programs that provide a quantifiable increase to the agency's water supply. Supplier will not complete the table below.					
☐	Some or all of the supplier's future water supply projects or programs are not compatible with this table and are described in a narrative format.					
47	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 *Drop Down List*	Expected Increase in Water Supply to Supplier* *This may be a range*
	Drop Down List (y/n)	*If Yes, Supplier Name*				
Add additional rows as needed						
New Municipal Well	No		New Water Supply Well	2022-2024	All Year Types	289
New Municipal Well	No		New Water Supply Well	2022-2024	All Year Types	289
New Municipal Well	No		New Water Supply	2022-2024	All Year Types	315

			Well			

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

NOTES:

Submittal Table 6-8 Retail: Water Supplies — Actual

Water Supply		2020		
Drop down list May use each category multiple times.These are the only water supply categories that will be recognized by the WUEdata online submittal tool	Additional Detail on Water Supply	Actual Volume*	Water Quality Drop Down List	Total Right or Safe Yield* (optional)
Add additional rows as needed				
Groundwater (not desalinated)	San Joaquin Valley Groundwater Basin	2,221	Drinking Water	
	Total	2,221		0

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

NOTES: Volume in MG

Submittal Table 6-9 Retail: Water Supplies — Projected					
Water Supply	Additional Detail on Water Supply	Projected Water Supply * Report To the Extent Practicable			
Drop down list May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool		**2025**	**2030**	**2035**	**2040**
		Reasonably Available Volume	Reasonably Available Volume	Reasonably Available Volume	Reasonably Available Volume
Add additional rows as needed					
Groundwater (not desalinated)	San Joaquin Valley Groundwater Basin	2,615	2,615	2,615	2,615
	Total	2,615	2,615	2,615	2,615
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*					
NOTES: Volume in MG					

Submittal Table 7-1 Retail: Basis of Water Year Data (Reliability Assessment)			
Year Type	**Base Year** If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 2019-2020, use 2020	**Available Supplies if Year Type Repeats**	
		☐	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location _____
		☑	Quantification of available supplies is provided in this table as either volume only, percent only, or both.
		Volume Available *	**% of Average Supply**
Average Year	2018	2,483	
Single-Dry Year	2015	2,483	
Consecutive Dry Years 1st Year	2012	2,142	
Consecutive Dry Years 2nd Year	2013	2,142	
Consecutive Dry Years 3rd Year	2014	2,142	
Consecutive Dry Years 4th Year	2015	2,483	
Consecutive Dry Years 5th Year	2016	2,483	

Supplier may use multiple versions of Table 7-1 if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If a Supplier uses multiple versions of Table 7-1, in the "Note" section of each table, state that multiple versions of Table 7-1 are being used and identify the particular water source that is being reported in each table.

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

NOTES: Volume in MG. Supply based on 50% utilization of active groundwater wells. 341 MG / year of water supply capacity was added in 2014 with the addition of Well No.19.

Submittal Table 7-2 Retail: Normal Year Supply and Demand Comparison					
	2025	2030	2035	2040	2045 *(Opt)*
Supply totals *(autofill from Table 6-9)*	2,615	2,615	2,615	2,615	0
Demand totals *(autofill from Table 4-3)*	1,241	1,293	1,348	1,404	0
Difference	1,374	1,322	1,267	1,211	0
NOTES: Volume in MG					

Submittal Table 7-3 Retail: Single Dry Year Supply and Demand Comparison					
	2025	2030	2035	2040	2045 (Opt)
Supply totals*	2,615	2,615	2,615	2,615	
Demand totals*	1,303	1,358	1,415	1,474	
Difference	1,312	1,257	1,200	1,141	0
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*					
NOTES: Volume in MG					

Submittal Table 7-4 Retail: Multiple Dry Years Supply and Demand Comparison						
		2025*	2030*	2035*	2040*	2045* (Opt)
First year	Supply totals	2,615	2,615	2,615	2,615	
	Demand totals	1,368	1,426	1,486	1,548	
	Difference	1,247	1,189	1,129	1,067	0
Second year	Supply totals	2,615	2,615	2,615	2,615	
	Demand totals	1,314	1,369	1,427	1,487	
	Difference	1,301	1,246	1,188	1,128	0
Third year	Supply totals	2,615	2,615	2,615	2,615	
	Demand totals	1,325	1,381	1,439	1,499	
	Difference	1,290	1,234	1,177	1,116	0
Fourth year	Supply totals	2,615	2,615	2,615	2,615	
	Demand totals	1,336	1,392	1,450	1,512	
	Difference	1,279	1,223	1,165	1,103	0
Fifth year	Supply totals	2,615	2,615	2,615	2,615	
	Demand totals	1,347	1,404	1,463	1,524	
	Difference	1,268	1,211	1,152	1,091	0
Sixth year *(optional)*	Supply totals					
	Demand totals					
	Difference	0	0	0	0	0
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*						

NOTES: Volume in MG; Demand Totals = Normal Year Demand x 105%

Submittal Table 7-5: Five-Year Drought Risk Assessment Tables to address Water Code Section 10635(b)

2021	Total
Total Water Use	1,261
Total Supplies	2,221
Surplus/Shortfall w/o WSCP Action	960
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	960
Resulting % Use Reduction from WSCP action	0%

2022	Total
Total Water Use	1,272
Total Supplies	2,615
Surplus/Shortfall w/o WSCP Action	1,343
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	1,343
Resulting % Use Reduction from WSCP action	0%

2023	Total
Total Water Use	1,282
Total Supplies	2,615
Surplus/Shortfall w/o WSCP Action	1,333
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	1,333
Resulting % Use Reduction from WSCP action	0%

2024	Total
Total Water Use	1,293
Total Supplies	2,615
Surplus/Shortfall w/o WSCP Action	1,322

Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	1,322
Resulting % Use Reduction from WSCP action	0%

2025	**Total**
Total Water Use	1,303
Total Supplies	2,615
Surplus/Shortfall w/o WSCP Action	1,312
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	1,312
Resulting % Use Reduction from WSCP action	0%

NOTES: Volume in MG

Submittal Table 8-1 **Water Shortage Contingency Plan Levels**		
Shortage Level	**Percent Shortage Range**	**Shortage Response Actions** **(*Narrative description)***
1	Up to 10%	Demand Reduction (see Table 8-2)
2	Up to 20%	Demand Reduction (see Table 8-2)
3	Up to 30%	Demand Reduction (see Table 8-2)
4	Up to 40%	Demand Reduction (see Table 8-2)
5	Up to 50%	Demand Reduction (see Table 8-2)
6	>50%	Demand Reduction (see Table 8-2)
NOTES:		

