LIBERTY UTILITIES - PARK WATER

Liberty™

JUNE 2021

FINAL DRAFT

2020 URBAN WATER MANAGEMENT PLAN

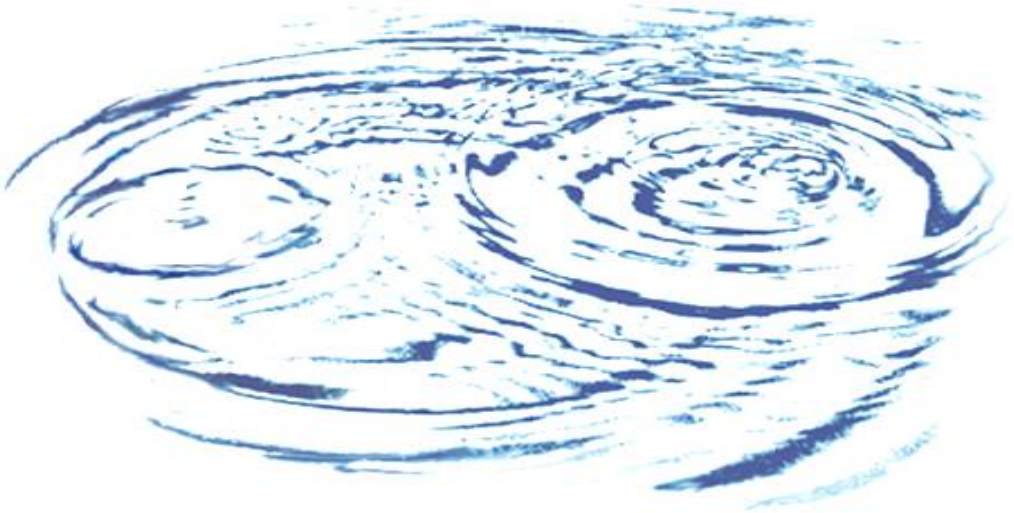
STETSON ENGINEERS INC.

Northern California • Southern California • Arizona • Colorado • Oregon

FINAL DRAFT

Liberty Utilities – Park Water

2020
Urban Water Management Plan



JUNE 2021

STETSON ENGINEERS INC.

861 Village Oaks Drive, Suite 100 • Covina , California 91724
Phone: (626) 967-6202 • FAX: (626) 331-7065 • Web site: www.stetsonengineers.com

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LIST OF ACRONYMS

AB	Assembly Bill
AF	Acre-Feet
AFY	Acre-Feet per Year
AMR	Automatic Meter Reading
Annual Assessment	Annual Water Supply and Demand Assessment
AWWA	American Water Works Association
CalWARN	California Water/ Wastewater Agency Response Network
CBMWD	Central Basin Municipal Water District
CY	Calendar Year
CIMIS	California Irrigation Management Information System
CFS	Cubic Feet per Second
CPUC	California Public Utilities Commission
CWC	California Water Code
DAC	Disadvantaged Communities
Delta	Sacramento- San Joaquin Delta
DOF	California Department of Finance
DMM	Demand Management Measures
DRA	Drought Risk Assessment
DWR	California Department of Water Resources
ERP	Emergency Response Plan
ETo	Evapotranspiration
GCM	General Circulation Models
GPCD	Gallons per Capita per Day
GPM	Gallons per Minute
GIS	Geographical Information Systems
GSP	Groundwater Sustainability Plan
Judgement	The Central Basin Judgement
JWPCP	Joint Water Pollution Control Plant
kWh	Kilowatt Hours
LACSD	Sanitation Districts of Los Angeles County
Liberty Utilities - Park Water	Liberty Utilities (Park Water) Corp.
LVL	Leo J. Vander Lans Advanced Water Treatment Facility
MCBA	CPUC Modified Cost Balancing Account
MGD	Million gallons per day
MSL	Mean Sea Level
MWD	Metropolitan Water District of Southern California
NAICS	North American Industry Classification System
PCE	Perchloroethylene
PFAS	Per- and Poly- Fluoroalkyl Substances

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Plan	Urban Water Management Plan
PWS	Public Water System
RCP	Representative Concentration Pathway
RDM	MWD's Robust Decision Making Approach
RRA	Risk and Resilience Assessment
SB	Senate Bill
SB X7-7	The Water Conservation Act of 2009
SCAG	Southern California Association of Governments
SCE	Southern California Edison
SGMA	Sustainable Groundwater Management Act of 2014
SWRCB-DDW	State Water Resources Control Board - Division of Drinking Water
SWP	State Water Project
TCE	Trichloroethylene
TDS	Total Dissolved Solids
USEPA	United States Environmental Protection Agency
UWMP	Urban Water Management Plan
VOCs	Volatile Organic Chemicals
Water Code	California Water Code
WIN	Central Basin Water Independence Now Program
WRAM	Revenue Adjusting Mechanism
WRCC	Western Regional Climate Center
WRD	Water Replenishment District of Southern California
WRP	Water Reclamation Plant
WSCP	Water Shortage Contingency Plan
WSAP	Water Supply Allocation Plan
WUCA	Water Utility Climate Alliance
WUE	Water Use Efficiency

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CHAPTER 1

URBAN WATER MANAGEMENT PLAN INTRODUCTION AND OVERVIEW

LAY DESCRIPTION - INTRODUCTION

An urban water supplier is defined (pursuant to Section 10617 of the California Water Code[1]) as "*a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. An urban water supplier includes a supplier or contractor for water, regardless of the basis of right, which distributes or sells for ultimate resale to customers.*"

Liberty Utilities (Park Water) Corp. (also referred to as Liberty Utilities or Liberty Utilities – Park Water within this Urban Water Management Plan) is classified as an urban water supplier because it serves more than 3,000 customers (i.e. individual metered accounts) and it supplies more than 3,000 acre-feet of water annually to its customers for municipal purposes.

In accordance with the "Urban Water Management Planning Act", which was enacted by the California Legislature in 1983, every urban water supplier (including Liberty Utilities) is required to prepare and adopt an Urban Water Management Plan (UWMP), periodically review its UWMP, and incorporate updated and new information into an updated UWMP at least once every five years.

Liberty Utilities' most recent update was its 2015 UWMP (or 2015 Plan) which was submitted to, and approved by, the California Department of Water Resources

1 References to CWC Sections in this 2020 UWMP were obtained from https://leginfo.legislature.ca.gov/

(DWR). Urban water suppliers (including Liberty Utilities) are required to complete and submit their 2020 UWMPs to DWR by July 1st, 2021.

The current requirements for preparing the UWMP are included in California Water Code (CWC) Sections 10608 through 10657. Liberty Utilities' 2020 UWMP (or 2020 Plan) was prepared consistent with the CWC and the recommended organization provided in DWR's Final "Urban Water Management Plan Guidebook 2020" (Final 2020 UWMP Guidebook), dated March 2021.

The UWMP provides urban water suppliers (including Liberty Utilities) with a reliable management action plan for long-term resource planning to ensure adequate water supplies are available to meet existing and future water supply needs. In addition, the 2020 UWMP incorporates water supply reliability determinations resulting from potential prolonged drought, regulatory revisions, and/or changing climatic conditions.

Liberty Utilities' 2020 Plan consists of the following Chapters:

Chapter 1	Urban Water Management Plan Introduction and Overview
Chapter 2	Plan Preparation
Chapter 3	System Description
Chapter 4	Water Use Characterization
Chapter 5	SB X7-7 Baselines, Targets, and 2020 Compliance
Chapter 6	Water Supply Characterization
Chapter 7	Water Service Reliability and Drought Risk Assessment
Chapter 8	Water Shortage Contingency Plan
Chapter 9	Demand Management Measures
Chapter 10	Plan Adoption, Submittal, and Implementation

A lay description is presented at the beginning of each of these Chapters.

LAY DESCRIPTION – CHAPTER 1

URBAN WATER MANAGEMENT PLAN INTRODUCTION AND OVERVIEW

Chapter 1 (Urban Water Management Plan Introduction and Overview) of Liberty Utilities – Park Water's 2020 Plan discusses and provides the following:

- An overall lay description of the 2020 Plan, including California Water Code and Urban Water Management Plan Act requirements, is provided. Liberty Utilities is required to prepare an Urban Water Management Plan.
- Liberty Utilities' 2020 Plan was prepared consistent with the recommended organization provided in DWR's Final "Urban Water Management Plan Guidebook 2020", dated March 2021. A description regarding the organization of the 2020 Plan, including a summary of each Chapter, is provided. Liberty Utilities' Water Shortage Contingency Plan (discussed in Chapter 8) is also included in the 2020 Plan.
- The 2020 Plan incorporates DWR's water use and supply tables (standardized tables) for the reporting and submittal of UWMP data. These tables are included within the respective sections of the 2020 Plan and in Appendix A.
- Liberty Utilities' coordination efforts with other planning agencies are discussed, including coordination efforts with Central Basin Municipal Water District and the Southern California Association of Governments.
- Liberty Utilities' eligibility to receive grants and loans administered by the State of California and/or DWR, as a result of preparing the 2020 Plan, is discussed.
- Information is provided which demonstrates Liberty Utilities' prior, continued, and projected reduction on imported water supplies obtained (either directly or indirectly) from the Sacramento-San Joaquin Delta. Liberty Utilities has reduced its reliance on the imported water supplies for Calendar Year 2014 and Calendar

Year 2019. In addition, Liberty Utilities is projected to continue reducing its reliance on imported water supplies through Calendar Year 2045.

- The checklist developed by DWR and used by Liberty Utilities to incorporate the specific UWMP requirements is discussed. The completed checklist is provided in Appendix C.

1.1 RECOMMENDED UWMP ORGANIZATION

Liberty Utilities' 2020 UWMP (2020 Plan) was prepared consistent with the recommended organization provided in DWR's Final "Urban Water Management Plan Guidebook 2020" (Final 2020 UWMP Guidebook), dated March 2021. Liberty Utilities' 2020 Plan consists of the following Chapters:

Chapter 1	Urban Water Management Plan Introduction and Overview
Chapter 2	Plan Preparation
Chapter 3	System Description
Chapter 4	Water Use Characterization
Chapter 5	SB X7-7 Baselines, Targets, and 2020 Compliance
Chapter 6	Water Supply Characterization
Chapter 7	Water Service Reliability and Drought Risk Assessment
Chapter 8	Water Shortage Contingency Plan
Chapter 9	Demand Management Measures
Chapter 10	Plan Adoption, Submittal, and Implementation

Pursuant to CWC requirements, Liberty Utilities' 2020 Plan incorporates DWR's water use and supply tables (standardized tables) for the reporting and submittal of UWMP data. DWR's standardized tables are provided within the body of the 2020 Plan text as well as in Appendix A. Liberty Utilities also submitted the UWMP data (standardized tables) electronically through DWR's Online Submittal Tool.

Liberty Utilities' 2020 Plan also provides supporting documents (appendices) including notification letters of the Plan update, public notice of the Plan hearing, and adoption resolution from Liberty Utilities' governing body. Further discussions regarding these supporting documents are provided within the individual Chapters of Liberty Utilities' 2020 Plan.

1.2 UWMPS IN RELATION TO OTHER EFFORTS

Liberty Utilities' 2020 Plan was prepared in coordination with planning agencies including the Los Angeles County Department of Regional Planning and the Southern California Association of Governments (SCAG). In addition, Liberty Utilities' 2020 Plan was prepared using management documents including the County of Los Angeles 2019 "All-Hazards Mitigation Plan" (see Appendix L).

Liberty Utilities is a sub-agency of Central Basin Municipal Water District (CBMWD), a wholesale water agency. CBMWD prepared a 2020 Plan which is incorporated by reference in Liberty Utilities' 2020 Plan. In addition, Liberty Utilities provided its 2020 Plan to CBMWD which includes water use projections in five-year increments for a normal year, a single dry year, and a five consecutive year drought conditions over the next 25 years.

1.3 UWMPS AND GRANT OR LOAN ELIGIBILITY

Pursuant to DWR's Final 2020 UWMP Guidebook:

"*In order for a Supplier to be eligible for any water grant or loan administered by DWR, the Supplier must have a current UWMP on file that has been determined by DWR to address the requirements of the Water Code. A current UWMP must also be maintained*

by the Supplier throughout the term of any grant or loan administered by DWR. A UWMP may also be required in order to be eligible for other state funding, depending on the conditions that are specified in the funding guidelines. Suppliers are encouraged to seek guidance on the specifics of any state funding source from the respective funding agencies. The following sections of the Water Code are pertinent to Suppliers considering pursuit of grants or loans."

Liberty Utilities' 2020 Plan has been prepared to meet eligibility requirements for grants and loans administered by the State and/or DWR.

1.4 DEMONSTRATION OF CONSISTENCY WITH THE DELTA PLAN FOR PARTICIPANTS IN COVERED ACTIONS

Pursuant to DWR, an urban water supplier that anticipates participating in or receiving water from a proposed project (or "covered action") such as a multi-year water transfer, conveyance facility, or new diversion that involves transferring water through, exporting water from, or using water in the Sacramento-San Joaquin Delta (Delta) should provide information in their 2015 and 2020 UWMPs for use in demonstrating consistency with Delta Plan Policy WR P1, "*Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance"*. In addition, pursuant to California Code of Regulations, Title 23, § 5003:

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

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

(C) Included in the Plan, commencing in 2015, the expected outcome for measurable reduction in Delta reliance and improvement in regional self-reliance. The expected outcome for measurable reduction in Delta reliance and improvement in regional self-reliance shall be reported in the Plan as the reduction in the amount of water used, or in the percentage of water used, from the Delta watershed. For the purposes of reporting, water efficiency is considered a new source of water supply, consistent with Water Code section 1011(a).

Liberty Utilities has reduced its reliance on the imported water supplies for Calendar Year 2015 and Calendar Year 2020. In addition, Liberty Utilities is projected to continue reducing its reliance on the imported water supplies through Calendar Year 2045. A further discussion of Liberty Utilities' measurable reduction in imported water reliance and improvement in regional self-reliance is provided in Appendix B.

1.5 TIPS FOR UWMP PREPARERS

Liberty Utilities' 2020 Plan (which includes Liberty Utilities' 2020 Water Shortage Contingency Plan (WSCP)) is considered an update to Liberty Utilities' 2015 Plan. However, the 2020 Plan and the WSCP are considered stand-alone documents. As discussed in Section 1.1, Liberty Utilities' 2020 Plan was prepared consistent with the recommended organization provided in DWR's Final 2020 UWMP Guidebook.

A checklist of specific UWMP requirements is included in Appendix C. The checklist includes the page number where the required elements are addressed to assist in DWR's review of the submitted Plan.

CHAPTER 2

PLAN PREPARATION

LAY DESCRIPTION – CHAPTER 2

PLAN PREPARATION

Chapter 2 (Plan Preparation) of Liberty Utilities Park Water's 2020 Plan discusses and provides the following:

- The basis for preparing an Urban Water Management Plan is provided. Liberty Utilities is required to prepare the 2020 Plan because it is an "urban water supplier" (Liberty Utilities serves more than 3,000 customers and it supplies more than 3,000 acre-feet of water annually to its customers for municipal purposes).
- Liberty Utilities is a "Public Water System" and is regulated by the State Water Resources Control Board - Division of Drinking Water. Liberty Utilities' Public Water System is divided into three non-contiguous water systems. Each Public Water System number is provided in Table 2-1.
- Liberty Utilities' Plan has been prepared as an "individual" plan rather than a "regional" plan in an effort to provide information specific to Liberty Utilities to best inform its employees, management, and customers.
- Information presented in Liberty Utilities' 2020 Plan is provided on "calendar year" basis which is from January through December 31, 2020.
- Water quantities presented in Liberty Utilities' 2020 Plan are provided on an "acre-foot" basis.
- Liberty Utilities' coordination and outreach efforts with wholesale water agencies, other retail water agencies, and the community are described. Liberty Utilities coordinated the preparation of its 2020 Plan with the Los Angeles County

Department of Regional Planning, Central Basin Municipal Water District, and the Cities of Artesia, Bell Gardens, Bellflower, Compton, Lynwood, Norwalk, and Santa Fe Springs.

- Liberty Utilities' notification process to the cities and county within which Liberty Utilities provides water supplies is discussed.

2.1 PLAN PREPARATION

As discussed in Section 1.1, Liberty Utilities' 2020 Plan was prepared consistent with the recommended organization provided in DWR's Final 2020 UWMP Guidebook. Pursuant to DWR's Final 2020 UWMP Guidebook:

"*The California Water Code (Water Code) specifies several requirements for preparing a UWMP, including who is required to prepare a UWMP; how to prepare a UWMP, depending on whether the Supplier chooses to participate in a regional or individual planning effort; selection of reporting year-type; and coordination, notification, and outreach.*"

Pursuant to CWC requirements, Liberty Utilities' 2020 Plan incorporates DWR's water use and supply tables (standardized tables) for the reporting and submittal of UWMP data.

2.2 BASIS FOR PREPARING A PLAN

CWC 10617.

"Urban water supplier" means a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. An urban water supplier includes a supplier or contractor for water, regardless of the basis of right, which distributes or sells for ultimate resale to customers. This part applies only to water supplied from public water systems subject to Chapter 4 (commencing with Section 116275) of Part 12 of Division 104 of the Health and Safety Code.

CWC 10620.

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

CWC 10621.

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

Liberty Utilities' 2020 Plan was prepared in accordance with the UWMP Act which was established in 1983. The UWMP Act requires every "urban water supplier" to prepare and adopt a Plan, to periodically review its Plan at least once every five years and make any amendments or changes which are indicated by the review. An "Urban Water Supplier" is defined as a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet (AF) of water annually.

Section 10621(a) of the CWC states, "*Each urban water supplier shall update its plan at least once every five years on or before July 1, in years ending in six and one, incorporating updated and new information from the five years preceding each update".* As a result, DWR requires the 2020 Plans be submitted by July 1, 2021.

Liberty Utilities is an “urban water supplier” pursuant to Section 10617 of the CWC and directly serves potable water to more than 3,000 customers and supplies more than 3,000 acre-feet per year (AFY) at retail for municipal purposes. Liberty Utilities’ 2020 Plan is an update to Liberty Utilities’ 2015 Plan.

2.2.1 PUBLIC WATER SYSTEMS

CWC 10644.

(a)(2) The plan, or amendments to the plan, submitted to the department … shall include any standardized forms, tables, or displays specified by the department.

California Health and Safety Code 116275.

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

Pursuant to CWC requirements, Liberty Utilities’ 2020 Plan incorporates DWR’s standardized tables for the reporting and submittal of UWMP data. The standardized tables are provided within the body of the 2020 Plan text as well as in Appendix A. Liberty Utilities also submitted the UWMP data (from the standardized tables) electronically through DWR’s Online Submittal Tool.

In addition, Liberty Utilities consists of three non-contiguous Public Water Systems and are regulated by the State Water Resources Control Board - Division of Drinking Water (SWRCB-DDW). The SWRCB-DDW requires water agencies to provide the number of connections, water usage, and other information annually. The information provided to SWRCB-DDW indicates Liberty Utilities serves potable water to more than 3,000 customers and supplies more than 3,000 AFY. Table 2-1 provides Liberty Utilities’ Public Water Systems names and numbers.

2.2.2 SUPPLIERS SERVING MULTIPLE SERVICE AREAS / PUBLIC WATER SYSTEMS

Liberty Utilities is an investor-owned public utility, meeting the definition of a Public Water System. Liberty Utilities provides water service primarily within areas of south Los Angeles County including areas within the Cities of Artesia, Bellflower, Compton, Lynwood, Norwalk, and Santa Fe Springs. Liberty Utilities has elected to prepare an individual 2020 Plan for this system.

Liberty Utilities' service area is divided into three non-contiguous water systems including the Liberty Utilities – Compton System, the Liberty Utilities – Lynwood System, and the Liberty Utilities - Bellflower/Norwalk System. Table 2-1 provides the Liberty Utilities' Public Water System names and numbers.

Table 2-1 Public Water Systems

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			
CA1910021	Liberty Utilities - Compton	6,978	2,792
CA1910161	Liberty Utilities - Lynwood	4,480	1,792
CA1910211	Liberty Utilities - Bellflower/Norwalk	16,599	6,640
	TOTAL	28,057	11,224
**** Units of measure (AF, CCF, MG)*** *must remain consistent throughout the UWMP as reported in Table 2-3.*			
NOTES: Source for "Number of Municipal Connections 2020": https://sdwis.waterboards.ca.gov/PDWW/			

2.3 REGIONAL PLANNING

Liberty Utilities has developed its 2020 Plan reporting solely on its service area to address all requirements of the CWC. Liberty Utilities' 2020 Plan was not developed as a Regional Plan.

2.4 INDIVIDUAL OR REGIONAL PLANNING AND COMPLIANCE

As shown in Table 2-2, Liberty Utilities' 2020 Plan is an "Individual UWMP". Liberty Utilities has developed its 2020 Plan reporting solely on its service area to address all requirements of the CWC, including water use targets and baselines pursuant to SB X7-7 Water Conservation Act of 2009 reporting (discussed further in Chapter 5). Liberty Utilities notified and coordinated with appropriate regional agencies and constituents (See Section 2.6).

Table 2-2 Plan Identification Type

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:			

2.4.1 REGIONAL UWMP

CWC 10620.

(d)(1) An urban water supplier may satisfy the requirements of this part by participation in area wide, regional, watershed, or basin wide urban water management planning where those plans will reduce preparation costs and contribute to the achievement of conservation and efficient water use.

As indicated in Table 2-2, Liberty Utilities' 2020 Plan was developed as an "Individual UWMP" and not part of a Regional Plan.

2.4.2 REGIONAL ALLIANCE

CWC 10608.20.

(a)(1) …Urban retail water suppliers may elect to determine and report progress toward achieving these targets on an individual or regional basis, as provided in subdivision (a) of Section 10608.28…

CWC 10608.28.

(a) An urban retail water supplier may meet its urban water use target within its retail service area, or through mutual agreement, by any of the following:

(1) Through an urban wholesale water supplier.
(2) Through a regional agency authorized to plan and implement water conservation, including, but not limited to, an agency established under the Bay Area Water Supply and Conservation Agency Act (Division 31 (commencing with Section 81300)).
(3) Through a regional water management group as defined in Section 10537.
(4) By an integrated regional water management funding area.
(5) By hydrologic region.
(6) Through other appropriate geographic scales for which computation methods have been developed by the department.

(b) A regional water management group, with the written consent of its member agencies, may undertake any or all planning, reporting, and implementation functions under this chapter for the member agencies that consent to those activities. Any data or reports shall provide information both for the regional water management group and separately for each consenting urban retail water supplier and urban wholesale water supplier.

As indicated in Table 2-2, Liberty Utilities' 2020 Plan was developed as an "Individual UWMP" and not part of a Regional Alliance.

2.5 FISCAL OR CALENDAR YEAR AND UNITS OF MEASURE

CWC 10608.20.

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

2.5.1 FISCAL OR CALENDAR YEAR

The data provided in Liberty Utilities' 2020 Plan is reported on a calendar year (CY) basis, unless noted otherwise, as shown in Table 2-3. A calendar year begins on January 1st of every year.

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)	
01/01	
Units of measure used in UWMP * (select from drop down)	
Unit	AF
**** Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*	
NOTES:	

2.5.2 REPORTING COMPLETE 2020 DATA

The data provided in Liberty Utilities' 2020 Plan is provided on a CY basis through December 31, 2020.

2.5.3 UNITS OF MEASURE

As shown in Table 2-3, the data provided in Liberty Utilities' 2020 Plan is reported in units of AF, unless noted otherwise.

2.6 COORDINATION AND OUTREACH

CWC 10631.

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

2.6.1 WHOLESALE AND RETAIL COORDINATION

Liberty Utilities is a sub-agency of CBMWD, a wholesale agency. As indicated in Table 2-4, Liberty Utilities has provided its 2020 Plan to CBMWD which includes water use projections in five-year increments for a normal year, a single dry year, and a five consecutive year drought conditions over the next 25 years.

Table 2-4 Water Supplier Information Exchange

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
Central Basin Municipal Water District
NOTES:

2.6.2 COORDINATION WITH OTHER AGENCIES AND THE COMMUNITY

CWC 10620.

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

CWC 10642.

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

Liberty Utilities is a retail water supplier that serves customers in the Cities of Artesia, Bellflower, Compton, Lynwood, Norwalk, and Santa Fe Springs as well as unincorporated areas of Los Angeles County. Liberty Utilities is required to coordinate the preparation of the Plan with appropriate agencies in the area, including appropriate water suppliers that share a common source. Therefore, Liberty Utilities coordinated the preparation of its 2020 Plan with the Los Angeles County Department of Regional Planning, Central Basin

Municipal Water District, and the Cities of Artesia, Bell Gardens, Bellflower, Compton, Lynwood, Norwalk, and Santa Fe Springs. As discussed in Section 10.2, Liberty Utilities notified these agencies, as well as the cities and county within which Liberty Utilities provides water supplies, at least sixty (60) days prior to the public hearing of the preparation of the 2020 Plan and invited them to participate in the development of the 2020 Plan. A copy of the notification letters sent to these agencies is provided in Appendix D.

2.6.3 NOTICE TO CITIES AND COUNTIES

CWC 10621.

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

As discussed in Section 10.2, notification was provided to the cities and county within which Liberty Utilities provides water supplies that Liberty Utilities was reviewing and considering amendments (updates) to the previous 2015 Plan, and as a result prepared the 2020 Plan. Notification was provided at least 60 days prior to the public hearing (see Appendix D).

CHAPTER 3

SYSTEM DESCRIPTION

LAY DESCRIPTION – CHAPTER 3

SYSTEM DESCRIPTION

Chapter 3 (System Description) of Liberty Utilities Park Water's 2020 Plan discusses and provides the following:

- A description of Liberty Utilities' service area is provided. Liberty Utilities provides water service to residential (single-family and multi-family), commercial, industrial, and institutional customers within areas of the Cities of Artesia, Bellflower, Compton, Lynwood, Norwalk, and Santa Fe Springs as well as unincorporated areas of Los Angeles County.
- Liberty Utilities' water service area encompasses an area of approximately 11 square miles. Liberty Utilities' service area is generally bordered by the Cities of La Mirada to the east, Carson, Lakewood and Cerritos to the south, Gardena to the west, and Downey to the north. The location of Liberty Utilities' water service area is provided in Figure 1.
- A description regarding Liberty Utilities' water service area climate is provided. The monthly historical average temperatures (including minimum and maximum), monthly historical average rainfall, and monthly evapotranspiration in the vicinity of Liberty Utilities' service area is summarized. The sources of the climate information are also discussed.
- The population within Liberty Utilities' water service area is discussed and projected. The sources of the population information are also discussed. Liberty Utilities provides water service to an area with a current population of 132,691. Liberty Utilities is projected to have a population of 136,245 by CY 2045.

- A discussion of land use information used by Liberty Utilities to develop the 2020 Plan is provided. Liberty Utilities reviewed the current and projected land uses within its service area. Liberty Utilities also reviewed data provided by the Southern California Association of Governments, the Department of Finance, and the United States Census Bureau and prepared for counties, cities, and unincorporated areas within Southern California.

3.1 GENERAL DESCRIPTION

CWC 10631.

(a) Describe the service area of the supplier, including current and projected population, climate, and other social, economic, and demographic factors affecting the supplier's water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available. The description shall include the current and projected land uses within the existing or anticipated service area affecting the supplier's water management planning. Urban water suppliers shall coordinate with local or regional land use authorities to determine the most appropriate land use information, including, where appropriate, land use information obtained from local or regional land use authorities, as developed pursuant to Article 5 (commencing with Section 65300) of Chapter 3 of Division 1 of Title 7 of the Government Code.

Liberty Utilities is an investor-owned utility created in 1937, originally named the Los Nietos Water Company. The Liberty Utilities Company acquired Los Nietos Water Company and renamed it Liberty Utilities - Park Water in January 2016.

Liberty Utilities provides water service to the Cities of Artesia, Bellflower, Compton, Lynwood, Norwalk, and Santa Fe Springs as well as unincorporated areas of Los Angeles County. Liberty Utilities' service area encompasses an area of approximately 11 square miles and is located in the southern region of Los Angeles County. Liberty Utilities' service area is generally bordered by the Cities of La Mirada to the east, Carson, Lakewood and Cerritos to the south, Gardena to the west, and Downey to the north. Figure 1 shows

Liberty Utilities' service area boundaries. The service area consists of residential (single-family and multi-family), commercial, industrial, and institutional land uses.

Liberty Utilities provides domestic water from wells within the Central Basin, imported surface water from MWD through CBMWD, and recycled water from the Sanitation Districts of Los Angeles County (LACSD).

3.2 SERVICE AREA BOUNDARY MAPS

As discussed in Section 3.1, Liberty Utilities' service area covers approximately 11 square miles in the southern region of Los Angeles County. A service area boundary map is provided on Figure 1. Liberty Utilities' water service area boundary relative to the municipal boundaries of the Cities of Artesia, Bellflower, Compton, Lynwood, Norwalk, and Santa Fe Springs as well as unincorporated areas of Los Angeles County is provided of Figure 2.

Liberty Utilities' service area map was submitted online through DWR's Population Tool in a "KML" file format (i.e. Google Earth format). The KML file was originally created in a Geographical Information Systems (GIS) shape file format and converted into a KML format. To the extent information was available, metadata was included in the KML file (including map projection, contact information, start and end dates for which the map is valid, constraints, attribute table definitions, and digitizing base).

3.3 SERVICE AREA CLIMATE

CWC 10631.

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

CWC 10630.

It is the intention of the Legislature, in enacting this part, to permit levels of water management planning commensurate with the numbers of customers served and the volume of water supplied, while accounting for impacts from climate change.

The monthly historical average temperatures (including minimum and maximum), monthly historical average rainfall, and monthly evapotranspiration (ETo) in the vicinity of Liberty Utilities' service area is summarized in the tabulation below. Historical climate information was obtained from the Western Regional Climate Center (WRCC)and from DWR's California Irrigation Management Information System (CIMIS).

Service Area Climate Information

Month	Average Temperature (F)	Average Minimum Temperature (F)	Average Maximum Temperature (F)	Average Total Precipitation (Inches)	ETo (Inches)
January	58.6	47.8	69.6	3.2	1.94
February	60.2	48.8	71.4	3.2	2.36
March	61.6	50.4	72.9	2.2	3.67
April	65.5	53.3	77.6	1.0	4.58
May	68.3	57.3	79.4	0.2	4.74
June	72.5	60.9	84.0	0.1	4.89
July	76.5	64.2	88.6	0.0	5.64
August	77.2	65.1	89.5	0.1	5.45
September	75.6	63.6	87.7	0.3	4.48
October	70.6	58.5	82.9	0.5	3.21
November	63.4	51.5	75.4	1.4	2.08
December	59.0	47.4	70.5	2.0	1.66
Annual	67.0	55.3	79.1	14.5	44.7

Source:

Historical average monthly precipitation information was obtained from the Western Regional Climate Center (http://www.wrcc.dri.edu/) and is based on data collected from Station 049660 (Whittier City Yard, California) from 1949 through 2014. Historical average monthly temperature information was obtained from the Western Regional Climate Center (http://www.wrcc.dri.edu/) and is based on data collected from Station 045790 (Montebello, California) from 1979 through 2011. Historical monthly average ETo information was obtained from the California Irrigation Management Information Systems (http://wwwcimis.water.ca.gov) and is based on data collected from Station 174 (Long Beach).