Submittal Table 8-2: Demand Reduction Actions (Shortage Stage #1)				
Shortage Level	Demand Reduction Actions ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.*	How much is this going to reduce the shortage gap?	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? ***For Retail Suppliers Only*** *Drop Down List*
Add additional rows as needed				
1	Prohibition on Waste of Water	5%	Washing of vehicles, sidewalks, and driveways prohibited without the use of a positive shut-off nozzle on the hose.	No
1	Prohibition on Waste of Water	5%	The excessive use, loss, or escape of water through breaks, leaks, or malfunctions in the water user's plumbing or distribution facilities for any period of time after such escape of water should reasonably have been discovered and corrected. It shall be presumed that a period of forty-eight hours after discovery is a reasonable time within which to correct such leak or break.	No
1				
1				
1	Estimated water Savings (%)	10%		
NOTES:				

Submittal Table 8-2: Demand Reduction Actions (Shortage Stage #2)				
Shortage Level	Demand Reduction Actions ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.*	How much is this going to reduce the shortage gap?	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? ***For Retail Suppliers Only*** *Drop Down List*
Add additional rows as needed				

2	Mandatory Compliance - Minimum Water Shortage Alert	9%	Landscape irrigation is limited to four days per week based on last digit of street address between the hours of 12:00 am – 5:00 am and 7:00 pm – 11:59 pm.	Yes
2	Mandatory Compliance - Minimum Water Shortage Alert	0%	Washing of automobiles permitted only on designated irrigation days between 8:00 am – 6:00 pm with a hand-held bucket, or a hand-held hose equipped with an automatic positive shut-off nozzle for quick rinses.	Yes
2	Mandatory Compliance - Minimum Water Shortage Alert	1%	Emptying and refilling of swimming pools permitted only on designated irrigation days between 12:00 am to 5:00 am and 7:00 pm to 11:59 pm.	Yes
2	Mandatory Compliance - Minimum Water Shortage Alert	0.0%	The operation of any ornamental fountain or other structure making similar use of water is prohibited unless the fountain uses a recycling system, such as an electric pump.	Yes
2	Mandatory Compliance - Minimum Water Shortage Alert	1.0%	Washing of sidewalks, driveway, parking areas, courts, patios, or other paved or hard surface areas is absolutely prohibited, unless it is necessary for the health and safety of the public.	Yes
2	Mandatory Compliance - Minimum Water Shortage Alert	0.5%	Construction operations receiving water from a construction meter or water truck shall not use water unnecessarily for any purpose other than those required by regulatory agencies.	Yes
2	Mandatory Compliance - Minimum Water Shortage Alert	0.5%	Use of water from fire hydrants shall be limited to fire fighting and/or other activities immediately necessary to maintaining the health, safety, and welfare of the citizens of Lamont.	Yes

2	Estimated water Savings (%)	12%		
NOTES:				

Submittal Table 8-2: Demand Reduction Actions (Shortage Stage #3)

Shortage Level	Demand Reduction Actions ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.*	How much is this going to reduce the shortage gap?	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? ***For Retail Suppliers Only*** *Drop Down List*
Add additional rows as needed				
3	Mandatory Compliance – Mild Water Shortage Warning	9%	Landscape irrigation is limited to three days per week based on last digit of street address between the hours of 12:00 am – 5:00 am and 7:00 pm – 11:59 pm.	Yes
3	Mandatory Compliance – Mild Water Shortage Warning	1%	The draining and refilling of swimming pools and/or spas will be allowed by permit only.	Yes
3	Mandatory Compliance – Mild Water Shortage Warning	None, but no increase.	The number of new construction meters shall not exceed the number of currently authorized meters removed from service. A new meter shall be issued only when an old meter is returned. Construction projects requiring water from a construction meter or a water truck shall not use water unnecessarily for any purposes other than those required by regulatory agencies.	Yes
3	Estimated water Savings (%)	10%		
NOTES:				

Submittal Table 8-2: Demand Reduction Actions (Shortage Stage #4)

Shortage Level	Demand Reduction Actions ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.*	How much is this going to reduce the	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? ***For Retail Suppliers Only*** *Drop Down List*

		shortage gap?		
Add additional rows as needed				
4	Mandatory Compliance – Moderate Water Shortage Emergency	9%	Landscape irrigation is limited to two days per week based on last digit of street address between the hours of 12:00 am – 5:00 am and 7:00 pm – 11:59 pm.	Yes
4	Mandatory Compliance – Moderate Water Shortage Emergency	1%	The washing of automobiles, trucks, trailers, boats, airplanes, and other types of mobile equipment, not occurring upon the immediate premises of commercial car washes and commercial service stations, is prohibited unless such washing is in the immediate interest of the public health, safety, and welfare.	Yes
4	Mandatory Compliance – Moderate Water Shortage Emergency	0.5%	The use of water for cooling mists is prohibited.	Yes
4	Mandatory Compliance – Moderate Water Shortage Emergency	None, but no increase	No new construction meters will be issued. Construction water shall not be used for earth work, road construction purposes, dust control, compaction, or trenching jetting. Construction projects necessary to maintaining the health, safety, and welfare of the public, as determined by the District, are exempt from these regulations.	Yes
4	Estimated water Savings (%)	10.5%		

Submittal Table 8-2: Demand Reduction Actions (Shortage Stage #5)

Shortage Level	Demand Reduction Actions ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool. Select those*	How much is this going to reduce	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? ***For Retail***

	that apply.	the shortage gap?		***Suppliers Only*** *Drop Down List*
Add additional rows as needed				
5	Mandatory Compliance – Severe Water Shortage Emergency	1%	The operation of or any refilling of water to swimming pools, artificial ponds and fountains is prohibited.	Yes
5	Mandatory Compliance – Severe Water Shortage Emergency	2.50%	Commercial nurseries, farmers, and similar establishments shall water only on designated days between the hours of ten a.m. and six p.m. and shall only use hand-held hoses equipped with positive shut-off nozzles, drip irrigation systems, or hand-held buckets.	Yes
5	Mandatory Compliance – Severe Water Shortage Emergency	1%	The washing of automobiles, trucks, trailers, boats, airplanes, and other types of mobile equipment, not occurring upon the immediate premises of commercial car washes and commercial service stations which utilize recirculated or recovered water, is prohibited unless such washing is in the immediate interest of the public health, safety, and welfare.	Yes
5	Estimated water Savings (%)	4.5%		
NOTES:				