The historical average rainfall in the vicinity of Liberty Utilities' service area is 14.5 inches. Liberty Utilities' service area has a dry climate where the average minimum monthly temperature reaches approximately 47 degrees Fahrenheit. The warm, dry summers reach average maximum monthly temperatures of approximately 89 degrees Fahrenheit. Although changes in climatic conditions may have an impact (as discussed in Section 4.5), the projected water supply demands will be based on an average year, a single dry year, and a five consecutive year drought conditions, based on historical data and

projected demands. Precipitation within the vicinity of Liberty Utilities' service area is discussed further in Section 7.2.

A discussion of Liberty Utilities' source of supply, how that source may be impacted by climate change, and the proactive actions Liberty Utilities and other local/regional water managers may take to address the potential climate change on water supplies is provided in Section 4.5.

3.4 SERVICE AREA POPULATION AND DEMOGRAPHICS

3.4.1 SERVICE AREA POPULATION

CWC 10631.

(a) Describe the service area of the supplier, including current and projected population… The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available.

Liberty Utilities provides water service to an area with a current population of 132,691. does not make sense compared to water use Table 3-1 presents the current and projected population of the area encompassed by Liberty Utilities' service area from CY 2020 to CY 2045. Liberty Utilities is projected to have a population of 136,245 by CY 2045.

A discussion of the methodology used to calculate the current CY 2020 population within Liberty Utilities' service area is provided in Section 5.4 and is consistent with DWR requirements. This current CY 2020 population was used to determine compliance with Liberty Utilities' SB X7-7 water use target for 2020, as discussed in Section 5.5.

Projected populations in Liberty Utilities' service area were based on growth rate projections obtained from data provided by SCAG. The data provided by SCAG was based on their "The 2020-2045 Regional Transportation Plan / Sustainable Communities Strategy of the SCAG", dated September 2020, and incorporates demographic trends, existing land use, general plan land use policies, and input and projections through the year 2045 from the Department of Finance (DOF) and the U.S. Census Bureau for counties, cities, and unincorporated areas within Southern California.

Table 3-1 Population – Current and Projected

Submittal Table 3-1 Retail: Population - Current and Projected						
Population Served	2020	2025	2030	2035	2040	2045*(opt)*
	132,691	133,407	134,111	134,819	135,530	136,245
NOTES: The 2020 population and the population projected through 2045 were obtained from data in SCAG's 2020-2045 Regional Transportation Plan (See Section 3.4.1 and Section 5.4.1).						

3.4.2 OTHER SOCIAL, ECONOMIC, AND DEMOGRAPHIC FACTORS

CWC 10631.

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

No other demographic factors affect Liberty Utilities' water management planning. However, increased population will have an impact on water demand.

3.5 LAND USES WITHIN SERVICE AREA

Liberty Utilities reviewed the current and projected land uses within its service area during the preparation of this 2020 Plan. The existing land uses within Liberty Utilities' service area includes residential (single-family and multi-family), commercial, industrial, and institutional. The projected land uses within Liberty Utilities' service area are expected to remain similar to the existing land uses. In addition, although mostly built-out, the projected population within Liberty Utilities' service area is anticipated to increase (as discussed in Section 3.4). A discussion of the existing and projected water uses for the individual water use sectors within Liberty Utilities' service area, which includes the different land uses, is provided in Section 4.2. As discussed in Section 2.6, Liberty Utilities coordinated the preparation of the 2020 Plan with the Cities of Artesia, Bell Gardens, Bellflower, Compton, Lynwood, Norwalk, and Santa Fe Springs, the County of Los Angeles, and other agencies.

As discussed in Section 3.4, Liberty Utilities obtained data from the SCAG document entitled "The 2020-2045 Regional Transportation Plan / Sustainable Communities Strategy of the SCAG", dated September 2020. Projected populations in Liberty Utilities' service area were based on growth rate projections developed by SCAG. The data provided by SCAG incorporates demographic trends, existing land use, general plan land use policies, and input and projections through the year 2045 from the DOF and the U.S. Census Bureau for counties, cities, and unincorporated areas within Southern California

CHAPTER 4

WATER USE CHARACTERIZATION

LAY DESCRIPTION – CHAPTER 4

WATER USE CHARACTERIZATION

Chapter 4 (Water Use Characterization) of Liberty Utilities - Park Water's 2020 Plan discusses and provides the following:

- Liberty Utilities provides water service to individual "water use sectors". These water use sectors include single-family residential, multi-family, commercial, institutional (and governmental), and industrial. Individual descriptions for these water use sectors are provided in Section 4.2.1.
- Liberty Utilities' total water demands (including potable and recycled water) over the past 10 years have ranged from 8,640 AFY to 11,837 AFY, with an average of 10,524 AFY. Liberty Utilities currently measures its water use through meter data and billing records.
- Liberty Utilities conducts an annual water loss audit to identify distribution system water losses. Water losses can result from pipeline leaks and inaccurate metering due to faulty meters. Water loss estimates are incorporated into Liberty Utilities' projected water demands.
- Liberty Utilities' current and projected water demands are provided in five-year increments over the next 25 years and are provided (through Calendar Year 2045) as shown on Table 4-3.
- Liberty Utilities' water demand projections incorporate water savings which are the result of implementation of new plumbing codes along with consumer awareness of the need to conserve water.

- The projected water demands for lower income households are identified and are included in Liberty Utilities' total projected water demands.
- Liberty Utilities' source of water supply and how this source may be impacted by climate change are discussed. The proactive actions Liberty Utilities and other local/regional water managers may take to address the potential climate change impacts on water supplies are also discussed.
- Liberty Utilities will be able to provide sufficient water supplies to meet the projected water demands of its customers, including during a five consecutive year drought period.

4.1 NON-POTABLE VERSUS POTABLE WATER USE

The CWC requires a description and quantification of water uses within Liberty Utilities' service area, including both non-potable and potable water. Recycled water (non-potable) uses are addressed in Section 6.2.5; however a summary is provided in Table 4-3. Furthermore, Chapter 4 addresses Liberty Utilities' potable water demands.

4.2 PAST, CURRENT, AND PROJECTED WATER USES BY SECTOR

CWC 10635.

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

CWC 10631.

(d)(1) For an urban retail water supplier, quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a),

and projected water use, based upon information developed pursuant to subdivision (a), identifying the uses among water use sectors, including, but not necessarily limited to, all of the following…

(2) The water use projections shall be in the same five-year increments described in subdivision (a).

(4)(A) Water use projections, where available, shall display and account for the water savings estimated to result from adopted codes, standards, ordinances, or transportation and land use plans identified by the urban water supplier, as applicable to the service area.

(B) To the extent that an urban water supplier reports the information described in subparagraph (A), an urban water supplier shall do both of the following:

(i) Provide citations of the various codes, standards, ordinances, or transportation and land use plans utilized in making the projections.
(ii) Indicate the extent that the water use projections consider savings from codes, standards, ordinances, or transportation and land use plans. Water use projections that do not account for these water savings shall be noted of that fact.

Liberty Utilities' current and projected water demands are provided in five-year increments over the next 25 years (through CY 2045) in Tables 4-1, 4-2, and 4-3. Liberty Utilities' total water demands were projected based on a review of the SB X7-7 calculations which are discussed in Chapter 5 (including the SB X7-7 water use target for 2020), current water use factors based on recent water demands, and the total population projections based on land use trends within Liberty Utilities.

Liberty Utilities provides water service to individual "water use sectors" as identified by the CWC. The water use sectors supplied by Liberty Utilities are discussed in Section 4.2.1. The water use for each of these sectors during CY 2020 is provided in Table 4-1. The projected water use for each individual water use sector is provided in Table 4-2 and is based on the percentage breakdown of water use from each individual water use sector in CY 2020 (the percentages were then applied to the projected total water use).

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

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			
Single Family		Drinking Water	7,211
Multi-Family		Drinking Water	1,213
Commercial		Drinking Water	1,080
Industrial		Drinking Water	77
Institutional/Governmental	Public Authority	Drinking Water	461
Losses		Drinking Water	915
Other	Fire Services and Temporary Meter Services	Drinking Water	15
		TOTAL	10,972

[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: Recycled water demands are provided in Table 4-3 and Table 6-4.

Table 4-2 Use for Potable and Non-Potable Water - Projected

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						
Single Family		7,366	7,405	7,444	7,483	7,523
Multi-Family		1,239	1,246	1,252	1,259	1,265
Commercial		1,103	1,109	1,115	1,121	1,127
Industrial		79	79	79	80	80
Institutional/Governmental		471	473	476	478	481
Losses		935	939	944	949	954
Other		15	15	15	16	16
	TOTAL	11,208	11,266	11,325	11,386	11,446
[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:						

Table 4-3 Total Gross Water Use (Potable and Non-Potable)

Submittal Table 4-3 Retail: Total Water Use (Potable and Non-Potable)						
	2020	2025	2030	2035	2040	2045 (opt)
Potable Water, Raw, Other Non-potable *From Tables 4-1R and 4-2 R*	10,972	11,208	11,266	11,325	11,386	11,446
Recycled Water Demand[1] *From Table 6-4*	252	260	260	260	260	260
Optional Deduction of Recycled Water Put Into Long-Term Storage[2]						
TOTAL WATER USE	11,224	11,468	11,526	11,585	11,646	11,706

[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:

4.2.1 WATER USE SECTORS LISTED IN WATER CODE

CWC 10631.

(d)(1) For an urban retail water supplier, quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, based upon information developed pursuant to subdivision (a), identifying the uses among water use sectors, including, but not necessarily limited to, all of the following:

(A) Single-family residential.
(B) Multifamily.
(C) Commercial.
(D) Industrial.
(E) Institutional and governmental.
(F) Landscape.
(G) Sales to other agencies.
(H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.
(I) Agricultural.
(J) Distribution system water loss.

As shown in Table 4-1, Liberty Utilities' service area includes the following water use sectors listed in the CWC:

- Single-family residential
  (A single-family dwelling unit is a lot with a free-standing building containing one dwelling unit that may include a detached secondary dwelling. Single-family residential water demands are included in retail demands.)

- Multi-family residential
  (Multiple dwelling units are contained within one building or several buildings within one complex. Multi-family residential water demands are included in retail demands.)

- Commercial
  (Commercial users are defined as water users that provide or distribute a product or service.)

- Institutional (and governmental)
  (Institutional users are defined as water users dedicated to public service. Institutional users include, among other users, higher education institutions, schools, courts, churches, hospitals, government facilities, and nonprofit research institutions.)

- Industrial
  (Industrial users are defined as water users that are primarily a manufacturer or processor of materials as defined by the North American Industry Classification System (NAICS) code sectors 31 to 33, inclusive, or an entity that is a water user primarily engaged in research and development. Industrial water demands are included in retail demands.)

- Distribution system losses
  (Distribution system losses represent the potable water losses from the pressurized water distribution system and water storage facilities, up to the point of delivery to the customers. Additional information is discussed in Section 4.2.4)

4.2.2 WATER USE SECTORS IN ADDITION TO THOSE LISTED IN WATER CODE

Liberty Utilities' service area does not include other water demand sectors which are not listed in the CWC (including exchanges, surface water augmentation, transfers, and wetlands or wildlife habitat).

4.2.3 PAST WATER USE

Chapter 6 provides a discussion of the source of water supply Liberty Utilities uses to meet its water demands. Section 6.1 provides a tabulation of Liberty Utilities' historical annual water demands for its water supply source. Over the past ten years, Liberty Utilities' total water demands (including potable and recycled water) have ranged from 8,640 AFY to 11,837 AFY, with an average of 10,524 AFY. In addition, Liberty Utilities recently experienced a five consecutive year drought within its service area from CY 2011 to CY 2015. Liberty Utilities also reviewed its historical water demands to determine the projected water demands and water supply reliability (discussed in Chapter 7). Liberty Utilities is able to provide sufficient water supplies to meet the projected water demands of its customers, including during a five consecutive year drought period.

4.2.4 DISTRIBUTION SYSTEM WATER LOSS

CWC 10631.

(d)(1) For an urban retail water supplier, quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, based upon information developed pursuant to subdivision (a), identifying the uses among water use sectors, including, but not necessarily limited to, all of the following…

(J) Distribution system water loss.

CWC 10631.

(3)(A) The distribution system water loss shall be quantified for each of the five years preceding the plan update, in accordance with rules adopted pursuant to Section 10608.34.

(B) The distribution system water loss quantification shall be reported in accordance with a worksheet approved or developed by the department through a public process. The water loss quantification worksheet shall be based on the water system balance methodology developed by the American Water Works Association.

(C) In the plan due July 1, 2021, and in each update thereafter, data shall be included to show whether the urban retail water supplier met the distribution loss standards enacted by the board pursuant to Section 10608.34.

Distribution system water losses represent the potable water losses from the pressurized water distribution system and water storage facilities, up to the point of delivery to the customers. Sources of distribution system water loss can include inaccurate metering due to faulty meters and water use not metered such as firefighting, flushing of the water system, and pipeline leaks.

The CWC Section 10608.34 requires "On or before October 1, 2017, and on or before October 1 of each year thereafter, each urban retail water supplier shall submit a completed and validated water loss audit report for the previous calendar year or the previous fiscal year..." The water loss audits must follow American Water Works Association (AWWA) guidance and be validated by a certified water audit validator. Liberty Utilities has completed the annual water loss audit process through October 1, 2020, as required by the CWC (i.e. Liberty Utilities has completed water loss audits representing calendar years 2016, 2017, 2018, and 2019). Liberty Utilities' water loss audits were prepared and validated pursuant to DWR requirements. The annual water loss audit reports submitted by retail water agencies in California, including Liberty Utilities (provided in Appendix E), are available on DWR's website (https://wuedata.water.ca.gov/awwa_plans).

Liberty Utilities' annual water loss audits identify real water losses (e.g. leaks and main failures) and apparent water losses (e.g. customer meter inaccuracies, systematic data handling errors in customer billing systems, and unauthorized consumption). Liberty Utilities' distribution system water losses are based on the sum of the real and apparent water losses and are summarized in Table 4-4 for the past five years. Over the past five years, Liberty Utilities' average distribution system water losses represent approximately 4.0 percent of its total water demands. This average water loss factor was incorporated into Liberty Utilities' total potable water demand projections (Tables 4-2 and 4-3).

The CWC Section 10608.34 directs the SWRCB-DDW to "adopt rules requiring urban retail water suppliers to meet performance standards for the volume of water losses."

Pursuant to this law, and as discussed above, urban retail water suppliers (including Liberty Utilities) have been submitting water loss audits to DWR annually since October 2017. Pursuant to Assembly Bill (AB) 1668 and Senate Bill (SB) 606, urban retail water suppliers are required to calculate an "urban water use objective" that includes indoor, outdoor, commercial, industrial and institutional irrigation uses, and allowed system water loss by the year 2024. In addition, by CY 2028, urban retail water suppliers are required to comply with individual volumetric standards (based on an economic model) for leak detection and repair actions. The goal of the proposed water loss standards is to reduce collective water losses throughout California by approximately 40 percent. Liberty Utilities will continue to develop its water loss standard and urban water use objective pursuant to SWRCB-DDW requirements.

Table 4-4 12 Month Water Loss Audit Report

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]
01/2016	291
01/2017	308
01/2018	330
01/2019	184
01/2020	915
[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: The "Volume of Water Loss" quantities for CY 2016 through CY 2019 were obtained from the annual AWWA Water Loss Audits (and based on the combination of apparent losses and real losses). The AWWA Water Loss Audits were reported on a calendar year basis. The AWWA Water Loss Audit for calendar year 2020 will be prepared by October 2021. The "Volume of Water Loss" quantity for CY 2020 was estimated based on metered water production less metered water deliveries to customers.	

4.2.5 CURRENT WATER USE

Liberty Utilities currently measures its water use through meter data and billing records. The water use for Liberty Utilities' individual water use sectors during CY 2020 is provided in Table 4-1. Recycled water uses are addressed separately in Section 6.2.5; however a summary is provided in Table 4-3. Liberty Utilities' total water uses during CY 2020 have been reviewed for compliance with the SB X7-7 water use target for 2020 adopted in Liberty Utilities' 2015 Plan (discussed in Section 5.5).

DWR has created an optional "Planning Tool Worksheet" for water suppliers to review and assess monthly water use trends. DWR has deemed the tool as optional and Liberty Utilities is not required by DWR to use the tool. Section 6.1 provides a tabulation of Liberty Utilities' historical annual water uses for each water supply source. During the past 10 years, Liberty Utilities experienced a five consecutive year drought within its service area from CY 2011 to CY 2015. Historical records indicate Liberty Utilities' annual water demands had been greater prior to CY 2011. Liberty Utilities has been able to provide sufficient water supplies to its customers, including during long-term droughts and years with historically high water demands. In addition, Liberty Utilities has been able to provide water service to meet maximum day water demands for these years, including during the summer months. A further discussion regarding the reliability of Liberty Utilities' water supply sources is provided in Chapter 7.

4.2.6 PROJECTED WATER USE

CWC 10635.

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

CWC 10631.

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

CWC 10631.

(d)(4)(A) Water use projections, where available, shall display and account for the water savings estimated to result from adopted codes, standards, ordinances, or transportation and land use plans identified by the urban water supplier, as applicable to the service area.

(d)(4)(B) To the extent that an urban water supplier reports the information described in subparagraph (A), an urban water supplier shall do both of the following:

(i) Provide citations of the various codes, standards, ordinances, or transportation and land use plans utilized in making the projections.
(ii) Indicate the extent that the water use projections consider savings from codes, standards, ordinances, or transportation and land use plans. Water use projections that do not account for these water savings shall be noted of that fact.

Liberty Utilities' projected water demands are provided in five-year increments over the next 25 years (through CY 2045) in Table 4-3. Liberty Utilities' projected water demands and water supplies during a normal year, a single dry year, and a five consecutive year

drought are provided in Chapter 7. The projected water demands for each of Liberty Utilities' water use sectors are provided in Table 4-2.

Liberty Utilities' water demands were projected based on a review of the SB X7-7 calculations discussed in Chapter 5 (including the SB X7-7 water use target for 2020), existing water use factors based on recent water demands, and the total population projections based on land use trends within Liberty Utilities. The projected water demands for the water use sectors were based on the percentage breakdown of water demands from each individual water use sector in CY 2020 (the percentages were then applied to the projected total water demands). A discussion of Liberty Utilities' water supplies from CBMWD, a wholesaler, are discussed in Section 6.2. As discussed in Section 2.6, Liberty Utilities has coordinated its water demand projections with CBMWD for each water use sector.

Liberty Utilities' water demand projections incorporate water savings, or "passive savings", which are the result of implementation of new plumbing codes along with consumer awareness of the need to conserve water. The California Public Utilities Commission's "Water Conservation and Rationing Plan" which was created through the adoption of Rule 14.1 in June 2014 (discussed in Section 9.2.1), includes methods for current and ongoing reduction in water use and water waste. Prior to the adoption of Rule 14.1, Liberty Utilities' water use rate ranged from approximately 94 gallons per capita per day (GPCD) to 105 GPCD (from CY 1998 through CY 2007). As identified in Section 5.5, Liberty Utilities' actual water use rate during CY 2020 was 74 GPCD which is a decrease of up to 31 GPCD from the recent historical water use and includes passive savings. Liberty Utilities' projected water demands, incorporate water use targets less than its established SB X7-7 water use target for 2020 and incorporate ongoing water passive savings and reduced water use. As indicated in Table 4-5, estimated future water savings have been considered as part of Liberty Utilities' water use projections.

4.2.7 CHARACTERISTIC FIVE-YEAR WATER USE

CWC 10635.

(b) Every urban water supplier shall include, as part of its urban water management plan, a drought risk assessment for its water service to its customers as part of information considered in developing the demand management measures and water supply projects and programs to be included in the urban water management plan. The urban water supplier may conduct an interim update or updates to this drought risk assessment within the five-year cycle of its urban water management plan update. The drought risk assessment shall include each of the following:

(3) A comparison of the total water supply sources available to the water supplier with the total projected water use for the drought period.

(4) Considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.

Liberty Utilities' projected water demands are provided in five-year increments over the next 25 years (and through CY 2045) in Table 4-3. Liberty Utilities' projected water demands and water supplies during a normal year, a single dry year, and a five consecutive year drought over the next 25 years (and through CY 2045) are provided in Chapter 7.

Liberty Utilities' "Drought Risk Assessment" (DRA) for the next five years (from CY 2020 through CY 2025) is discussed in Section 7.3. The DRA includes Liberty Utilities' projected annual water demands and supplies for each of the next five years and was prepared based on the five driest consecutive years on record. The DRA provides an assessment of Liberty Utilities' water service reliability during a drought lasting five years. The DRA reflects anticipated water demands and supplies prior to any expected benefits associated with water supply shortage responses included in Liberty Utilities' WSCP (provided in Chapter 8). In addition to historical drought hydrology, Liberty Utilities considered impacts to water supplies and demands based on climate change conditions (discussed in Section 4.5) and anticipated regulatory changes, including the urban water use objectives (discussed in Section 4.2.4)

4.3 WORKSHEETS AND REPORTING TABLES

Liberty Utilities' current and projected water demands, including the water demands for each of Liberty Utilities' water use sectors, are provided in five-year increments over the next 25 years (and through CY 2045) in Tables 4-1, 4-2, and 4-3.

4.3.1 OPTIONAL PLANNING TOOL USE ANALYSIS WORKSHEET

As discussed in Section 4.2.5, DWR has deemed the "Planning Tool Worksheet" as optional and Liberty Utilities is not required by DWR to use the tool. Liberty Utilities has provided sufficient water supplies to its customers, including during long-term droughts and years with historically high water demands. Liberty Utilities has also been able to provide water service to meet maximum day water demands for these years, including during the summer months. A further discussion regarding the reliability of Liberty Utilities' water supply source is provided in Chapter 7.

4.3.2 DWR 2020 UWMP SUBMITTAL TABLES

Liberty Utilities' current water demands for each of the water use sectors during CY 2020 are provided in Table 4-1. Liberty Utilities' projected water demands for each of the water use sectors, in five-year increments over the next 25 years (and through CY 2045), are provided in Table 4-2. Liberty Utilities' total projected water demands, including potable and recycled water, in five-year increments over the next 25 years (and through CY 2045), are summarized in Table 4-3. Liberty Utilities' distribution system water losses over the past five years, based on the sum of the real and apparent water losses, are summarized in Table 4-4. Liberty Utilities' annual AWWA water loss audits are provided in Appendix E.

4.4 WATER USE FOR LOWER INCOME HOUSEHOLDS

CWC 10631.1.

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

California Health and Safety Code 50079.5.

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

Liberty Utilities' water demands projections provided in Table 4-3 include projected water demands for lower income single-family and multi-family households. A lower income household is defined as a household with an income less than 80 percent of the area median income, adjusted for family size. For the purpose of this evaluation the entire Los Angeles County was used for the "area median income". The total number of lower income households within Liberty Utilities' service area was estimated based on billing records provided by Liberty Utilities, a review of median household income range statistics provided by the U.S. Census Bureau (https://data.census.gov/cedsci/), and a review of GIS maps of Disadvantaged Communities[2] (DACs), including block groups, tracts, and places, provided by DWR. The estimated number of lower income households located within Liberty Utilities' service area is approximately 46 percent of the total number of households. As indicated in Table 4-2, the total projected residential water demands within Liberty Utilities in 2045 is estimated at about 8,788 AFY. Based on a 46 percent use factor of total residential water demands, the projected water demand for lower

[2] GIS information for DACs is based on data from the US Census showing census block groups, tracts, and places identified as disadvantaged communities (less than 80 percent of the State's median household income) or severely disadvantaged communities (less than 60 percent of the State's median household income)

income households will be about 4,043 AFY by CY 2045. The projected water demands for lower income households were included in Liberty Utilities' total projected water demands, as indicated in Table 4-5.

Table 4-5 Inclusion in Water Use Projections

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 4.2.6 and Chapter 8
Are Lower Income Residential Demands Included In Projections? *Drop down list (y/n)*	Yes
NOTES:	

4.5 CLIMATE CHANGE CONSIDERATIONS

CWC 10630.

It is the intention of the Legislature, in enacting this part, to permit levels of water management planning commensurate with the numbers of customers served and the volume of water supplied, while accounting for impacts from climate change.

CWC 10635.

(b) Every urban water supplier shall include, as part of its urban water management plan, a drought risk assessment for its water service to its customers as part of information considered in developing the demand management measures and water supply projects and programs to be included in the urban water management plan. The urban water supplier may conduct an interim update or updates to this drought risk assessment within the five-year cycle of its urban water management plan update. The drought risk assessment shall include each of the following…

(4) Considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.

Climate is defined as "the average course or condition of the weather at a place usually over a period of years as exhibited by temperature, wind velocity and precipitation[3]". A change in the climate which produces a greater amount of precipitation (i.e. more runoff and/or snowpack) and lower temperatures is generally a benefit to water supplies. However, drought conditions which may result in decreased precipitation, decreased runoff, and increased temperature may adversely affect an urban water supplier's ability to meet demands by potentially impacting supplies. Consequently, the focus of impacts of climate change is on these adverse consequences.

Section 6.2 of this 2020 Plan, describes Liberty Utilities' source of water supply, management practices associated with this source, and the long-term reliability of this source. Section 7.3 includes a DRA which considers the potential impacts of climate change to Liberty Utilities' water supply source. Chapter 8 provides a detailed discussion

[3] www.merriam-webster.com

of Liberty Utilities' WSCP, including but not limited to, the six standard water shortage levels in the event climate change results in a reduction to water supplies associated with a periodic drought condition. The following is a discussion of Liberty Utilities' source of supply, how this source may be impacted by climate change, and the proactive actions Liberty Utilities and other local/regional water managers may take to address the potential climate change impacts on water supplies.

Imported Water Supplies

Liberty Utilities receives treated imported water as discussed in Section 6.2.1 and relies on WRD to manage the groundwater supplies of the Central Basin. Consequently, Liberty Utilities directly and/or indirectly relies on the Metropolitan Water District of Southern California for those imported water supplies. MWD has prepared a Regional 2020 Urban Water Management Plan which includes a discussion (Section 2.6 in MWD's 2020 UWMP) of the reliability of its water supplies and the impacts of climate change and is incorporated by reference in this Plan. Furthermore, Liberty Utilities is a sub-agency of the Central Basin Municipal Water District which has also provided a discussion of climate change considerations and that discussion is included by reference. The following is a brief summary of MWD's efforts:

Resource Planning

- MWD has established the Robust Decision Making (RDM) approach to identify vulnerabilities to its water supplies. Climate change information was applied to MWD's simulated water supply scenarios to demonstrate the vulnerability of water supplies to climate change.

- MWD altered the inflow hydrology scenarios on the Colorado River simulation model to reflect modified inflow to MWD's Colorado River aqueduct.

Knowledge Sharing and Research Support

- MWD is an active and founding member of the Water Utility Climate Alliance (WUCA) which includes 12 nationwide partners collaborating on climate change considerations. As such, MWD shares agency actions on climate change and adaptation. WUCA has also released numerous research papers on climate change.

Implementation of Programs and Policies

- MWD's programs include the use of solar energy, use of ride share programs, and reduction of greenhouse emissions. Collectively these actions are intended to impact the effects of climate change.

Groundwater Supplies

Central Basin

Liberty Utilities relies on groundwater produced from the Central Basin as noted in Section 6.2.2 of this UWMP. As previously noted, the Central Basin has been identified by DWR as a very low-priority groundwater basin partially due to the fact it is adjudicated. In that regard, the Central Basin is actively managed by the Water Replenishment District of Southern California which serves as the Central Basin Watermaster and those management activities are described in detail in Section 6.2.2.

Recognizing the potential impacts of climate change on the Central Basin groundwater supplies (decreased local runoff and replenishment, along with increased groundwater production, may lead to decreased groundwater levels), Liberty Utilities has used climate tools available on the California Energy Commission's Cal-Adapt website (https://cal-

adapt.org/) \to identify potential future climate change cycles for the Central Basin. The Cal-Adapt website has been developed by the Geospatial Innovation Facility at the University of California, Berkeley with funding and advisory oversight by the California Energy Commission and California Strategic Growth Council.

To address the uncertainty in future greenhouse gas emissions, Cal-Adapt has developed a Representative Concentration Pathway 4.5 (RCP 4.5) scenario and a Representative Concentration Pathway 8.5 (RCP 8.5) scenario. RCP 4.5 represents a scenario in which greenhouse gas emissions peak around 2040, then decline and stabilize. RCP 8.5 represents a scenario in which emissions continue to strongly rise through 2050 and plateau around 2100. RCP 4.5 is a "medium" emissions scenario that models a future in which there is an effort made by societies to reduce greenhouse gas emissions, whereas RCP 8.5 is a "business-as-usual" scenario. For Liberty Utilities' climate change analysis, the RCP 4.5 scenario was selected.

The Cal-Adapt climate tools also incorporate several General Circulation Models (GCMs), which represent physical processes in the atmosphere, ocean, and land surface. These GCMs projected future climates under conditions such as warm/dry, cooler/wetter, and average simulations. For Liberty Utilities' climate change analysis, the average condition GCM (CanESM2) was selected.

The climate tools available on the Cal-Adapt website were used to simulate projected annual precipitation and annual average maximum temperature in the Central Basin. An electronic boundary of the Central Basin was submitted online through the Cal-Adapt website in a "KML" file format (i.e. Google Earth format) and data using several of the available climate tools was generated.

Based on the data generated by the Cal-Adapt simulations (see Appendix F), the average annual rainfall in the Central Basin is projected to be 14.90 inches over the next 25 years (through 2045), compared to historical average of 13.72 inches (from 1950 through 2019).

In addition, the average maximum temperature is projected to be 78.4 degrees Fahrenheit compared to a historical average of 75.4 degrees Fahrenheit. Although there may be more precipitation in the future, it may be more likely to fall as rainfall compared to snowfall. The simulations do not denote the duration or intensity of storms contributing to the annual precipitation. Notwithstanding, the San Gabriel River watershed includes a complex and interconnected series of dams, reservoirs and replenishment basins to capture stormwater runoff. In an average to below average year of precipitation, over 95 percent of the precipitation in the watershed is retained within the watershed and is not lost to the ocean. Consequently, most if not all precipitation (whether it is rain or snowfall) likely will be captured for use in the Central Basin area and not adversely impacted by a potentially higher average annual temperature.

Recognizing these potential impacts to local hydrology resulting from climate change and the resultant impacts to the groundwater supplies, the Central Basin Watermaster has taken (and may reinstate as needed) the following proactive actions to anticipate and circumvent the potential impacts of climate change. These actions will enable Liberty Utilities to use rely on the Central Basin as a reliable source of supply.

Recycled Water Groundwater Replenishment

The WRD has actively used recycled water for groundwater replenishment for many decades. Historically the recycled water replenishment was supplemented with untreated imported water replenishment as part of Central Basin management. However, WRD has also established the Water Independence Now (WIN) program. The WIN program includes a treatment facility (previously referred to as the Groundwater Reliability Improvement Program) which includes ultrafiltration, reverse osmosis, and ultraviolet disinfection and advanced oxidation to treat recycled water by significantly reducing the total dissolved solids concentration. This action with gradually help to improve the water quality of the Central Basin, plus reduce or eliminate the future need to purchase untreated imported water.

Water Storage Programs

The Central Basin Adjudication allows Parties to the Judgment to pump up to 20 percent more of its annual Allowed Pumping Allocation plus any carry-over water rights as described in Section 6.2.2. In addition, the Central Basin Judgment includes an amendment which implemented a water storage program. A party may store up to 50 percent of the party's Allowed Pumping Allocation in an Individual Storage Account and 150 percent of the party's Allowed Pumping Allocation in a Community Storage Account if space is available. The amendments also allow parties to convert unused Allowed Pumping Allocation to stored water and revised the amount of carryover to be equal to 60 percent of the party's Allowed Pumping Allocation minus the amount of carryover water set aside for storage. The purpose of the storage program creates an added reliability in water supply from the Central Basin.

CHAPTER 5

SB X7-7 BASELINE, TARGETS, AND 2020 COMPLIANCE

LAY DESCRIPTION – CHAPTER 5

SB X7-7 BASELINES, TARGETS, AND 2020 COMPLIANCE

Chapter 5 (SB X7-7 Baselines, Targets, and 2020 Compliance) of Liberty Utilities – Park Water's 2020 Plan discusses and provides the following:

- The Water Conservation Act of 2009 (or SB X7-7) required the State of California achieve a 20 percent reduction in urban water use by the year 2020.
- SB X7-7 required urban water suppliers, including Liberty Utilities, to develop a "2020 Water Use Target" to assist the State of California to achieve the 20 percent reduction. The 2020 Water Use Target represents the amount of water each person should use per day (i.e. gallons per capita per day or GPCD) by the year 2020.
- Liberty Utilities previously determined its 2020 Water Use Target during the preparation of its 2015 Plan by completing standardized tables (or the SB X7-7 Verification Form) to demonstrate compliance with the Water Conservation Act of 2009. Liberty Utilities' SB X7-7 Verification Form has not been modified and is included as part of this 2020 Plan as Appendix G. Liberty Utilities' 2020 Water Use Target is 142 GPCD.
- Liberty Utilities' 2020 Plan incorporates the 2020 Water Use Target and determines compliance based on actual water use.
- The population within Liberty Utilities' service area during Calendar Year 2020 is estimated at 132,691. Liberty Utilities' population was estimated using the California Department of Water Resources' online "Population Tool" which incorporates United States Census data in a Geographic Information Systems format to estimate the population within Liberty Utilities' service area.

- Liberty Utilities' "gross water" use represents the total volume of water entering its distribution system from its water supply sources. Liberty Utilities' gross water use excludes recycled water deliveries or water conveyed to another supplier. Liberty Utilities' annual gross water during Calendar Year 2020 was 10,972 AF.
- Liberty Utilities' per-capita water use is based on the gross water use divided by the population. Liberty Utilities' per-capita water use during Calendar Year 2020 was 74 GPCD. Liberty Utilities' confirmed 2020 Water Use Target is 142 GPCD. Liberty Utilities' per-capita water use during Calendar Year 2019 meets the 2020 Water Use Target.
- Liberty Utilities has also demonstrated compliance with the 2020 Water Use Target by completing the SB X7-7 2020 Compliance Form (provided in Appendix H).

5.1 GUIDANCE FOR WHOLESALE SUPPLIERS

CWC 10608.12.

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

Liberty Utilities is not a wholesale agency and is not required by DWR to complete Section 5.1.

5.2 SB X7-7 FORMS AND SUMMARY TABLE

Liberty Utilities previously calculated "Baseline" water uses and a "2020 Water Use Target" in its 2015 Plan. There were two different Baseline periods identified (including a 10-year Baseline period and a 5-year Baseline period). The average water use within these Baseline periods, expressed in GPCD, represents the Baseline water use for each period. The Baseline water uses were used to determine Liberty Utilities' 2020 Water

Use Target (which represents the per capita water use target for 2020 pursuant to SB X7-7).

According to Section 10608.22 of the CWC, if an urban retail water supplier's 5-year Baseline period water use is greater than 100 GPCD, the calculated 2020 Water Use Target may need to be reduced. A 5-year Baseline period was identified by Liberty Utilities and information regarding the starting year, ending year, and average water use rate during this period is provided in Table 5-1. The average water use rate during the identified 5-year Baseline period was greater than 100 GPCD. As a result, the 5-year Baseline period was used to determine whether the 2020 Water Use Target required any adjustments.

Liberty Utilities' calculated 2020 Water Use Target was compared with the 95 percent of the average water use within the 5-year Baseline to confirm whether any adjustments were required. Liberty Utilities' confirmed 2020 Water Use Target is 142 GPCD and is summarized in Table 5-1.

5.2.1 SB X7-7 VERIFICATION FORM (BASELINES AND TARGETS)

Liberty Utilities' service area has not changed (i.e. expansion or contraction) since the 2015 Plan was prepared. Liberty Utilities' 2020 Plan incorporates the Baseline water uses and 2020 Water Use Target calculated in the 2015 Plan. Liberty Utilities previously prepared standardized tables (SB X7-7 Verification Form) to demonstrate compliance with the Water Conservation Act of 2009Liberty Utilities in its 2015 Plan, including compliance with Liberty Utilities' 2015 Interim Water Use Target. Liberty Utilities' SB X7-7 Verification Form has not been modified and is included as part of this 2020 Plan as Appendix G.

5.2.2 SB X7-7 COMPLIANCE FORM

Liberty Utilities' compliance with its 2020 Water Use Target is summarized in the following sections. Liberty Utilities has also demonstrated compliance with the 2020 Water Use Target by completing the SB X7-7 2020 Compliance Form (provided in Appendix H).

5.2.3 SUBMITTAL TABLES 5-1 AND 5-2

Summary information from the SB X7-7 Verification Form and from the SB X7-7 2020 Compliance Form is provided in Tables 5-1 and 5-2 below.

Table 5-1 Baselines and Targets Summary from SB X7-7 Verification Form

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	*1998*	*2007*	*99.8*	*142*
5 Year	*2003*	*2007*	*99.0*	
**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:				

Table 5-2 2020 Compliance from SB X7-7 2020 Compliance Form

Submittal Table 5-2: 2020 Compliance From SB X7-7 2020 Compliance Form *Retail Supplier or Regional Alliance Only*				
2020 GPCD				
Actual 2020 GPCD*	2020 TOTAL Adjustments*	Adjusted 2020 GPCD* *(Adjusted if applicable)*	2020 Confirmed Target GPCD*	Did Supplier Achieve Targeted Reduction for 2020? Y/N
74	*0*	*74*	*142*	*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:				

5.2.4 REGIONAL UWMP/ REGIONAL ALLIANCE

As discussed in Section 2.4, Liberty Utilities' 2020 Plan was not developed as part of a Regional Alliance. Information from Liberty Utilities' 2020 Plan is not required to be reported in a Regional Alliance report.

5.3 BASELINE AND TARGET CALCULATIONS FOR 2020 UWMPS

5.3.1 SUPPLIER SUBMITTED 2015 UWMP, NO CHANGE TO SERVICE AREA

The general requirements associated with determining the Baseline periods, Baseline water uses, and 2020 Water Use Target were previously provided by DWR. Based on the requirements, Liberty Utilities calculated the Baseline water uses and 2020 Water Use

Target in its 2015 Plan. Liberty Utilities' service area has not changed (i.e. expansion or contraction) since the 2015 Plan was prepared. Liberty Utilities' 2020 Plan incorporates the Baseline water uses and 2020 Water Use Target calculated in the 2015 Plan. Liberty Utilities' SB X7-7 Verification Form is included in Appendix G.

As discussed in Section 5.2.1, Liberty Utilities prepared standardized tables (SB X7-7 Verification Form) to demonstrate compliance with the Water Conservation Act of 2009. Liberty Utilities' SB X7-7 Verification Form is provided in Appendix G and includes Baseline water uses and the 2020 Water Use Target. A summary of the Baseline water uses and 2020 Water Use Target is provided below.

The CWC allows an urban water supplier to calculate up to a 15-year Baseline period if at least 10 percent of its 2008 retail water demands were met through recycled water deliveries within its service area, otherwise calculation of a 10-year Baseline period is required. Liberty Utilities' recycled water deliveries were less than 10 percent of its retail water demands during CY 2007. . Consequently, a 10-year Baseline period was identified by Liberty Utilities and information regarding the starting year, ending year, and average water use rate during this period is provided in Table 5-1. Water systems could potentially identify their 2020 Water Use Target by calculating 80 percent of the 10-year Baseline water use.

5.4 METHODS FOR CALCULATING POPULATION AND GROSS WATER USE

5.4.1 SERVICE AREA POPULATION

CWC 10608.20.

(e) An urban retail water supplier shall include in its urban water management plan due in 2010 pursuant to Part 2.6 (commencing with Section 10610) the 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.

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

CWC 10644.

(a)(2) The plan… shall include any standardized forms, tables, or displays specified by the department.

A discussion regarding Liberty Utilities' compliance with the 2020 Water Use Target is provided in Section 5.5. Compliance with the 2020 Water Use Target is based on the total estimated population within Liberty Utilities' water service during CY 2020. Because U.S. Census 2020 population data was not available during the preparation of the 2020 Plan, Liberty Utilities reviewed the methodologies recommended by DWR to estimate the CY 2020 population. The population methodology used by Liberty Utilities in the 2020 Plan is provided below.

Liberty Utilities initially reviewed the available historical populations within its service area for population growth trends. Liberty Utilities determined historical U.S. Census population within its service area using DWR's Population Tool (https://wuedata.water.ca.gov/). Liberty Utilities' service area boundary was uploaded to DWR's Population Tool in a "KML" file format (i.e. Google Earth format). The KML file was originally created in GIS shapefile format and converted into a KML format. The uploaded

KML file represents Liberty Utilities' service area boundary from 1990 to present (2020). DWR's Population Tool utilized U.S. Census data from 1990, 2000, and 2010, along with Liberty Utilities' service area boundary, to estimate the population served by Liberty Utilities in the years 1990, 2000, and 2010.

DWR's Population Tool was also used to estimate the 2020 population within Liberty Utilities' service area. The total number of service connections within Liberty Utilities' service area (including residential, commercial, and industrial connections) in the years 2010 and 2020 were entered into the Population Tool. Based on the historical U.S. Census populations (from 1990, 2000, and 2010) and available data regarding total service connections for those corresponding years, DWR's Population Tool estimated the population within Liberty Utilities' service area for CY 2020 (using the service connection data for CY 2020) to be 132,691. The CY 2020 population is consistent with the historical population growth trends. Liberty Utilities' CY 2020 population is presented in Table 3 of the SB X7-7 2020 Compliance Form.

5.4.2 GROSS WATER USE

CWC 10608.12.

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

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

California Code of Regulations Title 23 Division 2 Chapter 5.1 Article 1, Section 596.

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

Gross water use represents the total volume of water entering a distribution system (but excludes recycled water deliveries, water placed into long term storage, water conveyed to another supplier, water delivered for agricultural use, and process water if there is a substantial percentage used for industrial purposes) over a 12-month period. Liberty Utilities' annual gross water use amounts are based on the total amount of water entering Liberty Utilities' distribution system from its water supply sources (including groundwater production wells and purchased imported water). The annual gross water use by Liberty Utilities during CY 2020 was 10,972 AF.

The annual gross water use amounts within Liberty Utilities for each year of the Baseline periods (discussed in Section 5.2) are provided in SB X7-7 Verification Form, Table 4 (Appendix G). A further discussion of the Baseline periods is provided in Section 5.2.

Liberty Utilities currently does not use indirect recycled water within its service area. Liberty Utilities is not required by DWR to complete SB X7-7 Verification Form, Table 4-B.

Industrial process water is not subtracted from Liberty Utilities' gross water use provided in SB X7-7 Verification Form, Table 4. Liberty Utilities is not required by DWR to complete SB X7-7 Verification Form, Table 4-C.1, Table 4-C.2, Table 4-C.3, Table 4-C.4, and Table 4-D.

5.5 2020 COMPLIANCE DAILY PER CAPITA WATER USE (GPCD)

CWC 10608.12.

(f) "Compliance daily per capita water use" means the gross water use during the final year of the reporting period, reported in gallons per capita per day.

CWC 10608.20.

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

As discussed in Section 5.5, the annual gross water use by Liberty Utilities during CY 2020 was 10,972 AF. As discussed in Section 5.4, the estimated population within Liberty Utilities' service area for CY 2020 is 132,691. As a result, Liberty Utilities' per-capita water use during CY 2020 was 74 GPCD. As discussed in Section 5.2, Liberty Utilities' confirmed 2020 Water Use Target is 142 GPCD. Liberty Utilities' per-capita water use during CY 2020 meets the 2020 Water Use Target and is in compliance. Liberty Utilities has also demonstrated compliance with the 2020 Water Use Target by completing the SB X7-7 2020 Compliance Form (provided in Appendix H).

5.5.1 2020 ADJUSTMENTS FOR FACTORS OUTSIDE OF SUPPLIER'S CONTROL

CWC 10608.24.

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

(A) Differences in evapotranspiration and rainfall in the baseline period compared to the compliance reporting period.

(B) Substantial changes to commercial or industrial water use resulting from increased business output and economic development that have occurred during the reporting period.

(C) Substantial changes to institutional water use resulting from fire suppression services or other extraordinary events, or from new or expanded operations, that have occurred during the reporting period.

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

Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use, Methodology 4.

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

Liberty Utilities has determined compliance with the 2020 Water Use Target without adjusting its annual gross water use during CY 2020.

5.5.2 2020 ADJUSTMENTS TO 2020 GROSS WATER USE

Liberty Utilities' 2020 Plan incorporates the Baseline water uses and 2020 Water Use Target calculated in the 2015 Plan. There were no special situations that required Liberty Utilities to recalculate the Baseline water uses and 2020 Water Use Target.

5.5.3 IF SUPPLIER DOES NOT MEET 2020 TARGET

Liberty Utilities' per-capita water use during CY 2020 meets the 2020 Water Use Target and is in compliance.

5.6 REGIONAL ALLIANCE

As discussed in Section 2.4, Liberty Utilities' 2020 Plan was not developed as part of a Regional Alliance. Information from Liberty Utilities' 2020 Plan is not required to be reported in a Regional Alliance report.

CHAPTER 6

WATER SUPPLY CHARACTERIZATION

LAY DESCRIPTION – CHAPTER 6

WATER SUPPLY CHARACTERIZATION

Chapter 6 (Water Supply Characterization) of Liberty Utilities – Park Water's 2020 Plan discusses and provides the following:

- Liberty Utilities' water supply sources include: groundwater pumped from the Central Basin, imported water purchased from MWD through CBMWD, and recycled water purchased from the Sanitation Districts of Los Angeles County through CBMWD.
- A tabulation of Liberty Utilities' historical water supplies is provided in Section 6.1.
- A discussion regarding Liberty Utilities' imported water supplies purchased from Central Basin Municipal Water District is provided. Information regarding imported water connections, capacities, reliability, and historical production is provided.
- A discussion regarding Liberty Utilities' groundwater supplies from the Central Basin is provided. Information regarding basin location, adjudication, management, water levels, water quality, water rights, and historical production is provided.
- A discussion regarding Liberty Utilities' recycled water supplies is provided. Liberty Utilities' recycled water supplies are produced by the Sanitation Districts of Los Angeles County and purchased from CBMWD. Liberty Utilities uses recycled water for landscape irrigation at parks, schools, freeway slopes, nursery stock irrigation, and various industrial applications.

- Liberty Utilities' proposed future projects to maximize its water supply resources are discussed.
- Liberty Utilities' "energy intensity" is discussed and represents the quantity of energy consumed, measured in kilowatt hours, divided by the volume of water, measured in acre-feet over a one-year period. The total energy intensity associated with Liberty Utilities' water management processes was estimated during CY 2019.

In this Chapter, Liberty Utilities will identify and describe each of its sources of water supply. In addition, Liberty Utilities will describe the following:

- Management of its water supply source;
- Current provisions of a basin adjudication or Groundwater Sustainability Plan, as applicable, pertaining to management of groundwater supplies;
- Measures Liberty Utilities is taking to develop potential new sources of water supply (as applicable); and,
- Opportunities for exchanges and transfers on a long- or short-term basis.

The characterization of Liberty Utilities' water supply source will account for the anticipated availability during a normal year, a single dry year, a five consecutive year drought, along with projections through CY 2045.

6.1 WATER SUPPLY ANALYSIS OVERVIEW

CWC 10631.

(b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a), providing supporting and related information, including all of the following:

(1) A detailed discussion of anticipated supply availability under a normal water year, single dry year, and droughts lasting at least five years, as well as more frequent and severe periods of drought, as described in the drought risk assessment. For each source of water supply, consider any information pertinent to the reliability analysis conducted pursuant to Section 10635, including changes in supply due to climate change.

(2) When multiple sources of water supply are identified, a description of the management of each supply in correlation with the other identified supplies

CWC 10631.

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

Liberty Utilities' source of water supply includes: groundwater pumped from the Central Basin; treated, imported water from Metropolitan Water District of Southern California through Central Basin Municipal Water District; and recycled water purchased from the Sanitation Districts of Los Angeles County through Central Basin Municipal Water District. Liberty Utilities' main sources of water supplies are groundwater pumped from the Central Basin and purchased water from Central Basin Municipal Water District. A tabulation of Liberty Utilities' historical water supplies is provided below.

Calendar Year	System Water Supply Sources (AF)				Total
	Potable Water			Recycled Water	
	Central Basin Groundwater	Purchased Water Central Basin MWD	Subtotal		
2011	2,539	8,547	11,086	239	11,325
2012	2,906	8,618	11,524	313	11,837
2013	3,158	8,335	11,493	335	11,828
2014	3,384	7,466	10,850	305	11,155
2015	3,520	6,060	9,580	208	9,787
2016	3,970	5,389	9,359	246	9,605
2017	5,038	4,518	9,556	139	9,694
2018	6,841	2,979	9,820	320	10,140
2019	7,173	1,225	8,399	241	8,640
2020	5,782	5,190	10,972	252	11,224

Source: Data provided by Liberty Utilities

6.1.1 SPECIFIC ANALYSIS APPLICABLE TO ALL WATER SUPPLY SOURCES

The section below provides a discussion of the following information to the extent practical:

- Liberty Utilities' existing and planned source of water supply are identified;
- Liberty Utilities' source of supply is quantified in five-year increments through CY 2045;
- The anticipated supply availability under normal, single dry, and five consecutive dry years, and any other water year conditions included in the DRA (see Chapter 7) are described;
- The management of Liberty Utilities' water supply in correlation with other identified supplies is described; and,
- Information pertinent to the reliability analysis, including climate change effects, is considered.

Liberty Utilities historically has relied on groundwater pumped from the Central Basin; treated, imported water from Metropolitan Water District of Southern California through Central Basin Municipal Water District; and recycled water purchased from the Sanitation Districts of Los Angeles County through Central Basin Municipal Water District. The following descriptions summarize Liberty Utilities' sources of supply (detailed descriptions are provided in Section 6.2).

Existing and Planned Sources of Supply

Purchased Treated Imported Water

Liberty Utilities has historically purchased treated imported water from CBMWD, as described in Section 6.2.1. In addition, Section 6.2.1 provides a detailed discussion of the existing and planned supply of the treated imported water, including a description of the management and reliability of those treated imported water supplies. Table 6-8 summarizes the actual treated imported water supply for CY 2020. In addition, Table 6-9 summarizes the projected water supply, in five-year increments, through CY 2045 under varying water supply conditions.

Groundwater

Liberty Utilities has historically pumped groundwater directly from the Central Basin as described in Section 6.2.2. In addition, Section 6.2.2 provides a detailed discussion of the existing and planned supply of the groundwater, including a description of the management and reliability of those groundwater supplies. Table 6-8 summarizes the actual groundwater supplies for CY 2020. In addition, Table 6-9 summarizes the projected water supply, in five-year increments, through CY 2045 under varying water supply conditions.

Surface Water

Liberty Utilities does not use surface water supplies to meet its water demands.

Storm Water

Liberty Utilities has historically received groundwater from the Central Basin. Management and use of the stormwater runoff from the groundwater basin watershed, which is crucial to groundwater management, is described in Section 6.2.4. However, Liberty Utilities currently does not have its own program to beneficially use stormwater runoff as a direct source of supply.

Wastewater and Recycled Water

Liberty Utilities has historically purchased recycled water supplies from Sanitation Districts of Los Angeles County through Central Basin Municipal Water District as described in Section 6.2.5. In addition, Section 6.2.5 provides a detailed discussion of the existing and planned use of the recycled water, including a description of the management and reliability of those recycled water supplies. Table 6-8 summarizes the actual recycled water supplies for CY 2020. In addition, Table 6-9 summarizes the projected recycled water supply, in five-year increments, through CY 2045 under varying water supply conditions.

6.1.2 OTHER CHARACTERIZATION CONSIDERATIONS

A description of Liberty Utilities' water system along with a map of the area which receives water supplies from Liberty Utilities is included in Chapter 3. In addition, the agencies which manage the water supplies treated by Liberty Utilities are identified in Section 6.2.1 (imported water), 6.2.2 (groundwater), 6.2.3 (surface water), 6.2.4 (stormwater), and 6.2.5 (recycled water).

6.1.3 OPTIONAL PLANNING TOOL

As discussed in Section 4.2.5, DWR has created an optional "Planning Tool Worksheet" for water suppliers to review and assess monthly water use trends. However, DWR has deemed the tool as optional and Liberty Utilities is not required by DWR to use the tool. Section 6.1 provides a tabulation of Liberty Utilities' historical annual water uses for each water supply source. During the past 10 years, Liberty Utilities experienced a five consecutive year drought within its service area from CY 2011 to CY 2015. In addition, historical records indicate Liberty Utilities' annual water demands typically have been even greater prior to CY 2012. Liberty Utilities has been able to provide sufficient water supplies to its customers, including during long-term droughts and years with historically high water demands. In addition, Liberty Utilities has been able to provide water service to meet maximum day water demands for these years, including during the summer months. A further discussion regarding the reliability of Liberty Utilities' water supply sources is provided in Chapter 7.

6.2 NARRATIVE SECTIONS FOR SUPPLIER'S UWMP WATER SUPPLY CHARACTERIZATION

6.2.1 PURCHASED OR IMPORTED WATER

CENTRAL BASIN MUNICIPAL WATER DISTRICT

Liberty Utilities can purchase treated, imported water from Metropolitan Water District of Southern California through Central Basin Municipal Water District. MWD imports water from the Colorado River through the Colorado River Aqueduct, owned and operated by MWD, and the State Water Project, which utilizes the California Aqueduct for transmission to Southern California. Water delivered to CBMWD's sub-agencies is treated at MWD's Weymouth Treatment Plant located in the City of La Verne.

CBMWD uses a tiered rate structure for water sales to its sub-agencies, including Liberty Utilities. Any water purchases in excess of the Tier 1 allocation may incur Tier 2 rates. Liberty Utilities can purchase treated, imported water directly from its CENB-09 (12.5 cubic feet per second or CFS), CENB-25 (12.5 CFS), CENB-26 (15 CFS), CENB-27 (12.5 CFS), CENB-50 (10 CFS), and CENB-53 connections. Liberty Utilities' purchases of treated, imported water from CBMWD over the past five years has been tabulated in Section 6.1. Over the past five years, Liberty Utilities has purchased 1,225 AFY to 5,389 AFY, with an average of 3,860 AFY from CBMWD. Liberty Utilities' projected purchases of treated, imported water from CBMWD, over the next 25 years in five-year increments, is provided in Table 6-9.

Liberty Utilities' treated imported water supplies from MWD, through CBMWD, may be impacted during a multi-year drought or other conditions which limits MWD from delivering sufficient water supplies to all of its member agencies, and consequently to Liberty Utilities. In anticipation of such a reduction in supplies, MWD developed a Water Supply Allocation Plan (WSAP) which is briefly described below. The WSAP provides a means of equitably providing reduced water supplies to each of MWD's member agencies for up to 10 levels of reduction representing up to a 50 percent reduction.

During calendar year 2007, critically dry conditions impacted MWD's water supply sources. In addition, a ruling in the Federal Courts in August 2007 provided protective measures for the Delta Smelt (and subsequently other aquatic species) in the Sacramento-San Joaquin River Delta resulting in restrictions on the availability of State Water Project water. As a result, MWD adopted a Water Supply Allocation Plan in February 2008 to allocate available water supplies to its member agencies. MWD revised the WSAP in December 2014.

The WSAP establishes ten different shortage levels and a corresponding Allocation to each member agency. Based on the shortage levels established by MWD, the WSAP

provides a separate reduced Allocation to a member agency for its 1) Municipal and Industrial (M&I) retail demand and 2) replenishment demand. The WSAP formula considers historical local water production, full service treated water deliveries, agricultural deliveries and water conservation efforts when calculating each member agency's Allocation.

In general, the WSAP process calculates total historical member agency demand. That historical demand is then compared to member agency projected local supply for a specific Allocation year. The balance required from MWD, less an Allocation reduction factor, is the member agency's "Water Supply Allocation" of imported water from MWD. When a member agency reduces its local demand through conservation or other means, the Allocation of imported water will increase. Depending on MWD's available supply, MWD can establish a specific WSAP shortage level. The shortage level causes a regional reduction and calculates an allocation for each of its member agency. Additional information about MWD's WSAP is provided in MWD's Regional 2020 UWMP which is incorporated by reference. The following is a summary of MWD's water shortage levels:

Level 1 – Regional Percent Reduction of 5%
Level 2 – Regional Percent Reduction of 10%
Level 3 – Regional Percent Reduction of 15%
Level 4 – Regional Percent Reduction of 20%
Level 5 – Regional Percent Reduction of 25%
Level 6 – Regional Percent Reduction of 30%
Level 7 – Regional Percent Reduction of 35%
Level 8 – Regional Percent Reduction of 40%
Level 9 – Regional Percent Reduction of 45%
Level 10 – Regional Percent Reduction of 50%

In response to a fourth consecutive year of below average rainfall and critically dry conditions, MWD declared a WSAP Allocation Level 3 for fiscal year 2015-16, which

represented a regional reduction of 15 percent. MWD rescinded the WSAP for fiscal year 2016-17 and has not reinstated the WSAP since that time.

6.2.2 GROUNDWATER

CWC 10631.

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

(A) The current version of any groundwater sustainability plan or alternative adopted pursuant to Part 2.74 (commencing with Section 10720), any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management for basins underlying the urban water supplier's service area.

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

(C) A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(D) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

CENTRAL BASIN

Central Basin - Sustainable Groundwater Management Act

The Central Basin is a subbasin of the Coastal Plain of Los Angeles Groundwater Basin pursuant to DWR Bulletin 118, Basin Number 4-11.04. Pursuant to the Sustainable Groundwater Management Act of 2014 (SGMA), the Central Basin was named as an adjudicated groundwater basin and is exempt from the requirements of developing a Groundwater Sustainability Plan (GSP) and subsequently was designated a very-low-priority basin in DWR's 2019 SGMA Basin Prioritization report. In compliance with SGMA, the Central Basin Watermaster (which is the Water Replenishment District of Southern California, or WRD) submits its Annual Report to DWR.

Central Basin - Adjudication

On January 2, 1962, the Central and West Basin Water Replenishment District (now the Water Replenishment District of Southern California) filed Case No. 786,656 in the Superior Court, County of Los Angeles, naming more than 700 parties as defendants. It sought to adjudicate water rights of groundwater and regulate pumping from the Central Basin. By September 1962, a proposed agreement had been approved by a sufficient number of water producers (producers owning over 75 percent of the Assumed Relative Rights within Central Basin) to guarantee control over groundwater pumping in Central Basin. On September 28, 1962, the Court signed the "Order Pursuant to Stipulation and Interim Agreement and Petition for Order" and appointed the Department of Water Resources as Watermaster.

Subsequently, a stipulated judgment was drafted. Approval was received by public utility water companies and other producers representing well over 200,000 AF, or 75 percent, of the total rights within Central Basin. This was a prerequisite to filing the stipulated judgment with the Court. On May 17, 1965, the case went to trial before Judge Edmund

M. Moor. Following testimony on engineering, geology, hydrology, and safe yield of Central Basin and arguments on water right entitlement, the case was continued to August 25, 1965. Shortly thereafter, Judge Moor appointed DWR as Watermaster. The final Judgment was signed on October 11, 1965 and became effective on October 1, 1966.[4]

The Judgment was amended on March 21, 1980, to provide for a transition in the administrative year from a water year (October 1 to September 30) to a fiscal year (July 1 to June 30). Under the Judgment, this transition in turn contained a "short" administrative year of nine months (from October 1, 1980 to June 30, 1981). The administrative year starting July 1, 1981 was on a fiscal year basis.

The Judgment was again amended on July 19, 1985, modifying the annual budget ($20 minimum assessment) and exchange pool provisions. The second amended Judgment of May 6, 1991 modified the carryover and overproduction provisions (to 20 percent of allowed pumping allocation or 20 AF, whichever is greater, from 10 percent of allowed pumping allocation or 10 AF), and defined drought carryover, and provided for exemptions for extractors of contaminated groundwater.

In December 2013, the Central Basin Judgment was amended ("Third Amended" Central Basin Judgment) to confirm the retirement of DWR as the Watermaster of Central Basin. The Judgment established three separate bodies to assist the Court in the administration and enforcement of the provisions and stipulations of the Judgment. The first body is the Administrative Body, which administers Watermaster accounting and financial reporting activities. The Water Replenishment District of Southern California was appointed by the Court for this role. The second body is the Water Rights Panel, which enforces issues related to groundwater production rights as defined by the Judgment. The Water Rights

4 Central and West Basin Water Replenishment District, etc. v. Charles E. Adams, et al, Los Angeles County Case No. 786,656.

panel comprises of seven elected water rights holders within the Central Basin. The third administrative body is the Storage Panel, which reviews and approves groundwater storage efforts. The Storage Panel is comprised of the Water Rights Panel and the WRD Board of Directors. A copy of the Central Basin Judgment is provided in Appendix I.

The Court approved 2013 Judgment amendments also implemented a water storage program. The amendment states, "…a party may store up to 200 percent of the party's Allowed Pumping Allocation, if space is available." In addition, the amendments allow parties to convert unused Allowed Pumping Allocation to stored water and revised the amount of carryover to be equal to 100 percent of the party's Allowed Pumping Allocation minus the amount of carryover water set aside for storage, as noted above. The purpose of the storage program creates an added reliability in water supply from the Central Basin. In addition, the amendments allow for transfer of water between Central Basin and West Basin by permitting parties with water rights in Central Basin to increase production in Central Basin, while another party decreases production in West Basin by the corresponding amount.