Submittal Table 8-2: Demand Reduction Actions (Shortage Stage #6)

Shortage Level	Demand Reduction Actions ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.*	How much is this going to reduce the shortage gap?	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? ***For Retail Suppliers Only*** *Drop Down List*
Add additional rows as needed				

6	Mandatory Compliance – Critical Water Shortage Emergency	10%	Customers are absolutely prohibited from outdoor watering and irrigation of lawns and ground cover at any time.	Yes
6	Mandatory Compliance – Critical Water Shortage Emergency	None, but no increase	Provided the Board of Directors has declared a water shortage emergency pursuant to California Water Code Section 350 et seq., the District shall not allow any new connections to the water system during Water Conservation Stage 6.	Yes
6	Estimated water Savings (%)	10.0%		

Submittal Table 8-3: Supply Augmentation and Other Actions

Shortage Level	Supply Augmentation Methods and Other Actions by Water Supplier ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool*	How much is this going to reduce the shortage gap? *Include units used (volume type or percentage)*	Additional Explanation or Reference *(optional)*
Add additional rows as needed			
NOTES:			

Submittal Table 10-1 Retail: Notification to Cities and Counties		
City Name	60 Day Notice	Notice of Public Hearing
Add additional rows as needed		
County Name *Drop Down List*	60 Day Notice	Notice of Public Hearing
Add additional rows as needed		
Kern County	Yes	Yes
Other Agency Name	60 Day Notice	Notice of Public Hearing
Kern Delta Water District	Yes	Yes
Kern County Board of Supervisors	Yes	Yes
Kern River GSA	Yes	Yes
Kern County Planning Department	Yes	Yes
Kern County Water Agency	Yes	Yes
NOTES:		

Appendix E – SBX7-7 Verification and Compliance Forms

SBX7-7 Verification Forms

SB X7-7 Table-1: Baseline Period Ranges			
Baseline	**Parameter**	**Value**	**Units**
10- to 15-year baseline period	2008 total water deliveries	4,220	Acre Feet
	2008 total volume of delivered recycled water	-	Acre Feet
	2008 recycled water as a percent of total deliveries	0.00%	Percent
	Number of years in baseline period[1, 2]	10	Years
	Year beginning baseline period range	2000	
	Year ending baseline period range[3]	2009	
5-year baseline period	Number of years in baseline period	5	Years
	Year beginning baseline period range	2003	
	Year ending baseline period range[4]	2007	
[1] If the 2008 recycled water percent is less than 10 percent, then the first baseline period is a continuous 10-year period. If the amount of recycled water delivered in 2008 is 10 percent or greater, the first baseline period is a continuous 10- to 15-year period. *[2] The Water Code requires that the baseline period is between 10 and 15 years. However, DWR recognizes that some water suppliers may not have the minimum 10 years of baseline data.*			
[3] The ending year must be between December 31, 2004 and December 31, 2010.			
[4] The ending year must be between December 31, 2007 and December 31, 2010.			
NOTES:			

SB X7-7 Table 2: Method for Population Estimates	
Method Used to Determine Population (may check more than one)	
☐	**1. Department of Finance** (DOF) DOF Table E-8 (1990 - 2000) and (2000-2010) and DOF Table E-5 (2011 - 2015) when available
☑	**2. Persons-per-Connection Method**
☐	**3. DWR Population Tool**
☐	**4. Other** DWR recommends pre-review
NOTES:	

SB X7-7 Table 3: Service Area Population		
Year		Population
10 to 15 Year Baseline Population		
Year 1	2000	16,483
Year 2	2001	16,664
Year 3	2002	16,844
Year 4	2003	17,025
Year 5	2004	17,206
Year 6	2005	17,386
Year 7	2006	17,567
Year 8	2007	17,748
Year 9	2008	17,928
Year 10	2009	18,109
Year 11		
Year 12		
Year 13		
Year 14		
Year 15		
5 Year Baseline Population		
Year 1	2003	17,025
Year 2	2004	17,206
Year 3	2005	17,386
Year 4	2006	17,567
Year 5	2007	17,748
2015 Compliance Year Population		
2015		18,784
NOTES: Population estimates based on 2000 and 2010 Census Data for Weedpatch CDP and Lamont CDP. Population for intervening years is estimated on a straight-line basis. 2015		

SB X7-7 Table 4: Annual Gross Water Use *								
Baseline Year *Fm SB X7-7 Table 3*		Volume Into Distribution System *This column will remain blank until SB X7-7 Table 4-A is completed.*	Deductions					Annual Gross Water Use
			Exported Water	Change in Dist. System Storage (+/-)	Indirect Recycled Water *This column will remain blank until SB X7-7 Table 4-B is completed.*	Water Delivered for Agricultural Use	Process Water *This column will remain blank until SB X7-7 Table 4-D is completed.*	
10 to 15 Year Baseline - Gross Water Use								
Year 1	2000	5,265			-		-	5,265
Year 2	2001	5,265			-		-	5,265
Year 3	2002	5,489			-		-	5,489
Year 4	2003	5,713			-		-	5,713
Year 5	2004	4,593			-		-	4,593
Year 6	2005	5,265			-		-	5,265
Year 7	2006	3,697			-		-	3,697
Year 8	2007	4,481			-		-	4,481
Year 9	2008	4,257			-		-	4,257
Year 10	2009	3,249			-		-	3,249
Year 11	0	-			-		-	-
Year 12	0	-			-		-	-
Year 13	0	-			-		-	-
Year 14	0	-			-		-	-
Year 15	0	-			-		-	-
10 - 15 year baseline average gross water use								**4,727**
5 Year Baseline - Gross Water Use								
Year 1	2003	5,713			-		-	5,713
Year 2	2004	4,593			-		-	4,593
Year 3	2005	5,265			-		-	5,265
Year 4	2006	3,697			-		-	3,697
Year 5	2007	4,481			-		-	4,481
5 year baseline average gross water use								**4,750**
2015 Compliance Year - Gross Water Use								
2015		3,225	-		-		-	**3,225**
* NOTE that the units of measure must remain consistent throughout the UWMP, as reported in Table 2-3								

SB X7-7 Table 4-A: Volume Entering the Distribution System(s)
Complete one table for each source.