Under the Judgment, water rights are fixed and do not vary year to year. Water producers cannot exceed their water rights by more than 20 percent or 20 AF, whichever is greater, in any year and an adjustment is made the following year. In addition, water producers cannot carry over more than 20 percent or 20 AF, whichever is greater, of their water rights for use in the following year. In addition, the Central Basin Judgment includes an amendment which implemented a water storage program. A party may store up to 50 percent of the party's Allowed Pumping Allocation in an Individual Storage Account and 150 percent of the party's Allowed Pumping Allocation in a Community Storage Account if space is available. The amendments also allow parties to convert unused Allowed Pumping Allocation to stored water and revised the amount of carryover to be equal to 60 percent of the party's Allowed Pumping Allocation minus the amount of carryover water set aside for storage. The purpose of the storage program creates an added reliability in water supply from the Central Basin.

Central Basin - Description

Central Basin is one of two groundwater basins in the Coastal Plain of Los Angeles County. It is comprised of Quaternary-age sediments (less than 1.8 million years old) of gravel, sand, silt, and clay that were deposited from the erosion of nearby hills and mountains, and from historical beaches and shallow ocean floors that covered the area in the past. Underlying these Quaternary sediments are basement rocks such as the Pliocene Pico Formation that generally do not provide sufficient quantities of groundwater for pumping. Separating the Central Basin from the West Coast Basin is the NIU, a series of discontinuous faults and folds that form a prominent line of northwest trending hills including the Baldwin Hills, Dominguez Hills, and Signal Hill.

Central Basin covers approximately 270 square miles and is bounded on the north by the Hollywood Basin and the Elysian, Repetto, Merced, and Puente Hills, to the east by the Los Angeles County/Orange County line, and to the south and west by the NIU. DWR divided the Central Basin into four sections: the Los Angeles Forebay, the Montebello Forebay, the Whittier Area, and the Pressure Area. Pursuant to DWR Bulletin 118 (for Basin Number 4-11.04), the total storage capacity of the Central Basin is estimated at approximately 13,800,000 AF.

The aquifers of Central Basin received their water supply primarily from the surface and subsurface inflow of water from the San Gabriel Valley. The water originates as rainfall in the San Gabriel Mountains, the runoff from which is conveyed to the Los Angeles River, the Rio Hondo, and the San Gabriel River. The Los Angeles River enters Central Basin through the Los Angeles Narrows, crosses the Los Angeles Forebay Area, and proceeds south across Central Basin, exiting Central Basin through the Dominguez Gap in West Basin. The Rio Hondo, enters Central Basin at Whittier Narrows parallel to the San Gabriel River, proceeds southwesterly across the Montebello Forebay Area and joins the Los Angeles River midway across the Basin. The San Gabriel River also enters Central

Basin through the Whittier Narrows, crosses the Montebello Forebay, and runs south to the Pacific Ocean near Long Beach at the Orange County line.

As the Rio Hondo and San Gabriel River flow through the Upper San Gabriel Valley toward Whittier Narrows, much of their flow percolates into the Main Basin. This water crosses the Whittier Narrows and enters Central Basin as subsurface flow into the aquifers of Central Basin. At the same time, the surface flows of the Rio Hondo and the San Gabriel River percolate downward into the aquifers of Central Basin in the Montebello Forebay. In the Montebello Forebay, the underground aquifers merge and are unconfined, and thus are capable of receiving large quantities of water from percolation through the sand and gravel surface of the forebay area.

The Los Angeles Forebay area is also favorably situated for percolation from the flows of the Los Angeles River, but the Los Angeles Forebay has been largely eliminated as a source of freshwater replenishment to Central Basin, due to lining of the Los Angeles River channel and the impervious surface in the forebay area. In the Montebello Forebay area, by contrast, flood flows have been largely controlled through the construction of the Whittier Narrows Dam, and the river channels have not been lined in the area, so percolation still occurs.

Groundwater in the Central Basin provides a substantial portion of the water supply needed by residents and industries in the overlying area. Groundwater occurs in the pore spaces of the sediments in the basin. The major aquifers identified in Central Basin include the following, from shallowest to deepest: a) the Gaspur and semi-perched aquifers of the Holocene Alluvium Formation; b) the Exposition, Artesia, Gage, and Gardena aquifers of the Upper Pleistocene Lakewood Formation; c) the Hollydale, Jefferson, Lynwood, and Silverado aquifers of the Lower Pleistocene Upper San Pedro Formation; and d) the Sunnyside Aquifer of the Lower Pleistocene Lower San Pedro Formation.

WRD's Leo J. Vander Lans Advanced Water Treatment Facility (LVL) was built in 2003 and expanded in 2014. The facility is located in the City of Long Beach and currently produces about 8 MGD of advanced treated water for injection at the Alamitos Barrier in Long Beach. The LVL also injects tertiary treated recycled water from Sanitation Districts of Los Angeles County's Long Beach Water Reclamation Plant. By injecting the LVL's advanced treated water and effluent from the Long Beach Water Reclamation Plant, groundwater supply is replenished and seawater intrusion is prevented.

The WRD Board of Directors established the Water Independence Now program in 2003 to protect the security of the region's groundwater supplies. The WIN program is comprised of various projects that include expansions to existing water treatment facilities, spreading activities, and stormwater capture. The largest component of the WIN program is the Albert Robles Center for Water Recycling & Environmental Learning (formerly the Groundwater Reliability Improvement Program), which was completed in 2019. The purpose of the Albert Robles Center is to reduce demand for imported water at the Rio Hondo and San Gabriel Coastal Spreading Grounds. The Albert Robles Center includes ultrafiltration, reverse osmosis, and ultraviolet disinfection and advanced oxidation to treat recycled water by significantly reducing the total dissolved solids concentration.

Groundwater quality is monitored by WRD. Groundwater in the Central Basin is currently contaminated with natural metals such as arsenic, iron and manganese, Volatile Organic Chemicals (VOCs), including trichloroethylene (TCE) and perchloroethylene (PCE), 1,4-Dioxane, Perchlorate, and Per- and Poly-Fluoroalkyl Substances (PFAS). In addition, Total Dissolved Solids (TDS) concentrations exceed drinking water quality standards. Wellhead treatment is necessary in these areas to allow delivery of the groundwater for potable purposes.

As previously discussed, DWR divided the Central Basin into four sections: the Los Angeles Forebay, the Montebello Forebay, the Whittier Area, and the Pressure Area.

Below is a discussion of groundwater level changes, pursuant to WRD's 2020 Engineering Survey and Report.

- In the Los Angeles Forebay, the water level high was observed in 1938 with an elevation of approximately 70 feet above mean sea level (msl) and by 1962, the water levels had fallen by 180 feet to an elevation of 109 feet below msl due to over pumping and lack of recharge. Water levels have improved since then due to pumping rights adjudication and managed aquifer recharge. In 2019, the groundwater levels were at an elevation of 20.3 feet below msl.

- In the Montebello Forebay, the water level high was observed in 1942 with an elevation of approximately 137.8 feet above mean sea level (msl) and by 1958, the water levels had fallen by 117 feet to an elevation of 20.9 feet above msl due to over pumping and lack of recharge. Water levels have improved since then due to pumping rights adjudication and managed aquifer recharge. In 2019, the groundwater levels were at an elevation of 72.9 feet above msl.

- In the Pressure Area, the water level high was observed in 1935 at about 10 feet above msl when they began to continually decline by over 110 feet until the observed low of about 120 feet below msl in 1961 due to over pumping and lack of recharge. Groundwater levels improved during the early 1960s due to replenishment operations. Between 1995 and 2007, there were 100-foot swings in water levels as a result of seasonal pumping from producers. Water levels have improved since then due to pumping rights adjudication and managed aquifer recharge. In 2019, the groundwater levels were at elevations between 75 and 91.1 feet below msl.

- Long-term hydrographs and records were not maintained for the Whittier Area; however, groundwater levels have been tracked from recently constructed monitoring wells.

Central Basin - Historical and Projected Basin Production

Liberty Utilities currently produces groundwater from the Central Basin. Liberty Utilities' current Allowed Pumping Allocation in the Central basin is 1,159.30 AFY. Liberty Utilities' production over the past five years has been tabulated in Section 6.1. Over the past five years, Liberty Utilities has produced 3,970 AFY to 7,173 AFY, with an average of 5,761 AFY from the Central Basin. Liberty Utilities' projected production from the Central Basin, over the next 25 years in five-year increments, is provided in Table 6-9.

Table 6-1 Groundwater Volume Pumped

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	Central Basin	3,970	5,038	6,841	7,173	5,782
	TOTAL	3,970	5,038	6,841	7,173	5,782
**** Units of measure (AF, CCF, MG)*** *must remain consistent throughout the UWMP as reported in Table 2-3.*						
NOTES:						

6.2.3 SURFACE WATER

Liberty Utilities does not use surface water supplies to meet its water demands.

6.2.4 STORMWATER

Liberty Utilities does not use stormwater supplies to meet its water demands.

6.2.5 WASTEWATER AND RECYCLED WATER

CWC 10633.

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

(a) A description of the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.

(b) A description of the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.

(c) A description of the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.

(d) A description and quantification of the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, potable reuse, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.

(e) The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.

(f) A description of actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre-feet of recycled water used per year.

(g) A plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating

uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.

Discussion of wastewater collection, treatment, and recycled water use is included in this chapter. Municipal recycled water is municipal wastewater that has been treated at a municipal wastewater facility in a manner specified by the SWRCB-DDW to a specified quality to enable it to be used again for a beneficial purpose. Municipal wastewater must meet two requirements; it must be reused beneficially pursuant to Title 22 of the California Code of Regulations and it must be reused in accordance with a Regional Water Quality Control Board permit. Title 22 of the California Code of Regulations defines beneficial reuse of recycled water as "…the use of recycled water that has been transported from the point of treatment or production to the point of use without an intervening discharge to water of the State…"

Liberty Utilities uses recycled water wholesaled by the Sanitation Districts of Los Angeles County (LACSD) from the Los Coyotes Water Reclamation Plant (WRP) and the San Jose Creek WRP through CBMWD. Liberty Utilities serves recycled water to customers within Liberty Utilities' service area.

6.2.5.1 RECYCLED WATER COORDINATION

CWC 10633.

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

Liberty Utilities' 2020 UWMP was prepared in coordination with local water, wastewater, groundwater, and planning agencies within its service area to analyze the current and projected wastewater supply for collection, treatment, disposal, and distribution.

Wastewater from Liberty Utilities' service area is collected and treated at the Los Coyotes WRP and the Joint Water Pollution Control Plant (JWPCP), which are owned and operated by LACSD. CBMWD then purchases recycled water from LACSD and distributes it throughout its service area, including Liberty Utilities' service area. Liberty Utilities participates in CBMWD's regional water recycled program which includes two major distribution systems, the E. Thornton Ibbetson Century Water Recycled Project and the Esteban E. Torres Rio Hondo Water Recycling Project.

6.2.5.2 WASTEWATER COLLECTION, TREATMENT, AND DISPOSAL

CWC 10633.

(a) A description of the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.

Wastewater generated by Liberty Utilities is treated by LACSD. Wastewater is collected within Liberty Utilities' local sewer collection system. Liberty Utilities' local sewers tie into LACSD's regional trunk sewers at multiple locations within Liberty Utilities' service area. The regional trunk sewer lines deliver wastewater to the Los Coyotes WRP and JWPCP owned by LACSD for treatment.

Municipal wastewater is collected from residential, commercial, and industrial customers within Liberty Utilities' service area. The water reclamation plants serving Liberty Utilities include the Los Coyotes WRP and JWPCP; however, the percentage breakdown between these two plants in treating Liberty Utilities' wastewater is unknown. Based on information provided by LACSD, it is estimated approximately 60 gallons per person per day of wastewater is generated within LACSD's service area in the vicinity of Liberty Utilities' service area. Based on a CY 2020 population of 132,691 within Liberty Utilities' service area, the estimated amount of wastewater collected within Liberty Utilities' service

area is approximately 8.0 million gallons per day (about 8,900 AFY), as shown in Table 6-2.

The Los Coyotes WRP is located outside of Liberty Utilities' service area in the City of Cerritos. This treatment facility provides primary, secondary, and tertiary treatment for 37.5 MGD of wastewater and produces an average of 18 MGD of recycled water. 5 MGD of the total recycled water produced is delivered for use as municipal recycled water in areas including the Liberty Utilities' service area.

The JWPCP is downstream of the Los Coyotes WRP in the City of Carson. The JWPCP, which began operation in 1928, currently has a treatment capacity of about 300 MGD. The treatment level is primary and secondary treatment with disinfection. The JWPCP plant serves a population of approximately 3.5 million people. Solids collected in primary and secondary treatment are processed in anaerobic digestion tanks where bacteria break down organic material and produce methane gas. Treated wastewater is ultimately disinfected prior to being discharged to the Pacific Ocean. Though highly treated, effluent from the JWPCP does not meet recycled water standards and is therefore not re-used for such purposes. However, all water discharged to the ocean is monitored to ensure compliance with applicable local, state, and federal standards for discharge water.

Liberty Utilities' wastewater is treated and disposed of outside of Liberty Utilities' service area as shown in Table 6-3.

Table 6-2 Wastewater Collected Within Area in 2020

Submittal Table 6-2 Retail: Wastewater Collected Within Service Area in 2020						
☐	There is no wastewater collection system. The supplier will not complete the table below.					
	Percentage of 2020 service area covered by wastewater collection system *(optional)*					
	Percentage of 2020 service area population covered by wastewater collection system *(optional)*					
Wastewater Collection			**Recipient of Collected Wastewater**			
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated? *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*
Los Angeles County Sanitation Districts	Estimated	8,900	Los Angeles County Sanitation Districts	Los Coyotes Water Reclamation Plant and Joint Water Pollution Control Plant	No	No
Total Wastewater Collected from Service Area in 2020:		8,900				
**** Units of measure (AF, CCF, MG)*** *must remain consistent throughout the UWMP as reported in Table 2-3* **.**						
NOTES:						

Table 6-3 Wastewater Treatment and Discharge within Service Area in 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	Wastewater Discharge ID Number *(optional)* [2]	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]				
							Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area	Instream Flow Permit Requirement
						Total	0	0	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:											

6.2.5.3 RECYCLED WATER SYSTEM DESCRIPTION

CWC 10633.

(c) A description of the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.

Liberty Utilities purchases recycled water from LACSD through CBMWD. A map of CBMWD's recycled water distribution system is provided in Appendix J. CBMWD's recycled water system consists of approximately 36 miles of pipeline serving the Cities of Bellflower, Bell Gardens, Compton, Cudahy, Downey, Huntington Park, Lakewood, Lynwood, Norwalk, Paramount, Santa Fe Springs, South Gate, and Vernon. Historically, the recycled water system has delivered water for landscape irrigation at parks, schools, freeway slopes, nursery stock irrigation, and various industrial applications. In 1994, the

system was connected to the Rio Hondo recycled water distribution system. The CBMWD and Rio Hondo recycled water systems can be partially supplied with recycled water from either the Los Coyotes or San Jose Creek WRP individually, or in combination. For sake of consistency, LACSD reports all water reuse for the CBMWD service area as recycled water coming from the Los Coyotes WRP, regardless of if the system receives water from the San Jose Creek WRP. The Rio Hondo service area is reported to receive recycled water from the San Jose Creek WRP.

6.2.5.4 POTENTIAL, CURRENT, AND PROJECTED RECYCLED WATER USES

CWC 10633.

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

(d) A description and quantification of the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, indirect potable reuse, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.

(e) The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.

This section discusses the potential, current, and projected beneficial use of recycled water within Liberty Utilities. Beneficial use is defined by Title 22 of the California Code of Regulations as "the use of recycled water that has been transported from the point of treatment or production to the point of use without an intervening discharge to the waters of the State."

Currently, Liberty Utilities delivers recycled water provided by and purchased from CBMWD. CBMWD purchases tertiary treated recycled water from LACSD. Liberty Utilities

uses recycled water to augment its groundwater supplies and imported water supply for landscape and golf course irrigation within its water service area.

Table 6-4 describes the supply currently being used and the supply available for use in a recycled water project. Table 6-5 compares the projected use for 2020 versus actual use of recycled water in 2020.

Table 6-4 Current and Projected 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.

Name of Supplier Producing (Treating) the Recycled Water:	Los Angeles County Sanitation District
Name of Supplier Operating the Recycled Water Distribution System:	Central Basin Municipal Water District
Supplemental Water Added in 2020 (volume) *Include units*	0
Source of 2020 Supplemental Water	Not Applicable

Beneficial Use Type *Insert additional rows if needed.*	**Potential** Beneficial Uses of Recycled Water (Describe)	Amount of **Potential** Uses of Recycled Water (Quantity) *Include volume units* [1]	General Description of 2020 Uses	Level of Treatment *Drop down list*	2020 [1]	2025 [1]	2030 [1]	2035 [1]	2040 [1]	2045 [1] (opt)
Agricultural irrigation										
Landscape irrigation (exc golf courses)	Schools, Parks, City Landscape	249	Schools, Parks, City Landscape	Tertiary	241	249	249	249	249	249
Golf course irrigation		11		Tertiary	11	11	11	11	11	11
Commercial use										
Industrial use										
Geothermal and other energy production										
Seawater intrusion barrier										
Recreational impoundment										
Wetlands or wildlife habitat										
Groundwater recharge (IPR)										
Reservoir water augmentation (IPR)										
Direct potable reuse										
Other (Description Required)										
				Total:	252	260	260	260	260	260
				2020 Internal Reuse						

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

NOTES:

Table 6-5 2015 Recycled Water Use Projection Compared to 2020 Actual

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.	
Beneficial Use Type	**2015 Projection for 2020 [1]**	**2020 Actual Use [1]**
Insert additional rows as needed.		
Agricultural irrigation		
Landscape irrigation (exc golf courses)	215	241
Golf course irrigation	9	11
Commercial use		
Industrial use		
Geothermal and other energy production		
Seawater intrusion barrier		
Recreational impoundment		
Wetlands or wildlife habitat		
Groundwater recharge (IPR)		
Reservoir water augmentation (IPR)		
Direct potable reuse		
Other (Description Required)		
Total	224	252
[1] **Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.		
NOTE:		

6.2.5.5 ACTIONS TO ENCOURAGE AND OPTIMIZE FUTURE RECYCLED WATER USE

CWC 10633.

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

(g) A plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.

Liberty Utilities works collaboratively with CBMWD to encourage and optimize future recycled water use within its service area. Through CBMWD's marketing efforts, recycled water customers have expanded from tradition irrigation users such as golf courses and parks to unconventional and industrial users. Additionally, Liberty Utilities provides incentives by setting recycled water rates below potable water rates to encourage recycled water use. CBMWD also advances funds for customer's retrofit expenses and are subsequently reimbursed through monthly payments. CBMWD's 2012 Recycled Water Master Plan (incorporated by reference) also provided potential system expansion routes and developed a phased CIP. Projects include those provided in Table 6-6.

Table 6-6 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.		
Section 6.2.5	Provide page location of narrative in UWMP		
Name of Action	Description	Planned Implementation Year	Expected Increase in Recycled Water Use *
Add additional rows as needed			
Recycled Water System Expansion	Potential system expansion routes and development of phased CIP within CBMWD service area pursuant to Central Basin Municipal Water District's 2012 Recycled Water Master Plan	Ongoing	20
		Total	20
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*			
NOTES:			

6.2.6 DESALINATED WATER OPPORTUNITIES

CWC 10631.

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

Central Basin

The average TDS concentrations for the Central Basin groundwater is less than its secondary MCL of 1,000 mg/l, based on most recent available data in Liberty Utilities' groundwater wells. Consequently, Liberty Utilities has not needed to investigate the use of desalination to develop or reestablish a new long-term supply. However, there may be opportunities for use of desalinated ocean water as a future potential water supply source, if needed, through coordination with other agencies that have ocean desalination programs.

6.2.7 WATER EXCHANGES AND TRANSFERS

CWC 10631.

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

6.2.7.1 EXCHANGES

Pursuant to DWR's 2020 Final Guidebook, "*Water exchanges are typically water delivered by one water user to another water user, with the receiving water user providing water in return at a specified time or when the conditions of the parties' agreement are met. Water exchanges can be strictly a return of water on a basis agreed upon by the participants or it can include payment and the return of water.*"

Liberty Utilities does not have any current or planned water exchanges.

6.2.7.2 TRANSFERS

Pursuant to DWR's 2020 Final Guidebook, "*The Water Code defines a water transfer as a temporary or long-term change in the point of diversion, place of use, or purpose of use due to a transfer, sale, lease, or exchange of water or water rights.*"

Pursuant to the Central Basin Judgment (discussed in Section 6.2), parties to the Judgments are allowed to assign, transfer, license, or lease their water rights. The Judgment also allows for the transfer of stored water between parties. Liberty Utilities is able to utilize the transfer opportunities available for Central Basin water when necessary.

6.2.7.3 EMERGENCY INTERTIES

Emergency interties (or interconnections) are distribution system interconnections between water agencies for use during critical situations where one system or the other is temporarily unable to provide sufficient potable water to meet its water demands and/or fire protection needs. An emergency interconnection will allow a water system to continue serving water during critical situations such as local water supply shortages as a result of earthquakes, fires, prolonged power outages, and droughts.

Liberty Utilities currently has 16 emergency interconnections with the ability to receive water from other water agencies that serve as short-term emergency exchange opportunities through the California Water/ Wastewater Agency Response Network (CalWARN) program.

6.2.8 FUTURE WATER PROJECTS

CWC 10631.

(f) Include a description of all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use, as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in normal and single-dry water years and for a period of drought lasting five consecutive water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.

Liberty Utilities is constructing a new groundwater well, Well 28D within the Bellflower/Norwalk water system. This project has been scheduled for the start of construction in December 2020 and completion in Fall 2021. The groundwater well was drilled in 2018 and is projected to provide 2,000 GPM. The total cost of the project is estimated at $5.5 million.

Liberty Utilities is also proposing to drill a new groundwater well to replace the existing Well 4B within the Compton East Water System. The well drilling and casing installation is scheduled in 2023 and estimated at $1.5 million. The building and equipment installation is schedule for the years 2024 through 2025 and are estimated at $5 million. The capacity of the well is to be determined during drilling activities.

Table 6-7 Expected Future Water Supply Projects or Programs

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.					
Section 6.2.8	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						
Construction of Well 28D	No		Completion of new Central Basin groundwater well	2022	All Year Types	3,200 AFY
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*						
NOTES:						

6.2.9 SUMMARY OF EXISTING AND PLANNED SOURCES OF WATER

CWC 10631.

(b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a), providing supporting and related information, including all of the following…

(b)(2) When multiple sources of water supply are identified, a description of the management of each supply in correlation with the other identified supplies.

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

6.2.9.1 DESCRIPTION OF SUPPLIES

As discussed in Section 6.2, Liberty Utilities' water supply sources consist of treated imported water purchased from MWD through CBMWD (see Section 6.2.1), groundwater from the Central Basin (see Section 6.2.2), and recycled water (see Section 6.2.5). The actual quantities of the water supply sources available to Liberty Utilities during CY 2020 are summarized in Table 6-8. The reliable quantities of projected water supply sources available to Liberty Utilities in five-year increments through CY 2045 during normal or average years are summarized in Table 6-9. The reliability of these sources of supply are addressed in Section 7.2.3, including during normal years, single dry years, and five consecutive year droughts.

The order of use of Liberty Utilities' projected reliable water supplies from CY 2020 through CY 2045 in five-year increments is based on historical practices, water supply

availability, and the cost of water. It is anticipated Liberty Utilities will initially use groundwater produced from the Central Basin. At the same time, Liberty Utilities will continue to use recycled water for non-potable demands. Liberty Utilities will also use treated imported water. It is important to note that although the Central Basin is adjudicated (as discussed in Section 6.2.2), there is a limit to the amount of groundwater which can be produced annually as water rights are fixed and do not vary year to year.

6.2.9.2 QUANTIFICATION OF SUPPLIES

The actual quantities of the water supply sources available to Liberty Utilities during CY 2020 are summarized in Table 6-8. The reliable quantities of projected water supply sources available to Liberty Utilities in five-year increments through CY 2045 during average years are summarized in Table 6-9. The reliability of these sources of supply are addressed in Section 7.2.3, including during normal years, single dry years, and five consecutive year droughts.

Liberty Utilities' projected quantities of treated imported water supplies are based on historical long-term averages and available supplies during previous dry year conditions. Liberty Utilities' projected quantities of recycled water supplies to meet non-potable demands are based on historical long-term averages. Liberty Utilities' projected quantities of groundwater supplies from Central Basin are based on meeting the remainder of Liberty Utilities' total water demands. It is anticipated Liberty Utilities will have sufficient water supplies available to meet projected demands.

Table 6-8 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	Total Right or Safe Yield* (optional)
Add additional rows as needed				
Groundwater (not desalinated)	Central Basin	5,782	Drinking Water	
Purchased or Imported Water	Central Basin Municipal Water District	5,190	Drinking Water	
Recycled Water		252	Recycled Water	
	Total	11,224		0
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*				
NOTES:				

Table 6-9 Water Supplies - Projected

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		2045 (opt)	
		Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)
Add additional rows as needed											
Groundwater (not desalinated)	Central Basin	6,000		6,250		6,500		6,750		7,000	
Purchased or Imported Water	Central Basin Municipal Water District	5,208		5,016		4,825		4,636		4,446	
Recycled Water	Central Basin Municipal Water District	260		260		260		260		260	
	Total	11,468	0	11,526	0	11,585	0	11,646	0	11,706	0
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*											
NOTES											

6.2.10 SPECIAL CONDITIONS

Liberty Utilities has considered the issues described below when developing its planned source of water supply.

6.2.10.1 CLIMATE CHANGE EFFECTS

Climate change has the possibility of impacting the availability of planned water supplies, particularly during a drought period. Section 4.5 of this Plan provides a discussion regarding climate change effects on Liberty Utilities' various sources of supply.

6.2.10.2 REGULATORY CONDITIONS AND PROJECT DEVELOPMENT

Liberty Utilities has considered the implications of changing regulatory conditions and project development on the availability of planned water supplies. Section 1.4 provides a discussion regarding the reduced reliance on imported water supplies.

6.2.10.3 OTHER LOCALLY APPLICABLE CRITERIA

There are no locally applicable criteria which applies to Liberty Utilities.

6.3 SUBMITTAL TABLES COMPLETION USING THE OPTIONAL PLANNING TOOL

As discussed in Section 4.2.5, DWR has created an optional "Planning Tool Worksheet" for water suppliers to review and assess monthly water use trends. However, DWR has deemed the tool as optional and Liberty Utilities is not required by DWR to use the tool. Section 6.1 provides a tabulation of Liberty Utilities' historical annual water uses for each water supply source. During the past 10 years, Liberty Utilities experienced a five consecutive year drought within its service area from CY 2011 to CY 2015. In addition, historical records indicate Liberty Utilities' annual water demands typically have been even greater prior to CY 2012. Liberty Utilities has been able to provide sufficient water supplies to its customers, including during long-term droughts and years with historically high water demands. In addition, Liberty Utilities has been able to provide water service to meet maximum day water demands for these years, including during the summer months. A further discussion regarding the reliability of Liberty Utilities' water supply sources is provided in Chapter 7.

6.4 ENERGY USE

CWC 10631.2.

(a) In addition to the requirements of Section 10631, an urban water management plan shall include any of the following information that the urban water supplier can readily obtain:

(1) An estimate of the amount of energy used to extract or divert water supplies.

(2) An estimate of the amount of energy used to convey water supplies to the water treatment plants or distribution systems.

(3) An estimate of the amount of energy used to treat water supplies.

(4) An estimate of the amount of energy used to distribute water supplies through its distribution systems.

(5) An estimate of the amount of energy used for treated water supplies in comparison to the amount used for nontreated water supplies.

(6) An estimate of the amount of energy used to place water into or withdraw from storage.

(7) Any other energy-related information the urban water supplier deems appropriate.

"Energy intensity" is defined as the quantity of energy consumed, measured in kilowatt hours (kWh), divided by the volume of water, measured in AF for a water management process over a one-year period. The information used to calculate the estimated energy intensity associated with Liberty Utilities' water system is provided below. The energy intensity information is based on readily obtainable energy and water use data for the following water management processes: 1) extraction or diversion of water supplies; 2) placement into storage; 3) conveyance to distribution; 4) treatment; and 5) water system distribution.

Liberty Utilities has tabulated its energy intensity using readily obtainable energy consumption data obtained from monthly electricity bills from Southern California Edison (SCE) for the whole water system and the corresponding water use data obtained from available water meter readings. Liberty Utilities has reported the energy intensity

associated with the water management processes which occur within its operational control. Because Liberty Utilities does not track individual energy usage for each water management process identified above, Liberty Utilities has estimated the energy intensity using a "total utility approach" (i.e. sum of all water management processes). The total energy consumed was approximately 3,798,923 kWh during Calendar Year 2020. Although the total energy consumption reported includes electricity usage for general administration (e.g. at the Liberty Utilities' headquarters) which is not associated with any water management processes, the general administration energy usage is considered negligible compared to overall water system use and has not been netted out.

The total volume of water entering the potable water system was approximately 10,972 AF during Calendar Year 2020 and is consistent with the total volume of water provided in Table 4-1 (less recycled water supplies).

The total energy intensity associated with Liberty Utilities' water management processes is estimated at 346 kWh/AF. The energy intensity data and calculations based on the "total utility approach" are provided in Table O-1B below.

Liberty Utilities' water management processes do not include "consequential hydropower generation" where the energy generation is a direct consequence of water delivery (i.e. all water passing through the energy generation devices is delivered to users). Liberty Utilities' water management processes do not include "non-consequential hydropower generation" where the energy generation is not a direct consequence of water delivery (i.e. energy could be generated even if no water was being delivered to water users). In addition, Liberty Utilities' water management processes do not include any substantial "self-generated energy sources" including solar, wind, geothermal, biomass, co-generation, and diesel generator sources.

Table O-1B. Recommended Energy Reporting — Total Utility Approach

Urban Water Supplier: *Liberty Utilities - Park Water*

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	*AF*	Total Utility	Hydropower	Net Utility
Volume of Water Entering Process (volume unit)		*10,972*	*0*	*10972*
Energy Consumed (kWh)		*3,798,923*	*0*	*3798923*
Energy Intensity (kWh/volume)		*346.2*	*0.0*	*346.2*

Quantity of Self-Generated Renewable Energy

0 kWh

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

Combination of Estimates and Metered Data

Data Quality Narrative:

The total energy consumed was identified based on Southern California Edison (SCE) billing records. Although the total energy consumed includes electricity usage for general administration (which is not an identified water management process), general administration energy use is considered to be negligible compared to overall water system use and has not been netted out.

Narrative:

The total energy consumption includes energy associated with operating groundwater production wells and booster pumps to deliver water in the distribution system. Energy consumption is associated with operating groundwater water treatment. Energy consumption is also associated with plant lighting and air conditioning, and operating the Supervisory Control and Data Acquisition (SCADA) system and chlorination injection pumps.

CHAPTER 7

WATER SERVICE RELIABILITY AND DROUGHT RISK ASSESSMENT

LAY DESCRIPTION – CHAPTER 7

WATER SERVICE RELIABILITY AND DROUGHT RISK ASSESSMENT

Chapter 7 (Water Service Reliability and Drought Risk Assessment) of Liberty Utilities Park Water's 2020 Plan discusses and provides the following:

- Calendar Year 2020 represents an "average" or "normal" water year for Liberty Utilities in which the total amount of rainfall was similar to the historical average rainfall.
- A "single dry" year for Liberty Utilities was represented in Calendar Year 2017, in which the total amount of rainfall was below the historical average rainfall.
- A "five consecutive year drought" period for Liberty Utilities is represented from Calendar Year 2011 to Calendar Year 2015, where the total amount of rainfall during each of these years was less than the historical average rainfall.
- Liberty Utilities' current and projected water supplies available during normal years in five-year increments over the next 25 years are provided (through Calendar Year 2045) as shown on Table 7-2.
- Liberty Utilities' current and projected water supplies available during single dry years in five-year increments over the next 25 years are provided (through Calendar Year 2045) as shown on Table 7-3.
- Liberty Utilities' current and projected water supplies available during each year of a five consecutive year drought in five-year increments over the next 25 years are provided (through Calendar Year 2045) as shown on Table 7-4.
- The reliability of Liberty Utilities' water supply sources, including a review of water supply constraints, is provided. A single dry year or a five consecutive year drought

period will not compromise Liberty Utilities' ability to provide a reliable supply of water to its customers.

- A Drought Risk Assessment is provided which includes an assessment of Liberty Utilities' water supply reliability over a five consecutive year drought period. Liberty Utilities' DRA assumes a five consecutive year drought from Calendar Year 2021 through Calendar Year 2025 and includes a review of water supplies, water uses, and water supply reliability for each water supply source during this period. Liberty Utilities has the ability to enact varying water shortage levels (see Chapter 8) to help educate its customers and provide an economic incentive for the retail customers to reduce their water consumption.

7.1 INTRODUCTION

This section of Liberty Utilities' UWMP describes Liberty Utilities' ability to meet retail customer water demands by analyzing a variety of factors which affect Liberty Utilities' water supply. This section assesses Liberty Utilities' water service reliability during average years, single dry years, and during a five consecutive year drought period to meet the water needs of its customers. This section also includes the discussion of a Drought Risk Assessment which provides a mechanism for Liberty Utilities to evaluate the risk to its water supply under a drought lasting for the next five consecutive years.

7.2 WATER SERVICE RELIABILITY ASSESSMENT

CWC 10635.

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

Information regarding the reliability of Liberty Utilities' water supplies is based on the historical precipitation data in the Central Basin area. Historical annual precipitation in the Central Basin area is discussed in Section 3.3 and is based on historical data collected from Station 049660 (Whittier City Yard, California). Furthermore, Section 4.5 of this Plan notes that potential future climate change impacts may result in an increase in the average annual precipitation within Liberty Utilities' service area, thus indicating use of historical data is a reasonable and conservative approach. As indicated in Section 3.3, the historical average rainfall in the vicinity of Liberty Utilities' service area is 14.5 inches. Calendar year 2020 represents an average or normal water year for Liberty Utilities in which the total amount of rainfall was similar to the historical average rainfall. A single dry year for Liberty Utilities was represented in CY 2017, in which the total amount of rainfall was below the historical average rainfall. A five consecutive year drought period for Liberty Utilities is represented from CY 2011 to CY 2015, where the total amount of rainfall during each of these years was less than the historical average rainfall. Table 7-1 summarizes these "base years" for average, single dry, and five consecutive year drought and provides the total amount of water supplies available to Liberty Utilities during those base years. The following discussion assesses the water service reliability of Liberty Utilities' water supply source.

Water Service Reliability - Imported Water

Liberty Utilities' treated imported water supplies from MWD, through CBMWD, may be impacted during a multi-year drought or other conditions which limits MWD from delivering sufficient water supplies to all of its member agencies, and consequently to Liberty Utilities. In anticipation of such a reduction in supplies, MWD developed a WSAP which is briefly described below. The WSAP provides a means of equitably providing reduced water supplies to each of MWD's member agencies for up to 10 levels of reduction representing up to a 50 percent reduction.

During CY 2007, critically dry conditions impacted MWD's water supply sources. In addition, a ruling in the Federal Courts in August 2007 provided protective measures for the Delta Smelt (and subsequently other aquatic species) in the Sacramento-San Joaquin River Delta resulting in restrictions on the availability of State Water Project water. As a result, MWD adopted a WSAP in February 2008 to allocate available water supplies to its member agencies. MWD revised the WSAP in December 2014.

The WSAP establishes ten different shortage levels and a corresponding Allocation to each member agency. Based on the shortage levels established by MWD, the WSAP provides a separate reduced Allocation to a member agency for its 1) Municipal and Industrial (M&I) retail demand and 2) replenishment demand. The WSAP formula considers historical local water production, full service treated water deliveries, agricultural deliveries and water conservation efforts when calculating each member agency's Allocation.

In general, the WSAP process calculates total historical member agency demand. That historical demand is then compared to member agency projected local supply for a specific Allocation year. The balance required from MWD, less an Allocation reduction factor, is the member agency's "Water Supply Allocation" of imported water from MWD. When a member agency reduces its local demand through conservation or other means,

the Allocation of imported water will increase. Depending on MWD's available supply, MWD can establish a specific WSAP shortage level. The shortage level causes a regional reduction and calculates an allocation for each of its member agency. Additional information about MWD's WSAP is provided in MWD's Regional 2020 UWMP which is incorporated by reference. The following is a summary of MWD's water shortage levels:

Level 1 – Regional Percent Reduction of 5%
Level 2 – Regional Percent Reduction of 10%
Level 3 – Regional Percent Reduction of 15%
Level 4 – Regional Percent Reduction of 20%
Level 5 – Regional Percent Reduction of 25%
Level 6 – Regional Percent Reduction of 30%
Level 7 – Regional Percent Reduction of 35%
Level 8 – Regional Percent Reduction of 40%
Level 9 – Regional Percent Reduction of 45%
Level 10 – Regional Percent Reduction of 50%

In response to a fourth consecutive year of below average rainfall and critically dry conditions, MWD declared a WSAP Allocation Level 3 for fiscal year 2015-16, which represented a regional reduction of 15 percent. MWD rescinded the WSAP for fiscal year 2016-17 and has not reinstated the WSAP since that time.

Water Service Reliability - Groundwater

Central Basin

The Central Basin groundwater supplies are managed by the Central Basin Watermaster (WRD), as discussed in Section 6.2.2. During a normal year (CY 2020), Liberty Utilities met about 52percent of its total demands with supplies from the Central Basin. During a single dry year (CY 2017), Liberty Utilities met about 52 percent of its total demands with

supplies from the Central Basin. During a five consecutive year drought multiple dry year period (CY 2011 to CY 2015), Liberty Utilities met between 22 and 36 percent of its total demands with supplies from the Central Basin.

Water Service Reliability Summary

Table 7-1 shows the water supplies during the base years (for average year, single dry year and a five consecutive year drought). As a result of Liberty Utilities' diverse water supply portfolio, water supplies may be re-apportioned during a five consecutive year drought to meet Liberty Utilities' water demands.

7.2.1 SERVICE RELIABILITY - CONSTRAINTS ON WATER SOURCES

CWC 10631.

(b)(1) A detailed discussion of anticipated supply availability under a normal water year, single dry year, and droughts lasting at least five years, as well as more frequent and severe periods of drought, as described in the drought risk assessment. For each source of water supply, consider any information pertinent to the reliability analysis conducted pursuant to Section 10635, including changes in supply due to climate change.

Liberty Utilities' sources of supplies consist imported water purchased from MWD through CBMWD, groundwater from the Central Basin, and recycled water as described in Section 6.2. Although all of these supplies are managed, the following constraints may occur which Liberty Utilities has considered in this reliability analysis.

Imported Water

Liberty Utilities receives treated surface water from MWD through CBMWD. Water quality from MWD relating to supply reliability is addressed separately in MWD's 2020 Regional Urban Water Management Plan.

Central Basin

Liberty Utilities produces groundwater from the Central Basin. The groundwater has been impacted by contamination, including by iron and manganese. However, Liberty Utilities has developed and implemented appropriate treatment (blending and/or treatment facilities) which have been approved by SWRCB-DDW. These groundwater supplies are considered reliable both from a water quality and quantity standpoint.

7.2.2 SERVICE RELIABILITY - YEAR TYPE CHARACTERIZATION

7.2.2.1 TYPES OF YEARS

Liberty Utilities' base years for an average year, a single dry year, and a five consecutive year drought are discussed in Section 7.2 and are summarized in Table 7-1. As indicated in Chapter 6, Liberty Utilities' water supplies sources have been sufficient in meeting Liberty Utilities' historical water demands during an average year, a single dry year, and a five consecutive year drought. An average year was based on a historical year during the past 10 years with a total precipitation similar to the historical average precipitation in the vicinity of Liberty Utilities' service area. Because a single dry year or a five consecutive year drought period will not compromise Liberty Utilities' ability to provide a reliable supply of water to its customers, a single dry year in this Plan was selected based one of the driest years during the past 10 years. The five consecutive year drought period was based on a period of five consecutive dry years during the past 10 years.

As indicated in Section 3.3, the historical average rainfall in the vicinity of Liberty Utilities' service area is 14.5 inches. CY 2020 represents an average or normal water year for Liberty Utilities in which the total amount of rainfall was similar to the historical average rainfall. A single dry year for Liberty Utilities was represented in CY 2017, in which the total amount of rainfall was less than the historical average rainfall. A five consecutive year drought period for Liberty Utilities is represented from CY 2011 to CY 2015, where

the total amount of rainfall during each of these years was less than the historical average rainfall. Table 7-1 summarizes these "base years" for an average year, a single dry year and a five consecutive year drought period and provides the total amount of water supplies available to Liberty Utilities during those base years.

Table 7-1 Basis of Water Year Data (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	2020	11,224	100%
Single-Dry Year	2017	10,140	90.3%
Consecutive Dry Years 1st Year	2011	11,837	105.5%
Consecutive Dry Years 2nd Year	2012	11,828	105.4%
Consecutive Dry Years 3rd Year	2013	11,155	99.4%
Consecutive Dry Years 4th Year	2014	9,787	87.2%
Consecutive Dry Years 5th Year	2015	9,605	85.6%
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:			

7.2.2.2 SOURCES OF WATER DATA

The monthly historical average temperatures (including minimum and maximum), monthly historical average rainfall, and monthly ETo in the vicinity of Liberty Utilities' service area are discussed in Section 3.3 Historical climate information was obtained from the WRCC and from DWR's CIMIS.

7.2.3 WATER SERVICE RELIABILITY – SUPPLY AND DEMAND COMPARISON

CWC 10635.

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

Liberty Utilities primarily obtains its water supplies from groundwater wells located in the Central Basin. As discussed in Section 7.3 and shown in Table 7-2, Table 7-3, and Table 7-4, each of Liberty Utilities' water supply sources share the same base years. As previously discussed in Section 7.2.1, a single dry year or a five consecutive year drought period will not compromise Liberty Utilities' ability to provide a reliable supply of water to its customers.

As previously discussed in Section 4.2.6, Liberty Utilities' projected normal year water demands over the next 25 years, in five-year increments, were based on Liberty Utilities' 2020 Water Use Target of 142 GPCD for potable water demands. The ratio of total water supplies (including potable and non-potable water supplies) available to Liberty Utilities during a historical average year in CY 2020 (or 11,224 AF) and during a historical single

dry year in CY 2017 (or 9,694 AF) was used to estimate Liberty Utilities' projected water demands during single dry years. The ratio of total water supplies available to Liberty Utilities during a historical average year in CY 2020 (or 11,224 AF) and a historical five consecutive year drought period from CY 2011 to CY 2015 (or 11,325 AF, 11,837 AF, 11,828 AF, 11,155 AF, and 9,787 AF, respectively) was used to estimate Liberty Utilities' projected water demands during a five consecutive year drought period. Liberty Utilities' projected dry year water supplies over the next 25 years were based on the minimum supplies needed by Liberty Utilities to meet projected single-dry year demands. Table 7-2, Table 7-3, and Table 7-4 summarize Liberty Utilities' projected water demands and supplies over the next 25 years in five-year increments, including during normal years, single dry years, and a five consecutive year drought periods. These tables indicate Liberty Utilities can meet water demands during normal years, single dry years, and a five consecutive year drought period over the next 25 years.

7.2.3.1 WATER SERVICE RELIABILITY – NORMAL YEAR

Table 7-2 summarizes Liberty Utilities' projected water demands and supplies over the next 25 years in five-year increments during normal years. Table 7-2 indicates Liberty Utilities can meet water demands during normal years over the next 25 years.

Table 7-2 Normal Year Supply and Demand Comparison

Submittal Table 7-2 Retail: Normal Year Supply and Demand Comparison					
	2025	2030	2035	2040	2045 *(Opt)*
Supply totals *(autofill from Table 6-9)*	11,468	11,526	11,585	11,646	11,706
Demand totals *(autofill from Table 4-3)*	11,468	11,526	11,585	11,646	11,706
Difference	0	0	0	0	0
NOTES:					

7.2.3.2 WATER SERVICE RELIABILITY – SINGLE DRY YEAR

Table 7-3 summarizes Liberty Utilities' projected water demands and supplies over the next 25 years in five-year increments during single dry years. Table 7-3 indicates Liberty Utilities can meet water demands during single dry years over the next 25 years.

Table 7-3 Single Dry Year Supply and Demand Comparison

Submittal Table 7-3 Retail: Single Dry Year Supply and Demand Comparison					
	2025	2030	2035	2040	2045 (Opt)
Supply totals*	10,800	10,857	10,915	10,972	11,030
Demand totals*	10,800	10,857	10,915	10,972	11,030
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:					

7.2.3.3 WATER SERVICE RELIABILITY – FIVE CONSECUTIVE DRY YEARS

Table 7-4 summarizes Liberty Utilities' projected water demands and supplies over the next 25 years in five-year increments during five consecutive year drought periods. Table 7-4 indicates Liberty Utilities can meet water demands during five consecutive year drought periods over the next 25 years.

Table 7-4 Multiple Dry Years Supply and Demand Comparison

Submittal Table 7-4 Retail: Multiple Dry Years Supply and Demand Comparison						
		2025*	2030*	2035*	2040*	2045* (Opt)
First year	Supply totals	12,608	12,674	12,741	12,808	12,876
	Demand totals	12,608	12,674	12,741	12,808	12,876
	Difference	0	0	0	0	0
Second year	Supply totals	12,598	12,664	12,731	12,798	12,866
	Demand totals	12,598	12,664	12,731	12,798	12,866
	Difference	0	0	0	0	0
Third year	Supply totals	11,881	11,944	12,007	12,070	12,134
	Demand totals	11,881	11,944	12,007	12,070	12,134
	Difference	0	0	0	0	0
Fourth year	Supply totals	10,424	10,479	10,534	10,590	10,646
	Demand totals	10,424	10,479	10,534	10,590	10,646
	Difference	0	0	0	0	0
Fifth year	Supply totals	10,230	10,284	10,338	10,393	10,448
	Demand totals	10,230	10,284	10,338	10,393	10,448
	Difference	0	0	0	0	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:						

7.2.4 DESCRIPTION OF MANAGEMENT TOOLS AND OPTIONS

CWC 10620.

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

As noted in Section 6.2.2, the Central Basin is managed by the Central Basin Watermaster. During the period of management under the Judgment, significant drought events have occurred. In each drought cycle the Central Basin has been managed to maintain water levels. Therefore, based on historical and on-going management practices, Liberty Utilities will be able to rely on the Central Basin for adequate supply over the next 25 years under single dry years and five consecutive year drought periods.

Section 6.2.2 provides a description of the management of groundwater resources in the Central Basin, as well as information on basin management. Chapter 6 also demonstrates the management structure of the Central Basin provides a reliable source of groundwater supply for Liberty Utilities during a normal year, a single-dry year and a five consecutive year drought. Historical data indicates the Central Basin has been well managed for the full period of the adjudication, resulting in a stable and reliable water supply. Basin management changes are discussed in Section 6.2.2, and include increased direct use of recycled water (see Section 6.2.5and the planned use of treated recycled water for groundwater replenishment in the Central Basin. Therefore, the groundwater supplies in the Central Basin are deemed reliable.

7.3 DROUGHT RISK ASSESSMENT

CWC 10635.

(b) Every urban water supplier shall include, as part of its urban water management plan, a drought risk assessment for its water service to its customers as part of information considered in developing the demand management measures and water supply projects and programs to be included in the urban water management plan. The urban water supplier may conduct an interim update or updates to this drought risk assessment within the five-year cycle of its urban water management plan update. The drought risk assessment shall include each of the following:

(1) A description of the data, methodology, and basis for one or more supply shortage conditions that are necessary to conduct a drought risk assessment for a drought period that lasts five consecutive water years, starting from the year following when the assessment is conducted.

(2) A determination of the reliability of each source of supply under a variety of water shortage conditions. This may include a determination that a particular source of water supply is fully reliable under most, if not all, conditions.

(3) A comparison of the total water supply sources available to the water supplier with the total projected water use for the drought period.

(4) Considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.

Liberty Utilities' source of supplies consist of groundwater from the Central Basin (which is managed by the Central Basin Watermaster), treated imported water purchased through CBMWD and managed by the Metropolitan Water District of Southern California, and recycled water. The following discussion provides a DRA which assesses Liberty Utilities' water supply reliability over a five consecutive year drought period. Liberty Utilities' DRA incorporates a five consecutive year drought from CY 2021 through CY 2025 and includes a review of water supplies, water uses, and water supply reliability.

7.3.1 DRA DATA, METHODS, AND BASIS FOR WATER SHORTAGE CONDITION

Liberty Utilities' DRA was prepared using historical production data from Liberty Utilities' water supply sources. The following assumptions were considered during the preparation of Liberty Utilities' DRA for each year of the five consecutive year drought.

- The five consecutive year drought period associated with the 2020 UWMP is based on five consecutive dry years from CY 2021 through CY 2025.
- The projected water supplies available during each year of this five consecutive year drought are assumed to be identical to the water supplies produced during each year between CY 2011 and CY 2015 (which represents the most recent and historical five consecutive year drought).
- The projected demands during this five consecutive year drought are based on water demands from CY 2020 (a normal year) which were adjusted based on projected population over the next five years along with the ratio of the normal year demands to actual demands over each year of the most recent and historical five consecutive year drought period (from CY 2011 and CY 2015).
- The projected demands were compared to the projected supplies to identify potential water supply deficits which may require implementation of the Water Shortage Contingency Plan (discussed further in Chapter 8).

The following hypothetical methodologies were considered during the preparation of Liberty Utilities' DRA during for each year of the five consecutive year drought:

- Drought Year 1: The region had experienced an average to above average year of precipitation in the prior year. Water use in the prior year had been below average due to a reduce need for outdoor water use, the groundwater basin had been replenished from above average local stormwater runoff, and imported water supplies were not restricted.
- Drought Year 2: The region experienced a second year of below average precipitation and runoff. Retail customers increase water use for outdoor irrigation to compensate for lack of precipitation. Groundwater and imported water supplies have not been impacted. Drought Year 3: The region experienced a third year of below average precipitation and runoff. Retail customers increase water use for outdoor irrigation to compensate for lack of precipitation. Groundwater and imported water supplies have not been impacted. However, there is an increased demand on both groundwater and treated imported water.
- Drought Year 4: The region experienced a fourth year of below average precipitation and runoff. Groundwater supplies have not been impacted. However, there is an increased demand on groundwater.
- Drought Year 5: Fifth year of below average precipitation and runoff. Groundwater supplies have not been impacted. However, there is an increased demand on groundwater.

7.3.2 DRA INDIVIDUAL WATER SOURCE RELIABILITY

Liberty Utilities' DRA incorporates a five consecutive year drought based on five consecutive dry years commencing in CY 2021. The quantity of water supplies available for each year during this five consecutive year drought period included in Liberty Utilities' DRA is assumed to be the same as the quantity of water supplies produced by Liberty Utilities (i.e. demands) during the most recent and historical five consecutive year drought which occurred from CY 2011 through CY 2015. Production data for those years have been tabulated in Section 6.1. The following describes the anticipated reliability of its

water source for each year of the five consecutive year drought based on recent experience.

Groundwater

Liberty Utilities receives water supplies is from the Central Basin which is actively managed by the Central Basin Watermaster, as described in Section 6.2.2. The Central Basin is adjudicated; however, Liberty Utilities' water rights are fixed each year. Consequently, Liberty Utilities cannot produce in excess of its own water rights or rights it may have leased from others. The quantity of groundwater used (and reliably available) during the most recent and historical five consecutive year drought period have been tabulated in Section 6.1. Liberty Utilities manages its water supply portfolio to optimize the water supplies available each year and to avoid a water supply shortage. Liberty Utilities also had the ability to systematically implement aspects of its Water Shortage Contingency Plan (see Chapter 8). As a result of these collective actions (and experience during prior five consecutive year droughts), Liberty Utilities does not anticipate a water supply shortage.

Imported Water

Liberty Utilities purchases treated imported water from the Metropolitan Water District of Southern California through CBMWD. Section 6.2.1 describes the reliability of imported water supplies from Metropolitan Water District of Southern California regarding treated imported water supplies available to Liberty Utilities. The reliability of MWD's supplies is also discussed in its 2020 Regional UWMP which is incorporated by reference. Liberty Utilities purchases treated imported water which is delivered directly within its distribution system. Liberty Utilities' purchases of treated, imported water over the past ten years have been tabulated in Section 6.1. In the event of a drought which limits imported water supplies, Liberty Utilities will rely on its groundwater production.

The imported water purchases by Liberty Utilities during the most recent and historical five consecutive year drought period have been tabulated in Section 6.1. Because Liberty Utilities' DRA assumes the most recent and historical five consecutive year drought scenario will be repeated over the next five years, it is assumed the quantity of treated imported water supplies purchased during the most recent and historical five consecutive year drought scenario will be available. Furthermore, this constitutes the minimum amount of treated imported water which may be available in a future five consecutive year drought absent MWD's programs which it has since implemented.

Recycled Water

Liberty Utilities has a recycled water distribution system which it has developed over the years to reduced demands on its potable water supplies as described in Section 6.2.5. The availability of recycled water supplies is not adversely impacted by drought conditions and are locally available.

The quantity of recycled water used during the most recent and historical five consecutive year drought period have been tabulated in Section 6.1. The quantity of recycled water available during each year of the most recent and historical five consecutive year drought is expected to be available during a future five consecutive year drought.

Summary

Liberty Utilities' water system has experienced a prior five consecutive year drought with no limitation to its water supplies. However, the cost of those water supplies may have increased based on the mix of supplies which are used. Liberty Utilities has the ability to enact varying water shortage levels (see Chapter 8) to help educate its customers and provide an economic incentive for the retail customers to reduce their water consumption.

7.3.3 DRA TOTAL WATER SUPPLY AND USE COMPARISON

Gross water use for the projected five consecutive year drought is shown on Table 7-5. Section 7.3.2 describes the water source reliability for each source of supply Liberty Utilities will rely on during a five consecutive year drought. The annual quantities are the summed and are also provided on Table 7-5. For the purposes of Liberty Utilities' DRA, as a worst-case scenario, Liberty Utilities has considered no water supply augmentation (as indicated in Table 7-5) from its groundwater and imported water supplies. When necessary, Liberty Utilities can implement various water shortage levels of its Water Shortage Contingency Plan (as discussed in Chapter 8) in order to reduce its water demands. The total water supplies available to Liberty Utilities in Table 7-5 are based on the quantity of supplies available to Liberty Utilities (i.e. demands) during the most recent historical five consecutive year drought period (from CY 2011 through CY 2015). As shown in Table 7-5, assuming no additional water supply benefits will be available from groundwater supplies, Liberty Utilities will implement various stages of its Water Shortage Contingency Plan to balance water demands with available supplies during years 1, 2, 3, 4, and 5 of the projected five consecutive year drought.

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

Submittal Table 7-5: Five-Year Drought Risk Assessment Tables to address Water Code Section 10635(b)	
2021	**Total**
Total Water Use	11,991
Total Supplies	11,837
Surplus/Shortfall w/o WSCP Action	(154)
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	0
WSCP - use reduction savings benefit	154
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	1%
2022	**Total**
Total Water Use	12,136
Total Supplies	11,828
Surplus/Shortfall w/o WSCP Action	(308)
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	0
WSCP - use reduction savings benefit	308
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	3%
2023	**Total**
Total Water Use	11,590
Total Supplies	11,155
Surplus/Shortfall w/o WSCP Action	(435)
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	0
WSCP - use reduction savings benefit	435
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	4%
2024	**Total**
Total Water Use	10,297
Total Supplies	9,787
Surplus/Shortfall w/o WSCP Action	(510)
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	0
WSCP - use reduction savings benefit	510
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	5%
2025	**Total**
Total Water Use	10,230
Total Supplies	9,605
Surplus/Shortfall w/o WSCP Action	(625)
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	0
WSCP - use reduction savings benefit	625
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	6%

7.3.4 OPTIONAL PLANNING TOOL WORKBOOK

DWR has deemed the “Planning Tool Worksheet” as optional and Liberty Utilities is not required by DWR to use the tool. Liberty Utilities has provided sufficient water supplies to its customers, including during long-term droughts and years with historically high water demands. Liberty Utilities has also been able to provide water service to meet maximum day water demands for these years, including during the summer months. Liberty Utilities obtains the majority of its water supplies from a managed groundwater basin which is not subject to seasonal fluctuation. Consequently, an evaluation regarding water supplies on a monthly basis was not considered.

CHAPTER 8

WATER SHORTAGE CONTINGENCY PLAN

LAY DESCRIPTION – CHAPTER 8

WATER SHORTAGE CONTINGENCY PLAN

Chapter 8 (Water Shortage Contingency Plan) of Liberty Utilities – Park Water's 2020 Plan discusses and provides the following:

- Liberty Utilities' Water Shortage Contingency Plan is a detailed approach which presents how Liberty Utilities intends to act, or respond, in the case of an actual water shortage contingency.
- Preparation of Liberty Utilities' "Annual Water Supply and Demand Assessment" (or Annual Assessment) is discussed. Commencing July 1, 2022, Liberty Utilities is required to submit the Annual Assessment. The Annual Assessment will include a review of Liberty Utilities' "unconstrained" water demands for the current year and for a potential upcoming single dry year. Unconstrained water demands represent Liberty Utilities' water demands prior to any "response actions" Liberty Utilities may invoke pursuant to Liberty Utilities' Water Shortage Contingency Plan.
- Liberty Utilities will manage water supplies to minimize the adverse impacts of water shortages. Liberty Utilities' plan for water usage during periods of shortage is designed to incorporate six standard water shortage levels corresponding to progressive ranges from up to a 10, 20, 30, 40, and 50 percent shortage, and greater than a 50 percent shortage.
- For each declared water supply shortage level, customers will be required to reduce their consumption by the percentage specified in the corresponding water supply shortage level.

- For each declared water supply shortage level, Liberty Utilities has established response actions to reduce demand on water supplies and to reduce any shortage gaps in water supplies. These demand reduction actions include irrigation and other outdoor use restrictions, rate structure changes, and other water use prohibitions.
- The operational changes Liberty Utilities will consider in addressing water shortages on a short-term basis are discussed and include improved monitoring, analysis, and tracking of customer water usage to enforce demand reduction measures.
- Liberty Utilities' Emergency Response Plan is summarized. The Emergency Response Plan provides the management, procedures, and designated actions Liberty Utilities and its employees will implement during emergency situations (including catastrophic water shortages) resulting from natural disasters, system failures, and other unforeseen circumstances.
- The preparation of Liberty Utilities' seismic risk assessment and mitigation plan is discussed. The locations of earthquake faults in the vicinity of Liberty Utilities' water service area are provided.
- The effectiveness of the shortage response actions for each of Liberty Utilities' standard water shortage levels is presented. Liberty Utilities has been able to provide sufficient water supplies to its customers, including during long-term droughts and years with historically high water demands.
- The communication protocols implemented by Liberty Utilities when it declares any water shortage level are presented.
- The compliance and enforcement procedures associated with Liberty Utilities' standard water shortage levels are presented.
- The legal authorities associated with Liberty Utilities' standard water shortage levels are presented.
- The financial consequences associated with Liberty Utilities' standard water shortage levels are presented.

- Liberty Utilities will evaluate the need for revising the Water Shortage Contingency Plan in order to resolve any water shortage gaps, as necessary. The steps necessary for Liberty Utilities to adopt and amend its Water Shortage Contingency Plan are presented.

The following Water Shortage Contingency Plan includes references to Chapters and Sections from Liberty Utilities – Park Water's 2020 Urban Water Management Plan:

8.1 WATER SUPPLY RELIABILITY ANALYSIS

CWC 10632.

(a)(1) The analysis of water supply reliability conducted pursuant to Section 10635.

Liberty Utilities' sources of supply were discussed in Section 6.2 of the 2020 UWMP and consist of groundwater from the Central Basin and treated imported water purchased from CBMWD. In addition, Liberty Utilities provides recycled water for irrigation instead of potable supplies. The Central Basin is adjudicated, and groundwater supplies are managed. The reliability of the various sources of supply are discussed in Chapter 7 of the 2020 UWMP. Imported water supplies may be impacted in the event MWD implements its WSAP due to a water supply shortage. Finally, recycled water is locally generated and is not impacted by drought conditions.

8.2 ANNUAL WATER SUPPLY AND DEMAND ASSESSMENT PROCEDURES

CWC 10632.

(a)(2) The procedures used in conducting an annual water supply and demand assessment that include, at a minimum, both of the following:

(A) The written decision-making process that an urban water supplier will use each year to determine its water supply reliability.

(B) The key data inputs and assessment methodology used to evaluate the urban water supplier's water supply reliability for the current year and one dry year, including all of the following:

(i) Current year unconstrained demand, considering weather, growth, and other influencing factors, such as policies to manage current supplies to meet demand objectives in future years, as applicable.

(ii) Current year available supply, considering hydrological and regulatory conditions in the current year and one dry year. The annual supply and demand assessment may consider more than one dry year solely at the discretion of the urban water supplier.

(iii) Existing infrastructure capabilities and plausible constraints.

(iv) A defined set of locally applicable evaluation criteria that are consistently relied upon for each annual water supply and demand assessment.

(v) A description and quantification of each source of water supply.

CWC 10632.1.

An urban water supplier shall conduct an annual water supply and demand assessment pursuant to subdivision (a) of Section 10632 and, on or before July 1 of each year, submit an annual water shortage assessment report to the department with information for anticipated shortage, triggered shortage response actions, compliance and enforcement actions, and communication actions consistent with the supplier's water shortage contingency plan. An urban water supplier that relies on imported water from the State Water Project or the Bureau of Reclamation shall submit its annual water supply and demand assessment within 14 days of receiving its final allocations, or by July 1 of each year, whichever is later.