Name of Source	District Wells
This water source is:	
☑	The supplier's own water source
☐	A purchased or imported source

Baseline Year *Fm SB X7-7 Table 3*		Volume Entering Distribution System	Meter Error Adjustment * *Optional (+/-)*	Corrected Volume Entering Distribution System
10 to 15 Year Baseline - Water into Distribution System				
Year 1	2000	5,265		5,265
Year 2	2001	5,265		5,265
Year 3	2002	5,489		5,489
Year 4	2003	5,713		5,713
Year 5	2004	4,593		4,593
Year 6	2005	5,265		5,265
Year 7	2006	3,697		3,697
Year 8	2007	4,481		4,481
Year 9	2008	4,257		4,257
Year 10	2009	3,249		3,249
Year 11	0			-
Year 12	0			-
Year 13	0			-
Year 14	0			-
Year 15	0			-
5 Year Baseline - Water into Distribution System				
Year 1	2003	5,713		5,713
Year 2	2004	4,593		4,593
Year 3	2005	5,265		5,265
Year 4	2006	3,697		3,697
Year 5	2007	4,481		4,481
2015 Compliance Year - Water into Distribution System				
2015		3,225		3,225

** Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document*

NOTES:

SB X7-7 Table 5: Gallons Per Capita Per Day (GPCD)				
Baseline Year *Fm SB X7-7 Table 3*		Service Area Population *Fm SB X7-7 Table 3*	Annual Gross Water Use *Fm SB X7-7 Table 4*	Daily Per Capita Water Use (GPCD)
10 to 15 Year Baseline GPCD				
Year 1	2000	16,483	5,265	285
Year 2	2001	16,664	5,265	282
Year 3	2002	16,844	5,489	291
Year 4	2003	17,025	5,713	300
Year 5	2004	17,206	4,593	238
Year 6	2005	17,386	5,265	270
Year 7	2006	17,567	3,697	188
Year 8	2007	17,748	4,481	225
Year 9	2008	17,928	4,257	212
Year 10	2009	18,109	3,249	160
Year 11	0	-	-	
Year 12	0	-	-	
Year 13	0	-	-	
Year 14	0	-	-	
Year 15	0	-	-	
10-15 Year Average Baseline GPCD				**245**
5 Year Baseline GPCD				
Baseline Year *Fm SB X7-7 Table 3*		Service Area Population *Fm SB X7-7 Table 3*	Gross Water Use *Fm SB X7-7 Table 4*	Daily Per Capita Water Use
Year 1	2003	17,025	5,713	300
Year 2	2004	17,206	4,593	238
Year 3	2005	17,386	5,265	270
Year 4	2006	17,567	3,697	188
Year 5	2007	17,748	4,481	225
5 Year Average Baseline GPCD				**244**
2015 Compliance Year GPCD				
2015		18,784	3,225	**153**
NOTES:				

SB X7-7 Table 6: Gallons per Capita per Day *Summary From Table SB X7-7 Table 5*	
10-15 Year Baseline GPCD	245
5 Year Baseline GPCD	244
2015 Compliance Year GPCD	153
NOTES:	

SB X7-7 Table 7: 2020 Target Method *Select Only One*		
Target Method		Supporting Documentation
☑	Method 1	SB X7-7 Table 7A
☐	Method 2	SB X7-7 Tables 7B, 7C, and 7D *Contact DWR for these tables*
☐	Method 3	SB X7-7 Table 7-E
☐	Method 4	Method 4 Calculator
NOTES:		

SB X7-7 Table 7-A: Target Method 1 20% Reduction	
10-15 Year Baseline GPCD	**2020 Target GPCD**
245	**196**
NOTES:	

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

5 Year Baseline GPCD *From SB X7-7 Table 5*	Maximum 2020 Target[1]	Calculated 2020 Target[2]	**Confirmed 2020 Target**
244	232	196	**196**

[1] Maximum 2020 Target is 95% of the 5 Year Baseline GPCD

[2] 2020 Target is calculated based on the selected Target Method, see SB X7-7 Table 7 and corresponding tables for agency's calculated target.

NOTES:

SB X7-7 Table 8: 2015 Interim Target GPCD

Confirmed 2020 Target *Fm SB X7-7 Table 7-F*	10-15 year Baseline GPCD *Fm SB X7-7 Table 5*	**2015 Interim Target GPCD**
196	245	**221**

NOTES:

SB X7-7 Table 9: 2015 Compliance

Actual 2015 GPCD	2015 Interim Target GPCD	Optional Adjustments *(in GPCD)* Enter "0" if Adjustment Not Used: Extraordinary Events	Weather Normalization	Economic Adjustment	TOTAL Adjustments	Adjusted 2015 GPCD	2015 GPCD *(Adjusted if applicable)*	**Did Supplier Achieve Targeted Reduction for 2015?**
153	221	*From Methodology 8 (Optional)*	*From Methodology 8 (Optional)*	*From Methodology 8 (Optional)*	-	153	153	**YES**

NOTES:

2020 SBX7-7 Compliance Forms

SB X7-7 Table 0: Units of Measure Used in 2020 UWMP* *(select one from the drop down list)*
Million Gallons
**The unit of measure must be consistent throughout the UWMP, as reported in Submittal Table 2-3.*
NOTES:

SB X7-7 Table 2: Method for 2020 Population Estimate	
Method Used to Determine 2020 Population (may check more than one)	
☑	**1. Department of Finance** (DOF) or **American Community Survey** (ACS)
☐	**2. Persons-per-Connection Method**
☐	**3. DWR Population Tool**
☐	**4. Other** DWR recommends pre-review
NOTES: Extrapolation of US Census and ACS Data	

SB X7-7 Table 3: 2020 Service Area Population	
2020 Compliance Year Population	
2020	18,339
NOTES:	

SB X7-7 Table 4: 2020 Gross Water Use

Compliance Year 2020	2020 Volume Into Distribution System *This column will remain blank until SB X7-7 Table 4-A is completed.*	2020 Deductions					2020 Gross Water Use
		Exported Water *	Change in Dist. System Storage* (+/-)	Indirect Recycled Water *This column will remain blank until SB X7-7 Table 4-B is completed.*	Water Delivered for Agricultural Use*	Process Water *This column will remain blank until SB X7-7 Table 4-D is completed.*	
	1,191			-		-	**1,191**

*** Units of measure (AF, MG , or CCF)** must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.

NOTES:

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment

Complete one table for each source.