Commencing July 1, 2022, Liberty Utilities is required to submit an "Annual Water Supply and Demand Assessment" (Annual Assessment) in accordance with DWR's guidance and requirements. The Annual Assessment will include a review of Liberty Utilities'

unconstrained water demands (i.e. water demands prior to any projected response actions Liberty Utilities may trigger under this WSCP) for the current year and the upcoming (potential single dry) year. Liberty Utilities will also include information regarding anticipated shortages, triggered shortage response actions, compliance and enforcement actions, and communication actions consistent with the Liberty Utilities' WSCP.

For each Annual Assessment, Liberty Utilities plans to prepare a preliminary assessment which evaluates the adequacy of its water supplies for the current and upcoming years by April of each year. The preliminary assessment will include a review of water supplies for at least a single dry year.

The components of an Annual Assessment consist of the following:

- A written decision-making process
- Key data inputs and assessment methodology

8.2.1 DECISION MAKING PROCESS

Liberty Utilities produces groundwater from the Central Basin as its primary source of water supply and this basin is managed on a fiscal year basis. Consequently, during the third quarter of each fiscal year Liberty Utilities will review its water demands from the initial six months along with the current groundwater basin conditions and local hydrology. This information will be used to help develop the Annual Assessment. A draft of the Annual Assessment will be circulated internally within Liberty Utilities for peer review and comment. Based on comments received, a redraft will be prepared and provided to Liberty Utilities managers during the Spring of each year. The draft subsequently will be provided to the General Manager for final review. Subsequently, a final draft of the Annual Assessment will be provided to the Liberty Utilities' Board of Directors for review and included in the agenda as part of a Board meeting such that it can be approved and any

recommended specific shortage response actions may be enacted. The final Annual Assessment will be provided to DWR no later than July 1 of each year.

The Annual Assessments will be instrumental in providing guidance to Liberty Utilities for decisions regarding potential declarations of a water supply shortage and implementation of water reduction stages, instituting mandatory water restrictions, promoting water use efficiency and conservation programs, water rates and drought rate surcharges, and the necessity of pursuing alternative water supplies. This process will help ensure adequate water supplies resources are available to Liberty Utilities.

8.2.2 DATA AND METHODOLOGIES

The key data inputs and methodologies which will be evaluated by Liberty Utilities during the preparation of the preliminary assessment will include the following:

1) Evaluation Criteria: The locally applicable evaluation criteria used to prepare the Annual Assessment will be identified. The evaluation criteria will include, but is not limited to, an analysis of current local hydrology (including rainfall and groundwater levels), current water demands, a review of water system improvement plans which may impact infrastructure availability, and water quality regulations which may impact groundwater availability.

2) Water Supply: A description of each available water supply source will be provided. The descriptions will include a quantification of each available water supply source and will be based on review of current production capacities, historical production, UWMPs, and prior water supply studies (including Water Supply Assessments and/or Master Plans).

3) Unconstrained Water Demand: The potential unconstrained water demands during the current year and the upcoming (potential single dry) year, prior to any special shortage response actions, will be reviewed. The review will include factors such as weather, existing and projected land uses and populations, actual customer consumption and water use factors, monthly Urban Water Supplier Monthly Reports, existing water shortage levels (see Section 8.3), and existing water conservation ordinances (see Section 9.2.1).

4) Planned Water Use for Current Year Considering Dry Subsequent Year: The water supplies available to meet the demands during the current year and the upcoming (potential single dry) year will be considered and identified by each type of supply. The evaluation will include factors such as estimated water demands, weather, groundwater basin operating safe yields, water quality results, existing available pumping capacities, imported water allocations, contractual obligations, regulatory issues, use of emergency interconnections, and the costs associated with producing each water supply source.

5) Infrastructure Considerations: The capabilities of the water distribution system infrastructure to meet the water demands during the current year and the upcoming (potential single dry) year will be considered. Available production capacities (e.g. groundwater well capacities) and distribution system water losses (see Section 4.2.4) will be reviewed. In addition, capital improvement and replacement projects, as well as potential projects which may increase water system and production capacities (see Section 6.2.8), will be considered.

6) Other Factors: Additional local considerations, if any, which can affect the availability of water supplies will be described.

8.3 SIX STANDARD WATER SHORTAGE LEVELS

CWC 10632.

(a)(3)(A) Six standard water shortage levels corresponding to progressive ranges of up to 10, 20, 30, 40, and 50 percent shortages and greater than 50 percent shortage. Urban water suppliers shall define these shortage levels based on the suppliers' water supply conditions, including percentage reductions in water supply, changes in groundwater levels, changes in surface elevation or level of subsidence, or other changes in hydrological or other local conditions indicative of the water supply available for use. Shortage levels shall also apply to catastrophic interruption of water supplies, including, but not limited to, a regional power outage, an earthquake, and other potential emergency events.
(a)(3)(B) An urban water supplier with an existing water shortage contingency plan that uses different water shortage levels may comply with the requirement in subparagraph (A) by developing and including a cross reference relating its existing categories to the six standard water shortage levels.

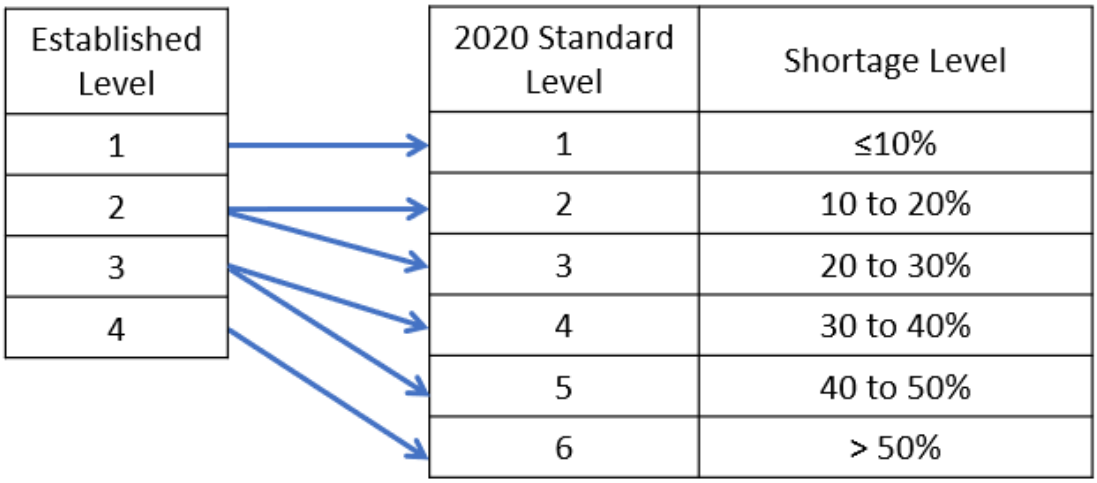
Liberty Utilities will manage water supplies prudently to minimize the adverse impacts of water shortages. Liberty Utilities' plan for water usage during periods of shortage is designed to incorporate six standard water shortage levels corresponding to progressive ranges from up to 10, 20, 30, 40, and 50 percent shortages, and greater than 50 percent shortage.

For each declared water supply shortage level, customers will be required to reduce their consumption by the percentage specified in the corresponding water supply shortage level. The required percentage reduction for each customer will be based on water usage during the same billing period in the last calendar year during which there were no declared water shortages.

CPUC's Rule 14.1 ("Water Conservation and Rationing Plan"), updated in September 2015, and the Park Water Company Schedule 14.1 ("Water Shortage Contingency Plan with Staged Mandatory Reductions, Restrictions and Drought Surcharges"), previously established four (4) water shortage levels. A copy of Rule 14.1 and Park Water Company Schedule 14.1 is provided in Appendix K. In accordance with CWC in which urban water

suppliers are required to define six (6) standard water shortage levels, Liberty Utilities has developed the crosswalk illustrated below that translates Liberty Utilities' previously established shortage levels to the mandated standard shortage levels.

Corresponding Relationships Between Supplier's 2015 Shortage Levels and the 2020 WSCP Mandated Shortage Levels



Established Level	2020 Standard Level	Shortage Level
1	1	≤10%
2	2	10 to 20%
3	3	20 to 30%
4	4	30 to 40%
	5	40 to 50%
	6	> 50%

Table 8-1 provides a description of the six water shortage levels, which may be triggered by a shortage in Liberty Utilities' water supply source, depending on the severity of the shortage and its anticipated duration.

Table 8-1 Water Shortage Contingency Planning Levels

Submittal Table 8-1 Water Shortage Contingency Plan Levels		
Shortage Level	**Percent Shortage Range**	**Shortage Response Actions** (*Narrative description*)
1	Up to 10%	Outdoor irrigation is restricted to no more than three (3) days per week, no more than 10 minutes per day per station, with no watering between 8:00 a.m. and 7:00 p.m. All leaks, breaks, or other malfunction must be repaired within five (5) days of written notification.
2	Up to 20%	In addition to Shortage Level 1; Outdoor irrigation is restricted to no more than two (2) days per week. All leaks, breaks, or other malfunction must be repaired within three (3) days of written notification. All usage in excess of the residential customer's allocation will be charged at the regular Schedule No. 1 quantity rate plus a drought emergency surcharge rate that is calculated from the Tier 1 quantity rate multiplied by a factor of 1.0. All usage for non-residential customers served under Tariff Schedule No. 3 will be charged at the regular Schedule No. 3 quantity rate plus a drought emergency surcharge rate that is calculated as the quantity rate multiplied by a factor of 0.15.
3	Up to 30%	In addition to Shortage Level 2, Liberty Utilities - Apple Valley may add actions if conditions warrant.
4	Up to 40%	In addition to Shortage Level 3; All usage in excess of the residential customer's allocation will be charged at the regular Schedule No. 1 quantity rate plus a drought emergency surcharge rate that is calculated from the Tier 1 quantity rate multiplied by a factor of 1.5. All usage for non-residential customers served under Tariff Schedule No. 3 will be charged at the regular Schedule No. 3 quantity rate plus a drought emergency surcharge rate that is calculated as the quantity rate multiplied by a factor of 0.30.
5	Up to 50%	In addition to Shortage Level 4, Liberty Utilities - Apple Valley may add actions if conditions warrant.
6	>50%	In addition to Shortage Level 5; All usage in excess of residential customer's allocation will be charged at the regular Schedule No.1 quantity rate plus a drought emergency surcharge rate that is calculated from the Tier 1 quantity rate multiplied by a factor of 2.0. All usage for non-residential customers served under Tariff
NOTES:		

8.4 SHORTAGE RESPONSE ACTIONS

CWC 10632.

(a)(4) Shortage response actions that align with the defined shortage levels and include, at a minimum, all of the following:

(A) Locally appropriate supply augmentation actions.

(B) Locally appropriate demand reduction actions to adequately respond to shortages.

(C) Locally appropriate operational changes.

(D) Additional, mandatory prohibitions against specific water use practices that are in addition to state-mandated prohibitions and appropriate to the local conditions.

(E) For each action, an estimate of the extent to which the gap between supplies and demand will be reduced by implementation of the action.

Shortage response actions are dependent on the severity of a declared shortage level. Response actions implement varying improvements and regulations of system infrastructure and operations, water supply augmentation, demand reduction initiatives and other water use functions to conserve water supplies.

Liberty Utilities is an investor-owned Supplier and is subject to CPUC approval to establish and activate necessary shortage response actions and corresponding water shortage levels pursuant to CPUC Rule 14.1 (“Water Conservation and Rationing Plan”). Liberty Utilities may express a need for customers to practice voluntary or mandatory conservation measures. If Liberty Utilities finds it necessary, Liberty Utilities may request to activate a water shortage level which would implement fines and surcharges in addition to mandatory conservation measures after establishing Park Water Company Schedule 14.1 (“Water Shortage Contingency Plan with Staged Mandatory Reductions, Restrictions and Drought Surcharges”). Copies of these CPUC documents are in Appendix K.

8.4.1 DEMAND REDUCTION

Liberty Utilities may establish water shortage response actions to reduce demand on water supplies. These demand reduction actions include irrigation and other outdoor use restrictions, rate structure changes, and other water use prohibitions. Depending on the percent reduction in Liberty Utilities' water supply and corresponding water shortage level, regulations are made to conserve water and reduce the shortage gap in normal supply levels. Many demand reduction actions, identified as voluntary or mandatory conservation measures, are applicable to all levels of water shortages. The structure of water shortage levels are designed to strongly encourage customers with high per capita usage to achieve proportionally greater reduction than those with low usage. Violations of these demand reduction actions will be considered waste and an unreasonable use of water. Table 8-2 describes each demand reduction action and its effect on reducing the shortage gap.

If water supplies are projected to be insufficient to meet normal customer demand, and are beyond control of Liberty Utilities, Liberty Utilities may elect to activate voluntary conservation using the following demand reduction actions:

- Use of potable water for more than minimal landscaping, as defined in the landscaping regulation of the jurisdiction or as described in Article 10.8 of the California Government Code in connection with new construction.
- Excessive use of water Liberty Utilities has notified the customer in writing to repair a broken or defective plumping, sprinkler, watering, or irrigation system and the customer has failed to effect such repairs within five (5) business days.
- Use of potable water which results in flooding or runoff in gutters or streets.
- Individual private washing of cars with a hose except with the use of a positive action shut-off nozzle. Use of potable water for washing commercial aircraft, cars, buses, boats, trailers, or other commercial vehicles at any time, except at

commercial or fleet vehicle or boat washing facilities operated at a fixed location where equipment using water is properly maintained to avoid wasteful use.

- Use of potable water washing buildings, structures, driveways, patios, parking lots, tennis courts, or other hard-surfaced areas, except in the cases where health and safety are at risk.
- Use of potable water to irrigate turf lawns, gardens, or ornamental landscaping by means other than drip irrigation, or hand watering without quick acting positive action shut-off nozzles, on a specific schedule, for example: 1) before 9:00 a.m. and after 5:00 p.m.; 2) every other day; or 3) selected days of the week.
- Use of potable water for street cleaning with trucks, except for initial wash-down for construction purposes (if street sweeping is not feasible), or to protect the health and safety of the public.
- Use of potable water for construction purposes, such as consolidation of backfill, dust control, or other uses unless no other source of water or other method can be used.
- Use of potable water for construction purposes unless no other source of water or method can be used.
- Use of potable water for street cleaning.
- Operation of commercial car washes without recycling at least 50 percent of the potable water used per cycle.
- Use of potable water for watering outside plants, lawn, landscape, and turf areas during certain hours if and when specified in Schedule 14.1 when the schedule is in effect.
- Use of potable water for decorative fountains of the filling or topping off of decorative lakes or ponds which utilize recycled water.
- Use of water by any restaurant except upon the request of a patron.
- Use of potable water to flush hydrants, except where required for public health or safety.

The following demand reduction actions are effective in times of mandatory conservation and apply to all water shortage levels:

- The application of potable water to outdoor landscapes in a manner that causes runoff such that water flow onto adjacent property, non-irrigated areas, private and public walkways, roadways, parking lots, or structures,
- The use of a hose that dispenses potable water to wash a motor vehicle, except where the hose is fitted with a shut-off nozzle or device attached to it that causes it to cease dispensing water immediately when not in use.
- The use of potable water for washing buildings, structures, sidewalks, walkways, patios, tennis courts, or other hard-surfaced, non-porous areas.
- The use of potable was in a fountain or other decorative water feature, except where the water is part of recirculating system.
- The use of potable water for watering outside plants, lawn, landscape, and turf area during certain hours prohibited by applicable laws, during and up to 48 hours after measurable rainfall (0.1” or more).
- Liberty Utilities will promptly notify customers when aware of leaks within the customer’s control. The failure to promptly repair leaks, breaks, or other malfunction resulting in water waste in a customer’s domestic or outdoor water system after notification by Liberty Utilities, unless other, specific arrangements are made with and agreed to by Liberty Utilities.
- The serving of water, other than upon request, in eating and drinking establishments, including but not limited to restaurants, hotels, cafes, bars, or other public places where food or drink are served and/or purchased.
- Hotels/ motels must provide guests with the option of choosing not to have towels and linens laundered daily and prominently display notice of this option in each guestroom.
- The use of potable water for irrigation of ornamental turf on public street medians.

- The use of potable water for irrigation outside of newly constructed homes and buildings that is not delivered by drip or micro spray systems.
- Commercial, industrial, and institutional properties, such as campuses, golf courses, and cemeteries, immediately implement water efficiency measures to reduce potable water use in an amount consistent with the mandated reduction.
- Further reduction in or the complete prohibition of any other use of water declared non-essential, unauthorized, prohibited, or unlawful by an unauthorized government or regulatory agency or official.
- Use of potable water for watering streets with trucks, or other vehicles, except for initial wash-down for construction purposes (if street sweeping is not feasible), or to protect the health and safety of the public.

The following stages will be implemented as needed to achieve reduction in the shortage gap. Liberty Utilities may implement Water Supply Shortage Level 2 and the associated Drought Emergency Surcharge without first implementing Water Supply Shortage Level 1 if warranted by the mandated reduction in the shortage gap.

Water Supply Shortage Level 1

The following restrictions are in effect during Water Supply Shortage Level 1:

- Outdoor irrigation is restricted to no more than three (3) days per week:

Addresses Ending In:	Watering Days
Even Numbers (0, 2, 4, 6, 8)	Monday, Wednesday, and Saturday
Odd Numbers (1, 3, 5, 7, 9)	Tuesday, Thursday, and Sunday

Additional restrictions:

- Watering or outdoor irrigation of outside plants, lawn, landscape, and turf areas with potable water using a landscape irrigation system or a watering device that is not continuously attended is limited to no more than 10 minutes of watering per day per station, with no watering between 8:00 a.m. and 7:00 p.m. This provision

does not apply to landscape irrigation zones that exclusively use drip-type irrigation systems that use less than 1.0 inch per hour. This provision also does not apply to watering or irrigating by use of a hand-held bucket or similar container, a hand-held hose equipped with a positive shut-off nozzle or device that causes it to cease dispensing water immediately when not in use, or for the express purpose of adjusting or repairing an irrigation system. However, no irrigation can occur regardless of method that results in runoff.

- Apart from the above outdoor irrigation restrictions, when a city, county, or other public agency in Liberty Utilities' service area adopts restrictions on the number of days or hours of that day that customers may irrigate that are different than those adopted by Liberty Utilities, Liberty Utilities may adopt the city, county, or other local public agency's restrictions.
- All leaks, breaks, or other malfunction in the customer's plumbing fixtures and/or irrigation system must be repaired within five (5) days of written notification by Liberty Utilities, unless other arrangements are made with Liberty Utilities.
- Failure to comply with these restrictions may result in the installation of a flow restrictor device along with associated fees for installation and removal.
- Failure to company with these restrictions may result in the installation of a real time measurement device on the customer's service line to provide the customer and Liberty Utilities with access to information from the device. The cost of the device, including installation, shall be billed to the customer, and nonpayment may result in discontinuance of service.
- If conditions warrant, Liberty Utilities will change the number of watering days and the specific days of watering after first notifying its customers in accordance with Rule 14.1.
- If conditions warrant, Liberty Utilities will change the number of days allowed for a customer to fix leaks, breaks, or other malfunction after first notifying its customers in accordance with Rule No. 14.1.

Water Supply Shortage Level 2

In addition to the restrictions identified in Water Supply Shortage Level 1, the following allocations and drought emergency surcharges are in effect during Water Supply Shortage Level 2:

- Outdoor irrigation is restricted to no more than two (2) days per week for non-residential customers. Watering or outdoor irrigation of outside plants, lawn, landscape, and turf areas with potable water using a landscape irrigation system or a watering device that is not continuously attended is limited to no more than 10 minutes of watering per day per station.
- All leaks, breaks, or other malfunction in the customer's plumbing fixtures and/or irrigation system must be repaired within three (3) days of written notification by Liberty Utilities, unless other arrangements are made with Liberty Utilities.
- The use of potable water to refill residential swimming pools or outdoor spas more than one foot or initial filling with potable water except when existing pools are drained to repair leaks.
- All customers will have their baseline established by using the system wide average use for 2013.
- The customer's allocation will be based on the 2013 baseline less 8%.
- Residential customer's allocation will be set at nine (9) Ccf per month for the months of November, December, January, February, March, April, and May. For the months of June, July, August, September, and October the allocation will be set at twelve (12) Ccf per month.
- All usage in excess of the residential customer's allocation will be charged at the regular Schedule No. PR-1-R quantity rate plus a drought emergency surcharge rate that is calculated from the Tier 1 quantity rate multiplied by a factor of 0.5.
- All usage for non-residential customers served under Tariff Schedule No. PR-1-NR will be charged at the regular Schedule No. PR-1-NR quantity rate plus a drought emergency surcharge rate that is calculated as the quantity rate multiplied by a factor of 0.10.

- If feasible, the customer's allocation may be based on a customer's consumption during a historical base period and will include a percentage reduction designed to meet necessary water use reductions. In addition to the normal rate paid of the unit of water, a drought surcharge will be charged to the customer for each unit of water used over the established allocation for the billing period.

Water Supply Shortage Level 3

In addition to the restrictions identified in Water Supply Shortage Level 2, the following allocations and drought emergency surcharges are in effect during Water Supply Shortage Level 3:

- If conditions warrant, Liberty Utilities may add additional demand reduction actions.

Water Supply Shortage Level 4

In addition to the restrictions identified in Water Supply Shortage Level 3, the following allocations and drought emergency surcharges are in effect during Water Supply Shortage Level 4:

- Outdoor irrigation is restricted to no more than one (1) day per week. Watering or outdoor irrigation of outside plants, lawn, landscape, and turf areas with potable water using a landscape irrigation system or a watering device that is not continuously attended is limited to no more than five (5) minutes of watering per day per station.
- All usage in excess of residential customer's allocation will be charged at the regular Schedule No. PR-1-R quantity rate plus a drought emergency surcharge rate that is calculated from the Tier 1 quantity rate multiplied by a factor of 1.0.
- All usage for non-residential customers served under Tariff Schedule No. PR-1-NR will be charged at the regular Schedule No. PR-1-NR quantity rate plus a drought emergency surcharge rate that is calculated as the quantity rate multiplied by a factor of 0.20.
- If conditions warrant, Liberty Utilities may add additional demand reduction actions.

Water Supply Shortage Level 5

In addition to the restrictions identified in Water Supply Shortage Level 4, the following allocations and drought emergency surcharges are in effect during Water Supply Shortage Level 5:

- If conditions warrant, Liberty Utilities may add additional demand reduction actions.

Water Supply Shortage Level 6

In addition to the restrictions identified in Water Supply Shortage Level 5, the following allocations and drought emergency surcharges are in effect during Water Supply Shortage Level 6:

- Outdoor irrigation is restricted to no more than one (1) day per week. Watering or outdoor irrigation of outside plants, lawn, landscape, and turf areas with potable water using a landscape irrigation system or a watering device that is not continuously attended is limited to no more than five (5) minutes of watering per day per station.
- All usage in excess of residential customer's allocation will be charged at the regular Schedule No. PR-1-R quantity rate plus a drought emergency surcharge rate that is calculated from the Tier 1 quantity rate multiplied by a factor of 1.5.
- All usage for non-residential customers served under Tariff Schedule No. PR-1-NR will be charged at the regular Schedule No. PR-1-NR quantity rate plus a drought emergency surcharge rate that is calculated as the quantity rate multiplied by a factor of 0.30.
- If conditions warrant, Liberty Utilities may add additional demand reduction actions.

Table 8-2 Demand Reduction Actions

Submittal Table 8-2: Demand Reduction Actions				
Shortage Level	Demand Reduction Actions ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.*	How much is this going to reduce the shortage gap? *Include units used (volume type or percentage)*	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? ***For Retail Suppliers Only*** *Drop Down List*
Add additional rows as needed				
1	Landscape - Limit landscape irrigation to specific days	Collective reduction from all Shortage Level 1 actions is up to 664 AFY	Maximum 23days a week.	Yes
1	Landscape - Limit landscape irrigation to specific times	Collective reduction from all Shortage Level 1 actions is up to 664 AFY	between 8 a.m. or after 7 p.m.	Yes
2	Other	Collective reduction from Shortage Level 1 plus all Shortage Level 2 actions is up to 1,329 AFY	All actions under Shortage Level 1	Yes
2	Implement or Modify Drought Rate Structure or Surcharge	Collective reduction from all Shortage Level 2 actions is up to 1,329 AFY	All users in excess of allocation will be charged regular rate plus surcharge.	Yes
3	Other	Collective reduction from Shortage Level 2 plus all Shortage Level 3 actions is up to 1,993 AFY	All actions under Shortage Level 2	Yes
4	Other	Collective reduction from Shortage Level 3 plus all Shortage Level 4 actions is up to 2,658 AFY	All actions under Shortage Level 3	Yes
4	Implement or Modify Drought Rate Structure or Surcharge	Collective reduction from all Shortage Level 4 actions is up to 2,658 AFY	All users in excess of allocation will be charged regular rate plus surcharge.	Yes
5	Other	Collective reduction from Shortage Level 4 plus all Shortage Level 5 actions is up to 3,322 AFY	All actions under Shortage Level 4	Yes
6	Other	Collective reduction from Shortage Level 5 plus all Shortage Level 6 actions is greater than 3,322 AFY	All actions under Shortage Level 5	Yes
6	Implement or Modify Drought Rate Structure or Surcharge	Collective reduction from all Shortage Level 6 actions is greater than 3,322 AFY	All users in excess of allocation will be charged regular rate plus surcharge.	Yes
NOTES:				

8.4.2 SUPPLY AUGMENTATION

Liberty Utilities does not plan to add a new source of water supply to address customer demands, but instead will consider increased supplies from existing sources. Table 8-3 reflects this approach and does not identify any new supplies. Instead, Liberty Utilities will focus on demand reduction measures in the event existing sources of supply are not sufficient to meet customer demands. As discussed in Chapter 6, Liberty Utilities' source of water supply is groundwater produced from the Central Basin, imported surface water purchased from MWD through CBMWD, and recycled water supplies provided by LACSD. As noted in Section 8.2, beginning July 1, 2022, Liberty Utilities will prepare and submit an Annual Assessment which will include a review of water supplies available to meet water demands for the current and upcoming years. If Liberty Utilities is currently in, or considers entering into, one of the standard water shortage levels identified in Section 8.3, Liberty Utilities will consider the water supply (augmentation) actions described below.

Table 8-3 Supply Augmentation and Other Actions

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			
1	Transfers	Not applicable (see Notes)	
2	Transfers	Not applicable (see Notes)	
3	Transfers	Not applicable (see Notes)	
4	Transfers	Not applicable (see Notes)	
5	Transfers	Not applicable (see Notes)	
6	Transfers	Not applicable (see Notes)	
NOTES: Liberty Utilities - Park Water will consider increased production from the Central Basin using existing facilities to address increased demands. As noted on Table 8-2, Liberty Utilities - Park Water plans to implement demand reduction measures in the event water supplies from existing sources are not sufficient to meet anticipated demands.			

8.4.3 OPERATIONAL CHANGES

During a water supply shortage situation, Liberty Utilities will manage its water supply resources to provide sufficient water supplies capable of meeting the demands of its customers. Section 8.4.2 describes Liberty Utilities' water supply source and water supply augmentation actions available. Section 8.4.1 describes Liberty Utilities' standard water shortage levels and associated demand reduction measures. The supply augmentation actions and demand reduction measures, when implemented, may potentially result in short-term operational changes which are necessary to allow Liberty Utilities to utilize all available water supply sources in response to water shortage situations.

As noted in Section 8.2, beginning July 1, 2022, Liberty Utilities will prepare and submit an Annual Assessment which will include a review of the water supplies available to meet water demands for the current and upcoming years. Preparation of the Annual Assessment will assist Liberty Utilities in determining any potential operational changes. In addition, Liberty Utilities' standard water shortage levels and the associated demand reduction measures, in conjunction with Liberty Utilities' existing Demand Management Measures (DMM) (discussed in Chapter 9), will be essential to Liberty Utilities in reducing water demands during any water shortage period. The operational changes Liberty Utilities will consider in addressing non-catastrophic water shortages on a short-term basis include the following:

- Improved monitoring, analysis, and tracking of customer water usage to enforce demand reduction measures.
- Optimized production from existing available water supply sources.
- Potential use of emergency supply sources, including emergency interconnections.
- Potential blending of water supply resources.
- Improved monitoring, maintenance, and repairs to reduce water distribution system losses.

8.4.4 ADDITIONAL MANDATORY RESTRICTIONS

The mandatory restrictions which are implemented by Liberty Utilities to reduce customer demands are discussed in Section 8.4.1. There are no additional mandatory restrictions planned at this time.

8.4.5 EMERGENCY RESPONSE PLAN

Catastrophic water shortages are incorporated in Liberty Utilities' standard water shortage levels (identified in Section 8.3) and the associated demand reduction measures (described in Section 8.4.1). In addition to the water supply augmentation actions (Section 8.4.2) and potential operational changes (Section 8.4.3) which Liberty Utilities may consider in order to continue providing sufficient water supplies, Liberty Utilities will review and implement any necessary steps included in its "Emergency Response Plan".

As part of the "America's Water Infrastructure Act of 2018", community water systems serving a population greater than 3,300 people, including Liberty Utilities, are required to review and update their "Risk and Resilience Assessment" (RRA) and the associated "Emergency Response Plan" (ERP) every five (5) years. However, due to security concerns regarding the submitting of these reports, water systems are required to submit certifications to the United States Environment Protection Agency (USEPA), from March 31, 2020 and December 30, 2021, confirming the current RRA and ERP have been reviewed and updated.

Liberty Utilities' RRA, prepared in 2021, evaluates the vulnerabilities, threats, and consequences from potential hazards to Liberty Utilities' water system. Liberty Utilities' RRA is being prepared by evaluating the following items:

- Natural hazards and malevolent acts (i.e., all hazards);
- Resilience of water facility infrastructure (including pipes, physical barriers, water sources and collection, treatment, storage and distribution facilities, and electronic, computer and other automated systems);
- Monitoring practices;
- Financial systems (e.g., billing systems);
- Chemical storage and handling; and
- Operation and maintenance.

Liberty Utilities' RRA evaluates a series of potential malevolent acts, natural hazards, and other threats in order to estimate the potential "monetized risks" (i.e. associated economic consequences to both the water system and surrounding region, and the likelihood of occurrence) associated with Liberty Utilities' water facility assets. The cost-effectiveness of implementing potential countermeasures to reduce risks is also under review.

Liberty Utilities' ERP, prepared in 2021, provides the management, procedures, and designated actions Liberty Utilities and its employees will implement during emergency situations (including catastrophic water shortages) resulting from natural disasters, system failures, and other unforeseen circumstances. Liberty Utilities' ERP (which is incorporated by reference) provides the guidelines for evaluating an emergency situation, procedures for activating an emergency response, and details of the different response phases in order to ensure that customers receive a reliable and adequate supply of potable water. The scope of the ERP includes emergencies which directly affect the water system and the ability to maintain safe operations (such as a chlorine release, and earthquake, or a threat of contamination). The ERP also incorporates the results of Liberty Utilities RRA and includes the following:

- Strategies and resources to improve resilience, including physical and cybersecurity.
- Plans and procedures for responding to a natural hazard or malevolent act.
- Actions and equipment to lessen the impact of a natural hazard or malevolent act.
- Strategies to detect natural hazards or malevolent act.

Liberty Utilities will review the ERP for procedures regarding the utilization of alternative water supply sources in response to water supply shortages, including during the standard water shortage levels. Liberty Utilities will also review applicable procedures described in the ERP regarding any necessary temporary shutdown of water supply facilities, including appropriate regulatory and public notifications.

8.4.6 SEISMIC RISK ASSESSMENT AND MITIGATION PLAN

CWC 10632.5.

(a) In addition to the requirements of paragraph (3) of subdivision (a) of Section 10632, beginning January 1, 2020, the plan shall include a seismic risk assessment and mitigation plan to assess the vulnerability of each of the various facilities of a water system and mitigate those vulnerabilities.

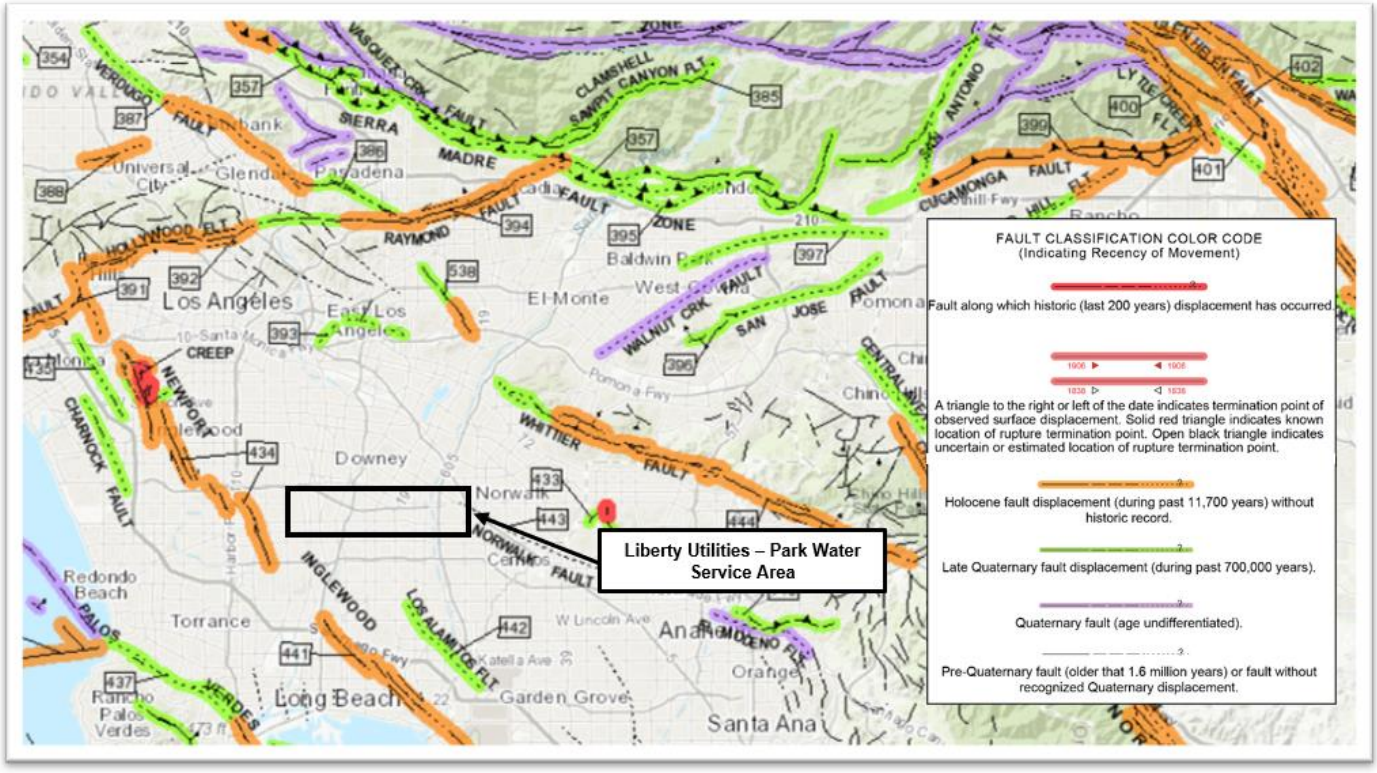
(b) An urban water supplier shall update the seismic risk assessment and mitigation plan when updating its urban water management plan as required by Section 10621.

(c) An urban water supplier may comply with this section by submitting, pursuant to Section 10644, a copy of the most recent adopted local hazard mitigation plan or multihazard mitigation plan under the federal Disaster Mitigation Act of 2000 (Public Law 106-390) if the local hazard mitigation plan or multihazard mitigation plan addresses seismic risk.

The County of Los Angeles prepared an “All-Hazards Mitigation Plan” in 2019 which identified methods to assess significant natural hazards (including earthquakes) affecting areas throughout Los Angeles County, and the mitigation strategies necessary to reduce risks, including seismic risk. The County’s All-Hazards Mitigation Plan is provided in Appendix L.

The California Geological Survey has published the locations of numerous faults which have been mapped in the Southern California region. Although the San Andreas fault is the most recognized and is capable of producing an earthquake with a magnitude greater than 8 on the Richter scale, some of the lesser-known faults have the potential to cause significant damage. The locations of these earthquake faults in the vicinity of Liberty Utilities' water service area are provided in the figure below. The faults that are located in close proximity to and could potentially cause significant shaking in Liberty Utilities' water service area include the San Andreas Fault, the Whittier Fault, the Los Alamitos Fault, the Whittier Fault, the Norwalk Fault, the Newport-Inglewood Fault, and the East Montebello fault.

Location of Earthquake Faults

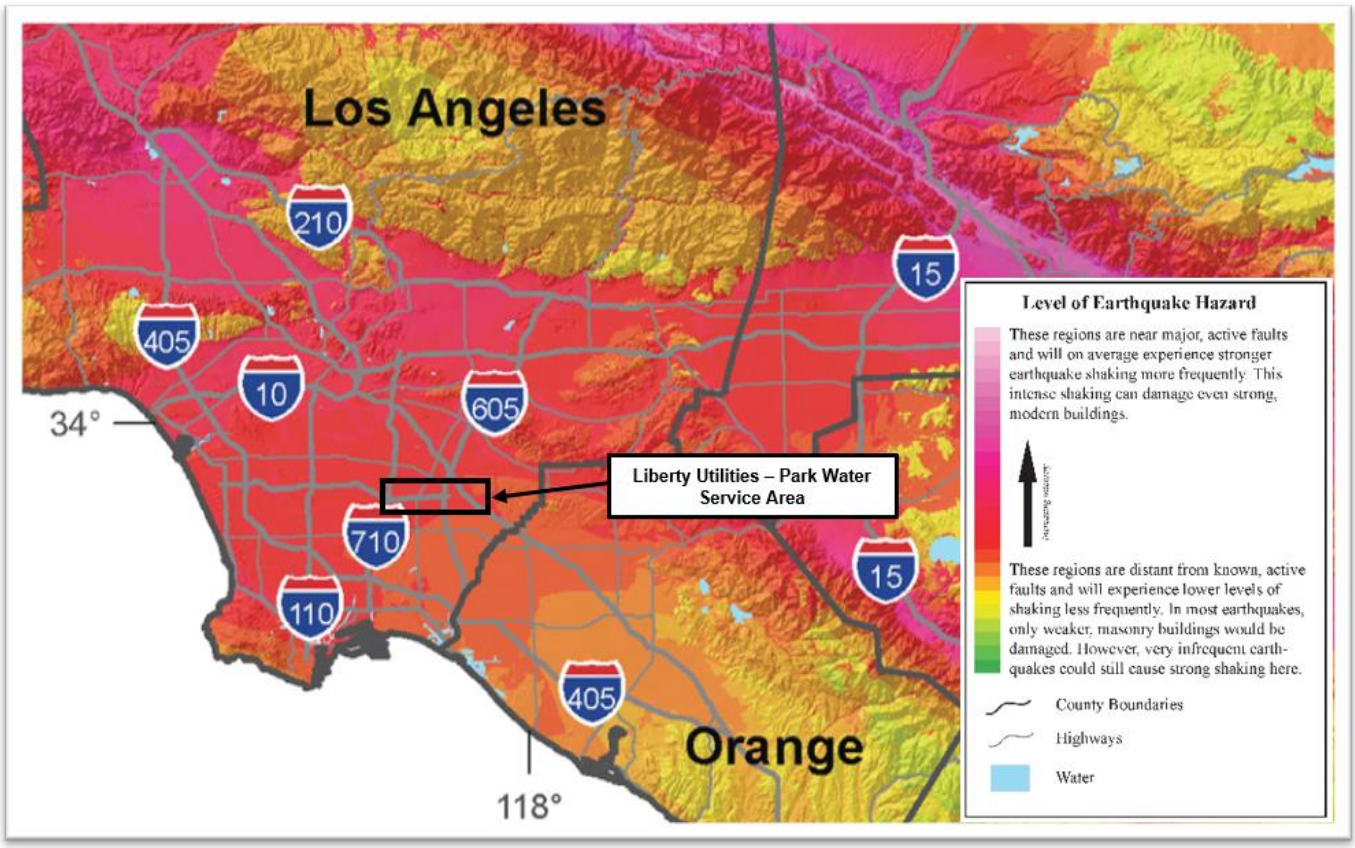


Source: https://maps.conservation.ca.gov/cgs/fam/App/

The following figure provides the relative intensity of ground shaking in the vicinity of Liberty Utilities' service area from anticipated future earthquakes. The locations of

relatively long-period (1.0 second) earthquake shaking, including Liberty Utilities' service area, are provided. Long-period shaking affects tall, relatively flexible buildings, but also correlates with earthquake damage. The shaking potential is calculated based on the level of ground motion that has a 2 percent chance of being exceeded in 50 years (or the level of ground-shaking with an approximate 2,500-year average repeat time). As discussed in Section 8.4.5, Liberty Utilities is currently preparing an Emergency Response Plan which provides the management, procedures, and designated actions Liberty Utilities and its employees will implement during emergency situations resulting from natural disasters, including during earthquakes, to ensure that customers receive a reliable and adequate supply of potable water. Liberty Utilities ERP is incorporated by reference.

Earthquake Shaking Potential



Source: "Earthquake Shaking Potential for California", 2016, California Geological Survey and United States Geological Survey

8.4.7 SHORTAGE RESPONSE ACTION EFFECTIVENESS

The effectiveness of the shortage response actions for each of the standard water shortage levels identified in Section 8.3 is evident in Liberty Utilities' historical ability to meet its customer's water demands in response to a water supply shortage. In addition, Liberty Utilities imposes water consumption regulations and restrictions, and supports local agencies in efforts to enforce regulations and prohibitions on water use. The effectiveness of each of Liberty Utilities' shortage response actions, in order to reduce any potential gaps between supply and demand, has been quantified in the expected demand reduction provided in Table 8-2 and Table 8-3.

Section 6.1 provides a tabulation of Liberty Utilities' historical annual water demands for its water supply source. During the past 10 years, Liberty Utilities experienced a five consecutive year drought within its service area from CY 2011 to CY 2015. Throughout this extended dry year period, Liberty Utilities annual water production ranged from 9,787 AF to 11,837 AF, with an average of approximately 11,186 AF. In addition, historical records indicate Liberty Utilities previously produced a maximum of up to 11,837 AF during CY 2012. Liberty Utilities has been able to provide sufficient water supplies to its customers, including during long-term droughts and years with historically high water demands. In addition, Liberty Utilities has been able to provide water service to meet maximum day water demands for these years, including during the summer months.

Liberty Utilities' water demands during the most recent five years (from CY 2016 to CY 2020) averaged approximately 9,861 AFY. Due to conservation efforts and demand management measures (discussed in Chapter 9), Liberty Utilities' recent water demands have been less than its historical water demands, including during long-term droughts. Liberty Utilities' projected water demands (during a normal year, a single dry year, and a five consecutive year drought conditions) are provided in Section 7.2.3 and are anticipated to incorporate similar reductions in water use rates as a result of the shortage response actions, ongoing conservation efforts, and demand management measures. Because Liberty Utilities' projected water demands are similar to, it is anticipated Liberty

Utilities will be able to continue providing sufficient water supplies to its customers to meet projected water demands, including during long-term droughts. In addition, as discussed in Section 8.4.2, based on historical and on-going management practices, Liberty Utilities will be able to continue relying on its water supply source from the Mojave Basin for adequate supply augmentation in response to each of the standard water shortage levels identified in Section 8.3.

Based on Liberty Utilities' demonstrated ability to meet water demands during past water supply shortages, the adopted water shortage levels, the adjusted operating safe yields, and water supplies during long-term droughts, it is anticipated that Liberty Utilities will be able to provide sufficient water supplies to its customers during each of its standard water shortage levels. Although adequate supplies are anticipated, the cost of those water supplies may become incrementally more expensive. Liberty Utilities will enact varying levels of its WSCP to encourage retail customers to reduce water consumption and at the same time reduce the need to use the more expensive water supplies. Notwithstanding, the effectiveness of each of Liberty Utilities' shortage response actions, in order to reduce any potential gaps between supply and demand, has been quantified in the expected demand reduction section provided in Table 8-2 and Table 8-3. The effectiveness of Liberty Utilities' shortage response actions is based on Liberty Utilities' water demands prior to 2015 (unconstrained demands). Liberty Utilities reduced its water demands in 2015 in response to the Governor's April 1, 2015 Executive Order B-29-15 which mandated statewide reduction in water use of 25 percent. Liberty Utilities' actual water demand reduction during this period was used to estimate the extent of water use reductions for Liberty Utilities' Water Shortage Levels. Liberty Utilities' Water Shortage Levels 1, 2, 3, 4, 5, and 6 are expected to reduce water demands by up to 10%, 20%, 30%, 40%, 50%, and greater than 50%, respectively.

8.5 COMMUNICATION PROTOCOLS

CWC 10632.

(a)(5) Communication protocols and procedures to inform customers, the public, interested parties, and local, regional, and state governments, regarding, at a minimum, all of the following:

(A) Any current or predicted shortages as determined by the annual water supply and demand assessment described pursuant to Section 10632.1.

(B) Any shortage response actions triggered or anticipated to be triggered by the annual water supply and demand assessment described pursuant to Section 10632.1.

(C) Any other relevant communications.

Commencing July 1, 2022, Liberty Utilities is required to submit an Annual Assessment in accordance with DWR's guidance and requirements. The Annual Assessment will include a review of Liberty Utilities' unconstrained water demands (i.e. water demands prior to any projected response actions Liberty Utilities may trigger under this WSCP) for the current year and the upcoming (potential single dry) year. Liberty Utilities will also include information regarding anticipated shortages, triggered shortage response actions, compliance and enforcement actions, and communication actions consistent with the Liberty Utilities' WSCP. Please see Section 8.2 for further discussion the Annual Assessment.

Wasteful water use practices constitute prohibited, non-essential, or unauthorized water use are declared to be a waste of water, subject to the terms and conditions of Rule No.11, which allow Liberty Utilities to discontinue service after due notice to the customer of wasteful or negligent use of water on the customer's premises. Liberty Utilities' customers shall be notified of these conservation measures through a bill insert of a direct mailing, and/or through electronic communications, pursuant to the direction of the CPUC.

If water supplies are projected to be insufficient to meet normal customer demand for reasons beyond the control of Liberty Utilities, or if directed under an emergency regulation by an authorized government agency, commission, or official, Liberty Utilities may implement additional water-saving conservation measures and mandatory restrictions. As directed by CPUC, Liberty Utilities' customers shall be notified of the applicable mandatory restrictions or conservation measures through newspaper inserts, website, or other electric communications, bill inserts, or direct mailings, as appropriate, as long as the declaration of emergency is in effect.

Should supply conditions or government directives dictate, prior to, or in response to, executive orders, state agency-promulgated emergency regulations, or a declaration of emergency issued by a water wholesaler or a government agency, Liberty Utilities may request permission from CPUC to add a Schedule 14.1 ("Water Shortage Contingency Plan with Staged Mandatory Reductions, Restrictions, and Drought Surcharges"), via a Tier 2 advice letters. Liberty Utilities may also request a lost revenue memorandum account at this time without a full decoupling Revenue Adjusting Mechanism (WRAM) balancing account in one or more ratemaking areas.

When Schedule 14.1 is in effect, but Liberty Utilities determines that water supplies are again sufficient to meet normal demands, and mandatory restrictions are no longer necessary, or if Liberty Utilities wants to implement a lower stage of mandatory restrictions, Liberty Utilities shall seek CPUC approval via a Tier 1 advice letter to de-activate the particular stage of mandatory reductions or allocations that had been authorized.

The Tier 2 advice letter to establish Schedule 14.1 shall include but not me limited to:

- Applicability,
- Territory applicable,
- A detailed description of each water shortage level,
- A detailed description of the trigger that activates each water shortage level,
- A detailed description of each water use restriction for each water shortage level,
- Water use violation levels, written warning levels, associated fines, if applicable, and exception procedures.
- Conditions for installation of a flow restrictor,
- Charges for removal of flow restrictors, and
- Special conditions.

The Tier 2 advice letter requesting activation of the established Schedule 14.1 shall include but not be limited to justification for activating a particular water shortage level, as well as the period during which the water shortage level will be in effect.

When Liberty Utilities requests the addition of Schedule 14.1, via a Tier 2 advice letter, it shall provide notice of the Tier 2 advice letter and associated public hearing, if necessary. Notice will be provided to customers through bill inserts or direct mailing, and it shall comply with all the requirements of Section 350-358 of CWC, including but not limited to the following:

- In order to be in compliance with both General Order 96-B and CWC, AVR shall provide notice via both newspaper and bill insert/direct mailing.
- Liberty Utilities shall file one notice for each advice letter filed, that includes both notice of the filing of the Tier 2 advice letter as well as the details of the public hearing (date, time, place, etc.).

- The public meeting shall be held after Liberty Utilities files the Tier 2 advice letter, and before the Commission authorizes the addition of Schedule 14.1 to the tariff except in cases of emergency water shortages approved by the Division of Water and Audits.
- Liberty Utilities shall consult with the Division of Water and Audits staff prior to filing the advice letter, in order to determine the details of the public meeting.

In the event that Schedule 14.1 is triggered and Liberty Utilities requests activation through the filing of a Tier 2 advice letter, Liberty Utilities shall notify its customers and provide each customer with a summary of Schedule 14.1 by means of bill insert or direct mailing. Notification shall take place prior to imposing any fines associated with this plan. If activation of Schedule 14.1 occurs one year or more since the public hearing associated with adding Schedule 14.1 to its tariffs, then Liberty Utilities shall conduct a public hearing pursuant to CWC Section 351 prior to activating the rationing stage.

During the period that a stage of Schedule 14.1 is activated, Liberty Utilities shall provide customers with updates in at least every other bill, regarding its water supply status, and the results of customers' conservation and water use reduction efforts.

Liberty Utilities may, after one written warning, install a flow-restricting device on the service line of any customer observed by utility personnel to be using water for any non-essential or unauthorized use. After removal of the device, if any non-essential or unauthorized use of water continues, the utility may install another flow-restricting advice without any written notice.

Any customer who seeks variance from any of the provisions of this WSCP shall notify Liberty Utilities in writing using the appeals form, explaining in detail the reason for such a variation. Liberty Utilities shall respond to each request in writing. The appeals form is available on Liberty Utilities' website or at Liberty Utilities' customer service office. If the

customer disagrees with such disposition, the customer may contact CPUC. No person shall have any right or claim in law or in equity, against Liberty Utilities or any of its employees, or CPUC because of, or as a result of, any matter or thing done or threatened to be done pursuant to the provisions of the WSCP.

8.6 COMPLIANCE AND ENFORCEMENT

CWC 10632.

(a)(6) For an urban retail water supplier, customer compliance, enforcement, appeal, and exemption procedures for triggered shortage response actions as determined pursuant to Section 10632.2.

Any violation of this WSCP is considered a waste and an unreasonable use of water. In the event a customer is observed to be using water for any nonessential or unauthorized use as defined by this WSCP, Liberty Utilities may charge a water use violation fine in accordance with Schedule 14.1.

Liberty Utilities may, after one written warning, install a flow restricting device on the service line of any customer observed by Liberty Utilities personnel to be using water in violation of the WSCP. A flow-restricting device shall not restrict water delivery by greater than 50% of normal flow and shall be capable of providing the property with a minimum of 3ccf/person/month. The restricting device may be removed only by Liberty Utilities staff, after a three-day period has elapsed, and upon payment of the appropriate removal charge as set forth in Schedule 14.1.

After removal of the restricting device, if any nonessential or unauthorized use of water continues, Liberty Utilities may install another flow restricting device without written notice. This device shall remain in place until water supply conditions warrant its removal and until the appropriate charge for removal has been paid to Liberty Utilities.

Any tampering with a flow restricting device by a customer can result in discontinuation of water use at Liberty Utilities' discretion.

8.7 LEGAL AUTHORITIES

CWC 10632.

(a)(7)(A) A description of the legal authorities that empower the urban water supplier to implement and enforce its shortage response actions specified in paragraph (4) that may include, but are not limited to, statutory authorities, ordinances, resolutions, and contract provisions.

(B) A statement that an urban water supplier shall declare a water shortage emergency in accordance with Chapter 3 (commencing with Section 350) of Division 1.

(C) A statement that an urban water supplier shall coordinate with any city or county within which it provides water supply services for the possible proclamation of a local emergency, as defined in Section 8558 of the Government Code.

CWC Division 1, Section 350

The governing body of a distributor of a public water supply, whether publicly or privately owned and including a mutual water company, shall declare a water shortage emergency condition to prevail within the area served by such distributor whenever it finds and determines that the ordinary demands and requirements of water consumers cannot be satisfied without depleting the water supply of the distributor to the extent that there would be insufficient water for human consumption, sanitation, and fire protection.

Liberty Utilities is an investor-owned Supplier and is subject to CPUC approval to establish and/or activate necessary shortage response actions and corresponding water shortage levels, pursuant to CPUC Rule 14.1. Liberty Utilities is then responsible for implementing and enforcing the water shortage response actions. Liberty Utilities may update current water shortage condition response measures based on CPUC approvals and direction, state policy directives, emergency conditions, or to improve customer response.

Liberty Utilities may declare a water shortage emergency and implement any shortage response action deemed necessary, upon CPUC approval. Upon declaration of a water shortage emergency, Liberty Utilities shall coordinate with the local cities and counties within their service area for the possible proclamation of a local emergency.

8.8 FINANCIAL CONSEQUENCES OF WSCP

CWC 10632.

(a)(8) A description of the financial consequences of, and responses for, drought conditions, including, but not limited to, all of the following:

(A) A description of potential revenue reductions and expense increases associated with activated shortage response actions described in paragraph (4).

(B) A description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions described in paragraph (4).

(C) A description of the cost of compliance with Chapter 3.3 (commencing with Section 365) of Division 1.

In 2008, CPUC approved the establishment of a WRAM Balancing Account and a Modified Cost Balancing Account (MCBA) These two regulatory accounts monitor the difference between actual and adopted water sales and production costs as part of a water conservation program. Liberty Utilities' WRAM, MCBA, and other balancing account surcharges provide protection to Liberty Utilities and its customers from unforeseen changes and ensure water rates accurately reflect the cost of providing service. By March 31st of each year, Liberty Utilities provides CPUC's Division of Water and Audit a written report on the status of the WRAM and MCBA. The report includes a section on the net accumulated balance as of December 31st of the preceding calendar year. If the combined net accumulated balance for the WRAM and MCBA exceeds 2.0 percent of the total recorded revenue requirement for the prior calendar year, Liberty Utilities will file an advice letter within 30 days that amortizes the balance of both accounts. Recovery of the

under-collections and refunds of over collections will be passed on to ratepayers through volumetric surcharges and surcredits.

A tiered rate structure has been implemented for residential customers to meet service costs and discourage high water use. In addition, as discussed in Section 8.1, water use in excess of residential or non-residential customer's seasonal allocation may be charged at the regular rate plus a drought emergency surcharge rate. Drought surcharge funds collected by Liberty Utilities can be used towards payment of future non-drought surcharges.

Liberty Utilities maintains financial reserves, which may be used for water system expenditures to make up for the shortfalls in water revenue. Financial reserves are listed in Liberty Utilities' Annual Reports submitted to the CPUC.

8.9 MONITORING AND REPORTING

CWC 10632.

(a)(9) For an urban retail water supplier, monitoring and reporting requirements and procedures that ensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance and to meet state reporting requirements.

Commencing July 1, 2022, Liberty Utilities is required to submit an Annual Assessment in accordance with DWR's guidance and requirements. The Annual Assessment will include a review of Liberty Utilities' unconstrained water demands (i.e. water demands prior to any projected response actions Liberty Utilities may trigger under this WSCP) for the current year and the upcoming (potential single dry) year. Liberty Utilities will also include information regarding anticipated shortages, triggered shortage response actions, compliance and enforcement actions, and communication actions consistent with the Liberty Utilities' WSCP. See Section 8.2 for further discussion of the Annual Assessment.

Additional monitoring and reporting requirements are approved by CPUC.

8.10 WSCP REFINEMENT PROCEDURES

CWC 10632.

(a)(10) Reevaluation and improvement procedures for systematically monitoring and evaluating the functionality of the water shortage contingency plan in order to ensure shortage risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented as needed.

Liberty Utilities' WSCP has been prepared as an adaptive management plan. As discussed in Section 8.9, Liberty Utilities will monitor and report on the implementation of the WSCP. Liberty Utilities will review the implementation results for any current or potential shortage gaps between water supplies and demands. Liberty Utilities will evaluate the need for revising the WSCP in order to resolve any shortage gaps, as necessary. Liberty Utilities will consider the following potential revisions in the event of a potential shortage gap:

- Implementation of additional public outreach, education, and communication programs (in addition to the programs discussed in Chapter 9).
- Implementation of more stringent water use restrictions under the standard water shortage levels (discussed in Section 8.4.1).
- Implementation of stricter enforcement actions and penalties (discussed in Section 8.6).
- Improvements to the water supply augmentation responses (discussed in Section 8.4.2), as well as any associated operational changes (discussed in Section 8.4.3) which may be required.
- Incorporation of additional actions recommended by Liberty Utilities staff or other interested parties.

Liberty Utilities will use the monitoring and reporting data to evaluate the ability for these potential revisions to resolve any shortage gaps which may occur within the standard water shortage levels.

This WSCP is adopted as part of Liberty Utilities' 2020 UWMP adoption process discussed in Section 10.3. It is anticipated Liberty Utilities will review, revise, and adopt an updated WSCP as part of preparing its 2025 UWMP as necessary. However, Liberty Utilities will continue to review the monitoring and reporting data, and if needed, update the WSCP more frequently. Any updates to Liberty Utilities' WSCP will include a public hearing and adoption process by the Liberty Utilities' Board (see Section 8.12).

8.11 SPECIAL WATER FEATURE DISTINCTION

CWC 10632.

(b) For purposes of developing the water shortage contingency plan pursuant to subdivision (a), an urban water supplier shall analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas, as defined in subdivision (a) of Section 115921 of the Health and Safety Code.

Liberty Utilities' WSCP defines "decorative water features" as water features which are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, but excluding pools and spas. In general, there are additional health and safety considerations in the water supplied to pools and spas compared to decorative water features. As a result, Liberty Utilities' WSCP has reviewed the response actions, enforcement actions, and monitoring and reporting programs separately for decorative water features and for pools and spas, as applicable.

Please see Section 8.4.1. for demand reduction actions in relation to special water features.

8.12 PLAN ADOPTION, SUBMITTAL, AND AVAILABILITY

CWC 10632.

(c) The urban water supplier shall make available the water shortage contingency plan prepared pursuant to this article to its customers and any city or county within which it provides water supplies no later than 30 days after adoption of the water shortage contingency plan.

Liberty Utilities' WSCP is adopted as part of Liberty Utilities' 2020 UWMP adoption process discussed in Chapter 10. The process for adopting Liberty Utilities' WSCP includes the following:

- Liberty Utilities will conduct a public hearing and make the WSCP available for public inspection.
- Liberty Utilities will provide notification of the time and place of the public hearing to any city or county in which water is provided.
- Liberty Utilities will publish notice of public hearing in a newspaper once a week, for two successive weeks (with at least five days between publication dates).
- Liberty Utilities' Board will adopt the 2020 UWMP and the WSCP.
- As part of submitting the 2020 UWMP to DWR, Liberty Utilities will also submit the WSCP (electronically through DWR's online submittal tool) within 30 days of adoption and by July 1, 2021. Liberty Utilities will submit a copy of the WSCP to the California State Library and to any city or county in which water is provided within 30 days of adoption. In addition, Liberty Utilities will make the WSCP available for public review within 30 days of adoption.

If there are any subsequent amendments required, the process for adopting an amended WSCP includes the following:

- Liberty Utilities will conduct a public hearing and make the amended WSCP available for public inspection.
- Liberty Utilities' Board will adopt the amended WSCP.
- Liberty Utilities will submit the amended WSCP to DWR (electronically through DWR's online submittal tool) within 30 days of adoption.

Additional information regarding the adoption, submittal, and availability of Liberty Utilities' WSCP (and 2020 UWMP) is provided in Chapter 10.

CHAPTER 9

DEMAND MANAGEMENT MEASURES

LAY DESCRIPTION – CHAPTER 9

DEMAND MANAGEMENT MEASURES

Chapter 9 (Demand Management Measures) of Liberty Utilities – Park Water's 2020 Plan discusses and provides the following:

- Liberty Utilities has implemented "Demand Management Measures" to reduce its water demands and achieve its water use targets (discussed in Chapter 5)
- Liberty Utilities' Demand Management Measures include metering of all its water supply connections with its retail member agencies.
- Liberty Utilities' Demand Management Measures include public education and outreach programs regarding water conservation.
- Liberty Utilities' Demand Management Measures include staffing of its water conservation program.
- Additional Demand Management Measures including rebate, conservation, asset management, and wholesale supplier assistance programs are discussed.
- A summary of the Demand Management Measures Liberty Utilities has implemented over the past five (5) years is provided.
- Liberty Utilities' Demand Management Measures include adoption of rules to prevent water waste.
- Liberty Utilities' Demand Management Measures include metering of all customer connections, including separate metering for single-family residential, commercial, industrial, large landscape and institutional/governmental facilities.

- Liberty Utilities' Demand Management Measures include conservation pricing. Liberty Utilities' current water rate structure is tiered to promote water conservation by customers.
- Liberty Utilities' Demand Management Measures include public education and outreach programs regarding water conservation.
- Liberty Utilities' Demand Management Measures include various actions to assess and manage water distribution system losses.
- Additional Demand Management Measures including rebate, conservation, and educational programs are discussed.
- A summary of the Demand Management Measures Liberty Utilities has implemented over the past five (5) years is provided. Liberty Utilities met the 2020 Water Use Target (discussed in Chapter 5) through the implementation of these Demand Management Measures.