Name of Source	Lamont Public Utility District
This water source is *(check one)*:	
☑	The supplier's own water source
☐	A purchased or imported source

Compliance Year 2020	Volume Entering Distribution System [1]	Meter Error Adjustment [2] *Optional (+/-)*	Corrected Volume Entering Distribution System
	1,191	-	1,191

[1] ***Units of measure (AF, MG , or CCF)*** *must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.*

[2] ***Meter Error Adjustment*** *- See guidance in Methodology 1, Step 3 of Methodologies Document*

NOTES

SB X7-7 Table 5: 2020 Gallons Per Capita Per Day (GPCD)		
2020 Gross Water *Fm SB X7-7 Table 4*	**2020 Population** *Fm SB X7-7 Table 3*	**2020 GPCD**
1,191	18,339	**178**
NOTES:		

SB X7-7 Table 9: 2020 Compliance							
Actual 2020 GPCD [1]	Optional Adjustments to 2020 GPCD (Enter "0" if Adjustment Not Used)			TOTAL Adjustments[1]	Adjusted 2020 GPCD [1] *(Adjusted if applicable)*	2020 Confirmed Target GPCD [1, 2]	**Did Supplier Achieve Targeted Reduction for 2020?**
	Extraordinary Events[1]	Weather Normalization[1]	Economic Adjustment[1]				
178	-	-	-	-	178	196	**YES**

[1] *All values are reported in GPCD*
[2] ***2020 Confirmed Target GPCD*** *is taken from the Supplier's SB X7-7 Verification Form Table SB X7-7, 7-F.*

NOTES:

Appendix F – Water Shortage Contingency Plan

LAMONT PUBLIC UTIILTY DISTRICT

Water Shortage Contingency Plan

Adopted by the Board of Directors August 11, 2021

Lamont Public Utility District Water Shortage Contingency Plan August 2021

Chapter 1 | Introduction

This Water Shortage Contingency Plan (WSCP) for the Lamont Public Utility District (District) outlines a program for responding to water supply limitations. The intent of the water conservation measures and progressive restrictions on water use and method of use identified in this WSCP is to provide certainty to water users and enable the District to control water use, provide water supplies, and plan and implement water management measures in a fair and orderly manner for the benefit of the public.

This WSCP is broken up into the following sections:

Chapter 1 – Introduction
Chapter 2 – Water Supply Reliability Analysis
Chapter 3 – Annual Water Supply and Demand Assessment Procedures
Chapter 4 – Water Shortage Levels
Chapter 5 – Shortage Response Actions
Chapter 6 – Communication Protocols
Chapter 7 – Compliance and Enforcement
Chapter 8 – Legal Authorities
Chapter 9 – Financial Consequences of WCSP
Chapter 10 – Monitoring and Reporting
Chapter 11 – WSCP Refinement Procedures
Chapter 12 – Plan Adoption, Submittal, and Availability

Chapter 2 | Water Supply Reliability Analysis

As described in Chapter 6 of the District's Urban Water Management Plan (hereafter referred to as the "UWMP"), the District's water system service area is located within the Kern County Subbasin which is within the greater San Joaquin Valley Basin. Per Chapter 7 of the UWMP, as the year 2020 was considered a dry year per the San Joaquin Valley Index (CDEC 2021), the Kern County Subbasin has been designated to be in critical over-draft. The UWMP has determined that the groundwater supplies to the District's customers are considered reliable, and that the District will be able to meet the demands of its customers through 2040 during normal, single-dry, and multiple-dry years. Although water shortage conditions are not expected to arise due to drought, this WSCP addresses potential water shortage conditions resulting from any cause such as: droughts, sudden failure of distribution system infrastructure, regulatory-imposed restrictions, and catastrophic events such as power outages or seismic events.

Under the Sustainable Groundwater Management Act, Groundwater Sustainability Agencies (GSAs) have the authority to implement projects and management actions that help basins reach their sustainability goal. As described in Chapter 6 of the District's UWMP, the District's service area falls within the jurisdiction of the Kern Groundwater Authority (KGA) GSA which has established its own Groundwater Sustainability Plan (GSP) which include various projects, mitigation measures, and management actions. These projects and management actions do not include any immediately planned groundwater pumping allocations, pumping fees, or other provisions which would be expected to impact the availability of groundwater supply to the District. If such actions are adopted in the future, the District will consider them as a part of its future supply planning efforts.

Chapter 3 | Annual Water Supply & Demand Assessment Procedures

On an annual basis, the District will conduct a Supply-Demand Assessment (SDA) to identify whether there is likely to be a water shortage condition in the coming year. This assessment will assume that the following year will experience a shortfall of 20%. This corresponds to Water Shortage Level 3. Each element of the annual SDA is described below.

1. Evaluation Criteria

The evaluation criteria that will be used to identify whether the District is likely to experience a water shortage in the coming year includes:

a. **Groundwater Supply Well Operational Constraints** - A comparison of groundwater level elevations to well operational depths to identify the need to lower pump depths or identify new sites to drill additional supply wells.
b. **Treatment and Distribution System Constraints** - An assessment of the probabilities of facility and infrastructure outages and the degree to which they could limit the District's ability to convey or treat adequate supplies, including any planned maintenance or capital improvements over the next year that could affect its ability to provide sufficient supply to meet demands.
c. **Local Regulatory Conditions** - Evaluation of (1) any new KGA GSA policies (e.g., pumping allocations) or sustainability criteria that could trigger a change in volume available for pumping, and (2) any new limitations on well drilling permitting that could limit the ability to drill new supply wells.
d. **State Regulatory Conditions** - Evaluation of any state-mandated drought or water use restrictions.

These evaluation criteria will be assessed by the District Board and the District's Engineering Support Staff with detailed knowledge of the District's water system operations, current well conditions, and local GSA activities. The data used to support these assessments may include, but is not limited to, water supply capacity, system pumping capacity, groundwater level measurement trends, and system demand.

2. Water Supply

The District relies solely on groundwater supplies from the Kern County Subbasin (DWR Basin No. 5-22.14) of the San Joaquin Valley Basin which lies within the Tulare Lake Hydrologic Region.
Since these subbasins are not adjudicated and there are currently no GSA-mandated pumping limitations, the groundwater supply is assumed to be adequate to meet projected demands under all hydrologic conditions.The only identified potential constraints on water supply are the operational limitations and potential local regulatory conditions identified as evaluation criteria above.

3. Unconstrained Customer Demand

The demand forecast described in Chapter 4 of the District's UWMP estimates the expected water use in the absence of shortage caused reductions in water use. During a drought cycle, unconstrained demand typically increases due to higher-than-normal air temperatures and lower than normal precipitation. The supply reliability analysis and Drought Risk Assessment presented in Chapter 7 of the District's UWMP accounts for this anticipated shift in water demand. However, even with these increases in demand, the available groundwater supply is expected to be sufficient to meet these demands.

4. Planned Water Use for Current Year Considering Dry Subsequent Year

The District will evaluate the anticipated supplies for the current year, assuming that the following year will be dry, as defined above, and using the Evaluation Criteria identified above. Barring changes in supply availability per the Evaluation Criteria, the assumed dry subsequent year is not expected to affect how the District will draw water from the basin in the current year, and the planned water use for the current year will equal the unconstrained water demand.

5. Infrastructure Considerations

Each year, the District's Water Department Engineer prepares a Technical Memorandum that evaluates the Supply-Demand Analysis for the water system. The Analysis is an inventory of water production sources and pump assets to meet customer demands in accordance with California Code of Regulations (CCR) Title 22 Waterworks Standards. This Analysis is based on a combination of regulatory requirements, professional consultant recommendations, and industry standard practices, including those from the American Water Works Association (AWWA). It identifies specific vulnerabilities within the system and evaluates the system against performance criteria that meet regulatory requirements and ensure operationally adequate levels of service.

This analysis guides the District's annual evaluation of operational treatment/distribution constraints as well as supply well operational constraints that could potentially limit the availability of supplies. If such constraints are identified, the District will develop a plan to address these constraints, mitigate potential effects, and implement the appropriate water shortage stage of action per Chapter 5.

6. Other Factors

As identified under the Evaluation Criteria above, local regulatory conditions could potentially limit the availability of supplies. Therefore, the District will evaluate the development of new regulatory constraints on or before June 1st of each year and assess their potential impacts on supply availability. If such constraints are identified, the District will develop a plan to address these constraints and mitigate potential effects and implement the appropriate water shortage stage of action per Chapter 5. Consistent with California Water Code (CWC) § 10632.1, the District will perform and submit an SDA to DWR by July 1st of each year beginning in 2022.

Chapter 4 | Water Shortage Levels

Consistent with the requirements of CWC § 10632(a)(3), this WSCP is based on the six water shortage levels (also referred to as "stages") shown in Table 4-1 for the water year ending September 2020. These shortage stages are intended to address shortage caused by any condition, including the catastrophic interruption of water supplies.

Table 4-1. Water Shortage Contingency Plan Levels (DWR Table 8-1)

Shortage Level	Percent Shortage Range	Shortage Response Actions
1	Up to 10%	Demand reduction (See Table 5-1)
2	Up to 20%	Demand reduction (See Table 5-1)
3	Up to 30%	Demand reduction (See Table 5-1)
4	Up to 40%	Demand reduction (See Table 5-1)
5	Up to 50%	Demand reduction (See Table 5-1)
6	>50%	Demand reduction (See Table 5-1)
NOTES:		

Shortage response actions for each of these stages are identified and discussed in Chapter 5.

Chapter 5 | Shortage Response Actions

This chapter explains the District's response actions when dealing with the shortages associated with each of the six stages listed in Chapter 4. The District may need to implement these shortage response actions in order to comply with the state mandates for water conservation, any local regulatory changes, or respond to catastrophic events.

1. Demand Reduction

The combinations of demand-reduction actions required to resolve the shortages associated with each of the six drought stages are based on the District's experience in dealing with past drought-related shortages and include other actions deemed appropriate to achieve the necessary demand reductions.

For each drought response action, the District has estimated the percent savings for those end use(s) for each account that implements the action. These are based on evaluations prepared by Dee Jaspar & Associates, Inc. (DJA) based on the available water supply and demand data and existing data and studies. Where data or studies are not available, the best estimates were generated based on the District's and DJA's experience.

Based on this information DJA has calculated the estimated water savings and has adjusted the combination of demand reduction actions and implementation levels to achieve the targeted savings levels for each of the six water shortage stages.

For each of the six water shortage stages, the modeling targeted the required demand reduction range as follows:

Table 5-1. Demand Reduction Actions to Achieve Required Savings (DWR Table 8-2)

DWR Submittal Table 8-2: Demand Reduction Actions (Shortage Level #1)				
Shortage Level	Demand Reduction Actions	How much is this going to reduce the shortage gap?	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement?
1	Prohibition on Waste of Water	5%	Washing of vehicles, sidewalks, and driveways, prohibited without the use of a positive shut-off nozzle on the hose.	No
1	Prohibition on Waste of Water	5%	The excessive use, loss, or escape of water through breaks, leaks, or malfunctions in the water user's plumbing or distribution facilities for any period of time after such escape of water should reasonably have been discovered and corrected. It shall be presumed that a period of forty-eight hours after discovery is a reasonable time within which to correct such leak or break.	No
1	Estimated Water Savings (%)	10%		

Table 5-2: Demand Reduction Actions

DWR Submittal Table 8-2: Demand Reduction Actions (Shortage Level #2)				
Shortage Level	Demand Reduction Actions	How much is this going to reduce the shortage gap?	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement?
2	Mandatory Compliance - Minimum Water Shortage Alert	9%	Landscape irrigation is limited to four days per week based on last digit of street address between the hours of 12:00 am – 5:00 am and 7:00 pm – 11:59 pm.	Yes
2	Mandatory Compliance - Minimum Water Shortage Alert	-	Washing of automobiles permitted only on designated irrigation days between 8:00 am – 6:00 pm with a hand-held bucket, or a hand-held hose equipped with an automatic positive shut-off nozzle for quick rinses.	Yes
2	Mandatory Compliance - Minimum Water Shortage Alert	1%	Emptying and refilling of swimming pools permitted only on designated irrigation days between 12:00 am to 5:00 am and 7:00 pm to 11:59 pm.	Yes
2	Mandatory Compliance - Minimum Water Shortage Alert	0%	The operation of any ornamental fountain or other structure making similar use of water is prohibited unless the fountain uses a recycling system, such as an electric pump.	Yes
2	Mandatory Compliance - Minimum Water Shortage Alert	1%	Washing of sidewalks, driveway, parking areas, courts, patios, or other paved or hard surface areas is absolutely prohibited, unless it is necessary for the health and safety of the public.	Yes
2	Mandatory Compliance - Minimum Water Shortage Alert	0.5%	Construction operations receiving water from a construction meter or water truck shall not use water unnecessarily for any purpose other than those required by regulatory agencies.	Yes
2	Mandatory Compliance - Minimum Water Shortage Alert	0.5%	Use of water from fire hydrants shall be limited to fire fighting and/or other activities immediately necessary to maintaining the health, safety, and welfare of the citizens of Lamont.	Yes
2	Estimated Water Savings (%)	12%		

Table 5-3: Demand Reduction Actions

DWR Submittal Table 8-2: Demand Reduction Actions (Shortage Level #3)				
Shortage Level	Demand Reduction Actions	How much is this going to reduce the shortage gap?	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement?
3	Mandatory Compliance – Mild Water Shortage Warning	9%	Landscape irrigation is limited to three days per week based on last digit of street address between the hours of 12:00 am – 5:00 am and 7:00 pm – 11:59 pm.	Yes
3	Mandatory Compliance – Mild Water Shortage Warning	1%	The draining and refilling of swimming pools and/or spas will be allowed by permit only.	Yes
3	Mandatory Compliance – Mild Water Shortage Warning	None, but no increase.	The number of new construction meters shall not exceed the number of currently authorized meters removed from service. A new meter shall be issued only when an old meter is returned. Construction projects requiring water from a construction meter or a water truck shall not use water unnecessarily for any purposes other than those required by regulatory agencies.	Yes
3	Estimated Water Savings (%)	10%		

Table 5-4: Demand Reduction Actions

DWR Submittal Table 8-2: Demand Reduction Actions (Shortage Level #4)				
Shortage Level	Demand Reduction Actions	How much is this going to reduce the shortage gap?	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement?
4	Mandatory Compliance – Moderate Water Shortage Emergency	9%	Landscape irrigation is limited to two days per week based on last digit of street address between the hours of 12:00 am – 5:00 am and 7:00 pm – 11:59 pm.	Yes
4	Mandatory Compliance – Moderate Water Shortage Emergency	1%	The washing of automobiles, trucks, trailers, boats, airplanes, and other types of mobile equipment, not occurring upon the immediate premises of commercial car washes and commercial service stations, is prohibited unless such washing is in the immediate interest of the public health, safety, and welfare.	Yes
4	Mandatory Compliance – Moderate Water Shortage Emergency	0.5%	The use of water for cooling mists is prohibited.	Yes
4	Mandatory Compliance – Moderate Water Shortage Emergency	None, but no increase	No new construction meters will be issued. Construction water shall not be used for earth work, road construction purposes, dust control, compaction, or trenching jetting. Construction projects necessary to maintaining the health, safety, and welfare of the public, as determined by the District, are exempt from these regulations.	Yes
4	Estimated Water Savings (%)	10.5%		

Table 5-5: Demand Reduction Actions

DWR Submittal Table 8-2: Demand Reduction Actions (Shortage Level #5)				
Shortage Level	Demand Reduction Actions	How much is this going to reduce the shortage gap?	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement?
5	Mandatory Compliance – Severe Water Shortage Emergency	1%	The operation of or any refilling of water to swimming pools, artificial ponds and fountains is prohibited.	Yes
5	Mandatory Compliance – Severe Water Shortage Emergency	2.5%	Commercial nurseries, farmers, and similar establishments shall water only on designated days between the hours of ten a.m. and six p.m. and shall only use hand-held hoses equipped with positive shut-off nozzles, drip irrigation systems, or hand-held buckets.	Yes
5	Mandatory Compliance – Severe Water Shortage Emergency	1%	The washing of automobiles, trucks, trailers, boats, airplanes, and other types of mobile equipment, not occurring upon the immediate premises of commercial car washes and commercial service stations which utilize recirculated or recovered water, is prohibited unless such washing is in the immediate interest of the public health, safety, and welfare.	Yes
5	Estimated Water Savings (%)	4.5%		

Table 5-6: Demand Reduction Actions

DWR Submittal Table 8-2: Demand Reduction Actions (Shortage Level #6)				
Shortage Level	Demand Reduction Actions	How much is this going to reduce the shortage gap?	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement?
6	Mandatory Compliance – Critical Water Shortage Emergency	10%	Customers are absolutely prohibited from outdoor watering and irrigation of lawns and ground cover at any time.	Yes
6	Mandatory Compliance – Critical Water Shortage Emergency	None, but no increase	Provided the board has declared a water shortage emergency pursuant to California Water Code Section 350 et seq., the District shall not allow any new connections to the water system during Water Conservation Stage 5.	Yes
6	Estimated Water Savings (%)	10%		

2. Supply Augmentation

The District has not identified any changes in the system's supply in order to resolve future District water shortages.

3. Operational Changes

As discussed previously in Chapter 4, the primary operational change that the District would consider is lowering the elevation for groundwater extraction, considering the annual SDA requires it. The District will also consider, along with he shortage levels describe earlier, limiting unnecessary water waste by line flushing the system less frequently. The District will also continue monitoring the system for any potential leaks and fix immediately to help increase the efficiency of the system.

4. Mandatory Restrictions

Due to the percentage of savings the water shortage levels require, the District may deem it necessary to have mandatory customer water restrictions in order to reach the targeted goals. These restrictions will be discussed more in Chapter 7.

5. Emergency Response Plan

The District has an Emergency Response Plan (ERP) in place that coordinates the overall response to a disaster. The ERP provides the framework for the District to mitigate the public health risks from drinking

water contamination that may occur during a disaster or other emergency events. This includes coordination with local authorities such as law enforcement and fire, along with state and federal agencies. The ERP establishes an emergency organization to direct and control operations during a period of emergency by assigning responsibilities to specific personnel. It conforms to the State mandated Standardized Emergency Management System (SEMS) and the Nation Incident Management System (NIMS), and it effectively structures emergency response at all levels in compliance with the Incident Command System (ICS).

Along with the plan, the District has diesel powered engines and gear drives at two of its well sites (one in the center and one in the north end of the District) that will be able to remain in operation in the event of a power outage. In addition, the District has a diesel electrical generator at another centrally located well site. These diesel engines and generators will be used to maintain at least a 30-psi positive pressure in the system until power can be restored. Available water supplies in storage will also be utilized.

6. Seismic Risk Assessment and Mitigation Plan

The District's ERP includes information on various hazards, including seismic risk. The Kern County Multi-Jurisdictional Local Hazard Mitigation Plan, which includes additional discussion of area earthquake risk and mitigation, can be found at https://mitigatehazards.com/county-of-kern/kern-hmp-docs/.

7. Shortage Response Action Effectiveness

The tables provided in the Chapter show the effectiveness of the specific demand-reduction actions and implementation levels necessary for the District to reach the targeted savings.

Chapter 6 | Communication Protocols

The District intends to increase communication to customers and stakeholders, as needed, throughout any water shortage situation to help ensure they are aware of current conditions, are aware of any water use restrictions that are in effect and are aware of the many ways the District can help customers reduce their water use.

The District's outreach efforts include multiple channels, including bill messages, bill inserts, direct mail, and print and radio advertisements. These efforts will expand on current District outreach efforts and will be customized to the needs at the time of the shortage. This will ensure a proper channel mix so that the maximum audience is reached as efficiently as possible.

Chapter 7 | Compliance and Enforcement

The District currently does not have a schedule of penalties for violations of this policy in an adopted Ordinance.

Chapter 8 | Legal Authorities

This WSCP adheres with the California Water Code 10632. This WSCP adheres with the California Water Code 10632. This document is also required by State law as outlined in the Water Code, which states that, “Every urban water supplier shall prepare and adopt a water shortage contingency plan as part of its urban water management plan…” (WC 10632). The District is a public municipality with the authority to adopt resolutions or ordinances, and has the authority to implement the WSCP, declare water shortages, and implement shortage response actions including statutory authorities, ordinances, resolutions, and contract provisions.

This Policy shall be known as the Lamont Public Utility District Water Shortage Contingency Plan (“WSCP” or “Policy”). Article 10, Section 2 of the California Constitution declares that waters of the state are to be put to beneficial use, and that waste, unreasonable use, or unreasonable method of use of water be prevented, and that water be conserved for public welfare.

The District may experience shortages due to drought conditions, regulatory restriction enacted upon imported supplies, catastrophic emergencies, and other factors. Conservation of current water supplies and minimization of the effects of water supply shortages that are the result of drought are essential to the public health, safety, and welfare. Regulation of the time of certain water use, manner of certain water use, design of rates, method of application of water for certain uses, and installation and use of water-saving devices provide an effective means of conserving water.

In addition, California Water Code Sections 375 et seq. authorizes a water supplier to adopt and enforce a comprehensive water conservation program. Adoption and enforcement of a comprehensive water conservation program will allow the District to delay or avoid implementing measures such as water rationing or more restrictive water use regulations pursuant to a declared water shortage emergency as authorized by California Water Code Sections 350 et seq.

The District has adopted an Urban Water Management Plan that includes water conservation as a necessary and effective component of its programs to provide a reliable supply of water to meet the needs of the public within its service territory. The District’s Urban Water Management Plan also includes a contingency analysis of actions to be taken in response to water supply shortages. This WSCP is consistent with the Urban Water Management Plan adopted by the District.

1. Declaring a Water Shortage Emergency

The District’s Board of Directors has the authority to declare a water shortage emergency following a public hearing, per the California Water Code.

2. Supplier Coordination

The General Manager will be responsible with County officials within the services area should there be a necessary proclamation for a local water emergency.

Chapter 9 | Financial Consequences of WSCP

The District does not expect the rates would need to be increased as a result of water shortages and the implementation of this WSCP. The District's current rate schedule consists of two parts: a monthly service charge, which covers the District's fixed costs, and a use charge (per 100 cf) which covers the cost of producing and delivering water to customers. Therefore, reductions in revenue due to reductions in use should be accompanied by a reduction in expenses incurred by the District. Minor shortfalls in revenue could be covered by the District's water reserve funds or from the decrease in operating expenses due to the implementation of various water conservation measures.

Chapter 10 | Monitoring and Reporting

The District has and will continue to comply with State reporting requirements. All connections in the system are metered, which assures customer compliance during any Water Shortage Level. Potable water production figures are recorded daily and totals are reports to the Facility Manager. Totals are reported monthly to the District General Manager and incorporated into the water supply report during normal water supply conditions.

During a Shortage Level 1 or 2, daily production figures will be reported to the Facility Manager. The Facility Manager will compare the weekly production to the target weekly production to verify if the water use reduction goal is being met. Weekly reports would then be forwarded to the District General Manager with monthly reports provided to the Board of Directors. If reduction goals are not met, the General Manager with notify the Board of Directors so that corrective action can be taken.

During Stage 3 and above, the procedure listed above will be followed, with the addition of a daily production report to the District General Manager.

During emergency shortages, production figures will be reported to both the Facility Manager and the General Manager hourly. Daily reports will also be provided to the Board of Directors.

Chapter 11 | WSCP Refinement Procedures

This WSCP is an update to a previous 2014 WSCP. This update satisfies new State requirements for WSCPs, and reflects the refinements and improvements deemed necessary to adequately address the District's needs. The WSCP will be re-evaluated at least every five years and at the end of each major drought period to assess its performance. If deemed necessary, it will be modified and improved based on lessons learned. The Plan may also be updated in the middle of a drought year if needed.

Chapter 12 | Plan Adoption, Submittal, and Availability

The deadline for public comments on the WSCP is December ##, 2021. The final WSCP will be formally adopted by the Board of Directors on December ##, 2021. The District UWMP includes a copy of the signed Resolution of Plan Adoption and contains the following:

- Letters sent to and received from various agencies regarding the UWMP and WSCP,

and

- Correspondence between the District and participating agencies.

This UWMP and WSCP were submitted to DWR within 30 days of adoption on December ##, 2021. The submittal as done electronically through Water Use Efficiency Data Portal, an online submittal tool. The adopted WSCP was also sent to the California State Library and to the counties listed in Table 10-1 of the District UWMP.

Appendix G – Kern River GSA Groundwater Sustainability Plan