9.1 DEMAND MANAGEMENT MEASURES FOR WHOLESALE SUPPLIERS

CWC 10631.

(e) Provide a description of the supplier's water demand management measures. This description shall include all of the following:

(1)(B) The narrative pursuant to this paragraph shall include descriptions of the following water demand management measures:

(ii) Metering.

(iv) Public education and outreach.
(vi) Water conservation program coordination and staffing support.

(vii) Other demand management measures that have a significant impact on water use as measured in gallons per capita per day, including innovative measures, if implemented.

(2) For an urban wholesale water supplier, as defined in Section 10608.12, a narrative description of the items in clauses (ii), (iv), (vi), and (vii) of subparagraph (B) of paragraph (1), and a narrative description of its distribution system asset management and wholesale supplier assistance programs.

Liberty Utilities is not a wholesale agency and is not required by DWR to complete Section 9.1.

9.2 EXISTING DEMAND MANAGEMENT MEASURES FOR RETAIL SUPPLIERS

CWC 10631.

(e) Provide a description of the supplier's water demand management measures. This description shall include all of the following:

(1)(A) For an urban retail water supplier, as defined in Section 10608.12, a narrative description that addresses the nature and extent of each water demand management measure implemented over the past five years. The narrative shall describe the water demand management measures that the supplier plans to implement to achieve its water use targets pursuant to Section 10608.20.

(B) The narrative pursuant to this paragraph shall include descriptions of the following water demand management measures:

(i) Water waste prevention ordinances.

(ii) Metering.

(iii) Conservation pricing.

(iv) Public education and outreach.

(v) Programs to assess and manage distribution system real loss.

(vi) Water conservation program coordination and staffing support.

(vii) Other demand management measures that have a significant impact on water use as measured in gallons per capita per day, including innovative measures, if implemented.

9.2.1 WATER WASTE PREVENTION ORDINANCES

Liberty Utilities implements CPUC-approved rules including Rule No. 14.1 ("Water Shortage Contingency Plan"), Schedule 14.1 ("Water Shortage Contingency Plan with Staged Mandatory Reductions, Restrictions and Drought Surcharges"), and Rule No. 20 ("Water Conservation), which prohibit water waste. Copies of these ordinances and the

CPUC rules and schedule are attached as Appendix K. CPUC's Rule No. 14.1, when in effect, sets forth the procedures to implement the following water conservation restrictions:

- Use of potable water for more than minimal landscaping.
- Use through a broken or defective water meter.
- Use of potable water which results in flooding or runoff in gutters or streets.
- Use of potable water for washing private cars or commercial aircrafts, cars, buses, boats, or trailers, except at a fixed location where water is properly maintained to avoid wasteful use.
- Use of potable water for washing buildings, structures, driveways, street cleaning, or other hard-surfaced areas.
- Use of potable water to irrigate turf, lawns, gardens, or ornamental landscaping.
- Use of potable water for construction purposes.
- Use of potable water for filling or refilling of swimming pools.

Schedule 14.1, when activated, imposes the mandatory conservation restrictions above and/or declares a level of water shortage which allows customer surcharges and reductions in water use (as discussed in Section 8.4).

CPUC's Rule No. 20 discourages wasteful use of water and promotes the use of water saving devices. The stated purpose of the rule is to "ensure that water resources available to the utility are put to a reasonable beneficial use and that the benefits of the utility's water supply and service extend to the largest number of persons."

9.2.2 METERING

CWC 526.

(a) Notwithstanding any other provision of law, an urban water supplier that, on or after January 1, 2004, receives water from the federal Central Valley Project under a water service contract or subcontract… shall do both of the following:

(1) On or before January 1, 2013, install water meters on all service connections to residential and nonagricultural commercial buildings… located within its service area.

CWC 527.

(a) An urban water supplier that is not subject to Section 526 shall do both of the following:

(1) Install water meters on all municipal and industrial service connections located within its service area on or before January 1, 2025.

Liberty Utilities meters all customer connections, including separate metering for single-family residential, commercial, industrial, and landscape customers. Furthermore, if there is new development within Liberty Utilities, each facility is individually metered. Liberty Utilities implements an Automatic Meter Reading (AMR) system which supports conservation efforts through improved meter reading accuracy and allows Liberty Utilities to effectively monitor and manage water supplies.

Service charges for Liberty Utilities are based on the customers' connection size. Further information regarding Liberty Utilities' service fees and conservation pricing is provided in Section 9.2.3.

9.2.3 CONSERVATION PRICING

Liberty Utilities implements a tiered conservation pricing rate structure for residential and non-residential customers as approved by the CPUC. Liberty Utilities' current water rates structure is tiered to promote water conservation by customers. Residential customers are billed on an inclining block rate structure, with a fixed service charge based on meter

size to encourage water conservation and discourage waste. The rate structure includes three tiers. Liberty Utilities' current rate structure showing conservation pricing is provided in Appendix M. Liberty Utilities also has an inclining drought emergency surcharge pursuant to Schedule 14.1 ("Water Shortage Contingency Plan with Staged Mandatory Reductions, Restrictions and Drought Surcharges") when activated upon CPUC approval. CPUC Schedule 14.1 is provided in Appendix K.

9.2.4 PUBLIC EDUCATION AND OUTREACH

Liberty Utilities offers public information programs for its customers. Liberty Utilities provides marketing and outreach materials to its customers by issuing press releases, newsletters, and bill inserts. Customers learn about rebates and additional programs through Liberty Utilities' website.

Liberty Utilities promotes water conservation through public information programs that offer brochures, posters, activity booklets, public outreach displays, oral presentations, and workshops to inform the public of conservation efforts. Liberty Utilities raises awareness through paid advertising, press releases, news ads, media events, and through the Speaker's Bureau.

Liberty Utilities offers education and outreach programs directly to its customers. Liberty Utilities' staff members attend special assemblies or class presentation opportunities to present water conservation information and collateral materials. Liberty Utilities offers free conservation devices and water audits, a High-Efficiency Toilet delivery program, and a rebate for the purchase and installation of a hot water recirculating pump.

9.2.5 PROGRAMS TO ASSESS AND MANAGE DISTRIBUTION SYSTEM REAL LOSS

Liberty Utilities' system is comprised mainly of single-family and multi-family dwellings. Liberty Utilities estimates water system losses at approximately 4.0 percent, as discussed in Section 4.2.4. Liberty Utilities has water conservation literature that alerts customers to be on the lookout for water system leaks and to correct them promptly. Liberty Utilities is available to assist customers in answering questions regarding system leaks or higher than expected water usage and also offers free water audits for customers.

Liberty Utilities' annual water loss audits identify real water losses (e.g. leaks and main failures) and apparent water losses (e.g. customer meter inaccuracies, systematic data handling errors in customer billing systems, and unauthorized consumption). Liberty Utilities also implements an AMR system which supports conservation efforts through improved meter reading accuracy and allows Liberty Utilities to effectively monitor and manage water supplies.

9.2.6 WATER CONSERVATION PROGRAM COORDINATION AND STAFFING SUPPORT

Liberty Utilities has had a full-time conservation coordinator since 2008 who provides coordination and oversight of conservation programs and DMM implementation.

9.2.7 OTHER DEMAND MANAGEMENT MEASURES

Liberty Utilities implements additional DMM programs using both Liberty Utilities-only programs and programs in collaboration with regional partners.

Liberty Utilities provides an audit program for high-use single-family and multi-family residential customers. These customers are identified through billing data and AMR, and

then contacted to offer free audits. Audits are also offered to walk-in customers at the local customer service area office.

Liberty Utilities plans to continue implementation of the programs described above to promote water conservation.

9.3 REPORTING IMPLEMENTATION

9.3.1 IMPLEMENTATION OVER THE PAST FIVE YEARS

CWC 10631.

(e) Provide a description of the supplier's water demand management measures. This description shall include all of the following:

(1) (A) …a narrative description that addresses the nature and extent of each water demand management measure implemented over the past five years.

Liberty Utilities is committed to implementing water conservation programs and works collaboratively with regional partners to provide water conservation programs for its customers. The highlights of DMM implementation over the past five years are described below.

As discussed in Section 9.2.1, CPUC's Rule 14.1, Schedule 14.1, and Rule No. 20, when in effect, are designed to prevent water waste. These rules have been in effect within the last five years.

As discussed in Section 9.2.2, Liberty Utilities meters all customer connections, including separate metering for single-family residential, commercial, industrial, and landscape customers. Furthermore, if there is new development within Liberty Utilities, each facility is individually metered. Liberty Utilities implements an AMR system which supports

conservation efforts through improved meter reading accuracy and allows Liberty Utilities to effectively monitor and manage water supplies.

As discussed in Section 9.2.3, Liberty Utilities implements a three-tiered conservation pricing rate structure for residential and non-residential customers as approved by the CPUC. Liberty Utilities' current water rates structure is tiered to promote water conservation by customers. Residential customers are billed on an inclining block rate structure, with a fixed service charge based on meter size to encourage water conservation and discourage waste.

As discussed in Section 9.2.4, Liberty Utilities offers public information programs for its customers. Liberty Utilities provides marketing and outreach materials to its customers by issuing press releases, newsletters, and bill inserts. Customers learn about rebates and additional programs through Liberty Utilities' website. Liberty Utilities promotes water conservation through public information programs that offer brochures, posters, activity booklets, public outreach displays, oral presentations, and workshops to inform the public of conservation efforts. Liberty Utilities offers education and outreach programs directly to its customers. Liberty Utilities' staff members attend special assemblies or class presentation opportunities to present water conservation information and collateral materials.

As discussed in Section 9.2.5, Liberty Utilities' annual water loss audits identify real water losses (e.g. leaks and main failures) and apparent water losses (e.g. customer meter inaccuracies, systematic data handling errors in customer billing systems, and unauthorized consumption). Liberty Utilities also implements an AMR system which supports conservation efforts through improved meter reading accuracy and allows Liberty Utilities to effectively monitor and manage water supplies.

As described in Section 9.2.6, Liberty Utilities has had a full-time conservation coordinator since 2008.

In addition to the above DMMs, other DMMs employed by Liberty Utilities are discussed in Section 9.2.7

9.3.2 IMPLEMENTATION TO ACHIEVE WATER USE TARGETS

CWC 10631.

(F)(1)(A) For an urban retail water supplier, as defined in Section 10608.12, a narrative description that addresses the nature and extent of each water demand management measure implemented over the past five years. The narrative shall describe the water demand management measures that the supplier plans to implement to achieve its water use targets pursuant to Section 10608.20.

The Demand Management Measures implemented by Liberty Utilities are discussed in Section 9.2 Descriptions regarding the nature and extent of these Demand Management Measures implemented by Liberty Utilities over the past five years are discussed in Section 9.3. Liberty Utilities will continue to implement these Demand Management Measures and other water conservation programs and work collaboratively with CBMWD to provide water conservation programs for its residents.

As discussed in Section 5.5, Liberty Utilities' per-capita water use during CY 2020 was 74 GPCD. Liberty Utilities' confirmed 2020 Water Use Target is 142 GPCD. Liberty Utilities' per-capita water use during CY 2020 meets the 2020 Water Use Target and is in compliance. Liberty Utilities met the 2020 Water Use Target through the implementation of the Demand Management Measures discussed in Section 9.2. Continued implementation of these Demand Management Measures will assist Liberty Utilities in meeting water use targets and objectives.

9.4 WATER USE OBJECTIVES (FUTURE REQUIREMENTS)

Liberty Utilities is currently working with DWR to develop Water Use Objectives pursuant to AB 1668 and SB 606. Beginning in 2024, water agencies, including Liberty Utilities, are required to begin reporting compliance of their Water Use Objectives consisting of indoor residential water use, outdoor residential water use, commercial, industrial and institutional, irrigation with dedicated meters, water loss, and other unique local uses. Liberty Utilities plans to meet its Water Use Objectives through continued implementation of the Demand Management Measures discussed in Section 9.2.

CHAPTER 10

PLAN ADOPTION, SUBMITTAL, AND IMPLEMENTATION

LAY DESCRIPTION – CHAPTER 10

PLAN ADOPTION, SUBMITTAL, AND IMPLEMENTATION

Chapter 10 (Plan Adoption, Submittal, and Implementation) of Liberty Utilities – Park Water's 2020 Plan discusses and provides the following:

- The steps Liberty Utilities has performed to adopt and submit its 2020 Plan are detailed.
- The steps Liberty Utilities has performed to adopt and submit its Water Shortage Contingency Plan are detailed.
- Liberty Utilities coordinated the preparation of its 2020 Plan with the Cities of Artesia, Bell Gardens, Bellflower, Compton, Lynwood, Norwalk, and Santa Fe Springs, and the County of Los Angeles, and other agencies. Liberty Utilities notified these agencies at least sixty (60) days prior to the public hearing of the preparation of the 2020 Plan and invited these agencies to participate in the development of the 2020 Plan.
- Liberty Utilities provided a notice of the public hearing to the same agencies regarding the time, date, and place of the public hearing.
- Liberty Utilities published a newspaper notification of the public hearing, once a week for two successive weeks
- Liberty Utilities conducted a public hearing to discuss and adopt Liberty Utilities' 2020 Plan and Liberty Utilities' Water Shortage Contingency Plan.
- Within 30 days of adoption, Liberty Utilities submitted the 2020 Plan and Water Shortage Contingency Plan to the California Department of Water Resources.

- Within 30 days of adoption, Liberty Utilities submitted all data tables associated with the 2020 Plan to the California Department of Water Resources.
- Within 30 days of adoption, Liberty Utilities submitted a copy of the 2020 Plan to the State of California Library.
- Within 30 days of adoption, Liberty Utilities submitted a copy of the 2020 Plan (and Water Shortage Contingency Plan) to the Los Angeles Registrar / Recorder's office and the CPUC.
- Within 30 days after submittal of the 2020 Plan to the California Department of Water Resources, Liberty Utilities made the 2020 Plan (including the Water Shortage Contingency Plan) available at on Liberty Utilities' website.
- The steps Liberty Utilities will perform to amend the 2020 Plan and/or the Water Shortage Contingency Plan, if necessary, are provided.

10.1 INCLUSION OF ALL 2020 DATA

The data provided in Liberty Utilities' 2020 Plan is provided on a CY basis through December 31, 2020 (as discussed in Section 2.4.2).

10.2 NOTICE OF PUBLIC HEARING

Liberty Utilities' public hearing notification process for its 2020 Plan and the WSCP is discussed below.

10.2.1 NOTICE TO CITIES AND COUNTIES

CWC 10621.

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

CWC 10642.

…The urban water supplier shall provide notice of the time and place of a hearing to any city or county within which the supplier provides water supplies. Notices by a local public agency pursuant to this section shall be provided pursuant to Chapter 17.5 (commencing with Section 7290) of Division 7 of Title 1 of the Government Code. A privately owned water supplier shall provide an equivalent notice within its service area…

10.2.1.1 60 DAY NOTIFICATION

As discussed in Section 2.6.2., Liberty Utilities coordinated the preparation of the 2020 Plan with the Los Angeles County Department of Regional Planning, Central Basin Municipal Water District, and the Cities of Artesia, Bell Gardens, Bellflower, Compton, Lynwood, Norwalk, and Santa Fe Springs. Liberty Utilities notified these agencies, as well as the cities and county within which Liberty Utilities provides water supplies, at least sixty (60) days prior to the public hearing of the preparation of the 2020 Plan and invited them to participate in the development of the Plan. A copy of the notification letters sent to these agencies is provided in Appendix D.

10.2.1.2 NOTICE OF PUBLIC HEARING

Liberty Utilities provided a notice of the public hearing the Los Angeles County Department of Regional Planning, Central Basin Municipal Water District, and the Cities of Artesia, Bell Gardens, Bellflower, Compton, Lynwood, Norwalk, and Santa Fe Springs. The notice includes the time and place of the public hearing. To ensure the Plan and the WSCP were available for review, Liberty Utilities placed a copy of the draft 2020 Plan and the draft WSCP at the Liberty Utilities customer service office and made a copy available

for review on its website. Copies of the notice of the public hearing are provided in Appendix D.

10.2.1.3 SUBMITTAL TABLES

Table 10-1 summarizes the agencies which were provided notifications by Liberty Utilities.

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		
Artesia	Yes	Yes
Bell Gardens	Yes	Yes
Bellflower	Yes	Yes
Compton	Yes	Yes
Lynwood	Yes	Yes
Norwalk	Yes	Yes
Santa Fe Springs	Yes	Yes
County Name *Drop Down List*	60 Day Notice	Notice of Public Hearing
Add additional rows as needed		
Los Angeles County	Yes	Yes
NOTES:		

10.2.2 NOTICE TO THE PUBLIC

CWC 10642.

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

Government Code 6066.

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

Liberty Utilities encouraged the active involvement of the population within its service area prior to and during the preparation of the Plan. Pursuant to Section 6066 of the Government Code, Liberty Utilities published a notice of public hearing in the newspaper during the weeks of June 10, 2021 and June 17, 2021. A notice of public hearing was also provided to Liberty Utilities' customers and on Liberty Utilities' website. A copy of the published notice is provided in Appendix D. To ensure the draft 2020 Plan and the draft WSCP were available for review, Liberty Utilities placed a copy of at the Liberty Utilities customer service office and made a copy available for review on its website.

10.3 PUBLIC HEARING AND ADOPTION

CWC 10642.

…Prior to adopting either, the urban water supplier shall make both the plan and the water shortage contingency plan available for public inspection and shall hold a public hearing or hearings thereon.

CWC 10608.26.

(a) In complying with this part, an urban retail water supplier shall conduct at least one public hearing to accomplish all of the following:

(1) Allow community input regarding the urban retail water supplier's implementation plan for complying with this part.

(2) Consider the economic impacts of the urban retail water supplier's implementation plan for complying with this part.

(3) Adopt a method, pursuant to subdivision (b) of Section 10608.20, for determining its urban water use target.

10.3.1 PUBLIC HEARING

Prior to adopting the draft 2020 Plan and the draft WSCP, Liberty Utilities held a public hearing on June 24, 2021 which included input from the community regarding Liberty Utilities' draft 2020 Plan and the draft WSCP. As part of the public hearing, Liberty Utilities adopted a method to determine its water use targets through selection of Target Method 3 (see Section 5.2.1 and Appendix G). In addition, Liberty Utilities considered the economic impacts of meeting these water use targets; including measures described in Section 8.8.

10.3.2 ADOPTION

CWC 10642.

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

Following the public hearing, Liberty Utilities adopted both the draft 2020 Plan and the draft WSCP (included in Chapter 8). A copy of the resolution adopting the 2020 Plan and the WSCP is provided in Appendix N.

10.4 PLAN SUBMITTAL

CWC 10621.

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

CWC 10644.

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

CWC 10635.

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

Liberty Utilities' submittal process for its 2020 Plan and the WSCP is discussed below.

10.4.1 SUBMITTING A UWMP AND WATER SHORTAGE CONTINGENCY PLAN TO DWR

Liberty Utilities' Board of Directors adopted the draft 2020 Plan on June 24, 2021 and within 30 days of adoption, Liberty Utilities submitted the adopted 2020 Plan (including the WSCP) to DWR. The 2020 Plan and WSCP were submitted through DWR's "Water Use Efficiency (WUE) Data Portal" website.

DWR developed a checklist which was used by Liberty Utilities to assist DWR with its determination that Liberty Utilities' 2020 Plan has addressed the requirements of the CWC. Liberty Utilities has completed the DWR checklist by indicating where the required CWC elements can be found within Liberty Utilities' 2020 Plan (See Appendix C).

10.4.2 ELECTRONIC DATA SUBMITTAL

CWC 10644.

(a)(2) The plan, or amendments to the plan, submitted to the department …shall be submitted electronically and shall include any standardized forms, tables, or displays specified by the department.

Within 30 days of adoption of the 2020 Plan, Liberty Utilities submitted all data tables associated with the 2020 Plan through DWR's "Water Use Efficiency Data Portal" website.

10.4.3 SUBMITTING A UWMP, INCLUDING WSCP, TO THE CALIFORNIA STATE LIBRARY

Within 30 days of adoption of the 2020 Plan by Liberty Utilities' Board of Directors, a copy (CD or hardcopy) of the 2020 Plan was submitted to the State of California Library. A copy of the letter to the State Library will be maintained in Liberty Utilities' file. The 2020 Plan will be mailed to the following address if sent by regular mail:

California State Library
Government Publications Section
Attention: Coordinator, Urban Water Management Plans
P.O. Box 942837
Sacramento, CA 94237-0001

The 2020 Plan will be mailed to the following address if sent by courier or overnight carrier:

California State Library
Government Publications Section
Attention: Coordinator, Urban Water Management Plans
900 N Street
Sacramento, CA 95814

10.4.4 SUBMITTING A UWMP TO CITIES AND COUNTIES

Within 30 days of adoption of the 2020 Plan (including the WSCP) by Liberty Utilities' Board of Directors, a copy of the 2020 Plan was submitted to the County of Los Angeles Registrar / Recorder's office and CPUC. A copy of the letter to the Los Angeles Registrar / Recorder's office will be maintained in Liberty Utilities' file.

10.5 PUBLIC AVAILABILITY

CWC 10645.

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

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

Within 30 days after submittal of the 2020 Plan to DWR, Liberty Utilities made the 2020 Plan (including the WSCP) available at the Liberty Utilities customer service office during normal business hours and on Liberty Utilities' website.

10.6 NOTIFICATION TO PUBLIC UTILITIES COMMISSION

CWC 10621.

(c) An urban water supplier regulated by the Public Utilities Commission shall include its most recent plan and water shortage contingency plan as part of the supplier's general rate case filings.

Liberty Utilities will submit the 2020 Plan (and WSCP) to the California Public Utilities Commission as part of its general rate case filings.

10.7 AMENDING AN ADOPTED UWMP OR WATER SHORTAGE CONTINGENCY PLAN

CWC 10621.

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

CWC 10644.

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

Liberty Utilities amendment process for its 2020 Plan is discussed below.

10.7.1 AMENDING A UWMP

If Liberty Utilities amends the adopted 2020 Plan, the amended Plan will undergo adoption by Liberty Utilities' governing board. Within 30 days of adoption, the amended Plan will then be submitted to DWR, the State of California Library, the Los Angeles Registrar / Recorder's office, and the CPUC.

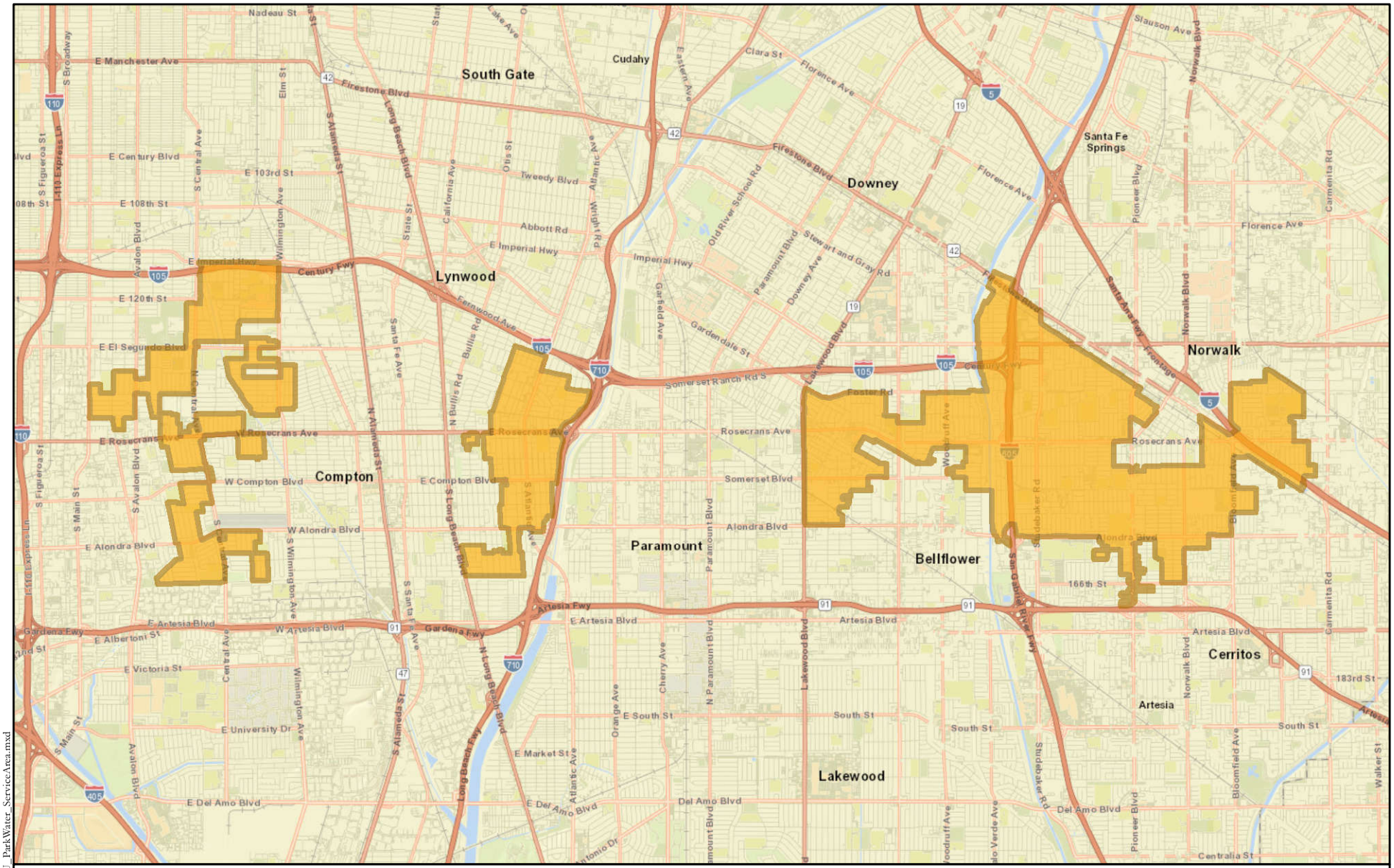
10.7.2 AMENDING A WATER SHORTAGE CONTINGENCY PLAN

CWC 10644.

(b) If an urban water supplier revises its water shortage contingency plan, the supplier shall submit to the department a copy of its water shortage contingency plan prepared pursuant to subdivision (a) of Section 10632 no later than 30 days after adoption, in accordance with protocols for submission and using electronic reporting tools developed by the department.

If Liberty Utilities amends the adopted 2020 Plan (including the WSCP), the amended Plan (and WSCP) will undergo adoption by Liberty Utilities' governing board. Within 30

days of adoption, the amended Plan (and WSCP) will then be submitted to DWR, the State of California Library, the Los Angeles Registrar / Recorder's office, and the CPUC.



LIBERTY UTILITIES - PARK WATER
WATER SERVICE AREA

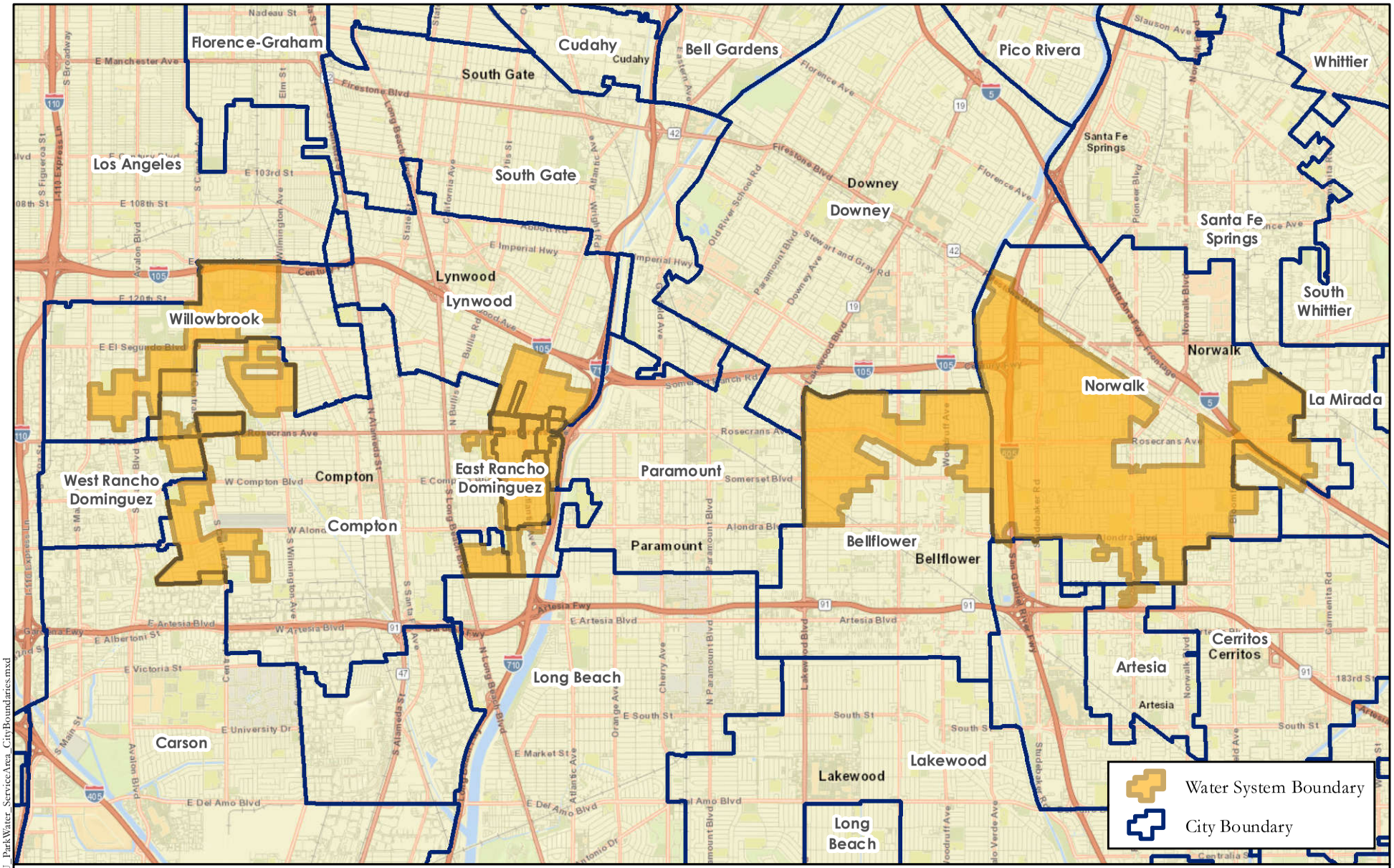
0 0.5 1 Miles

N

STETSON ENGINEERS INC.

FIGURE 1

Document Path: J:\in2741\LU_ParkWater_ServiceArea.mxd



LIBERTY UTILITIES - PARK WATER
WATER SERVICE AREA
AND CITY BOUNDARIES

STETSON ENGINEERS INC.

0 0.5 1 Miles

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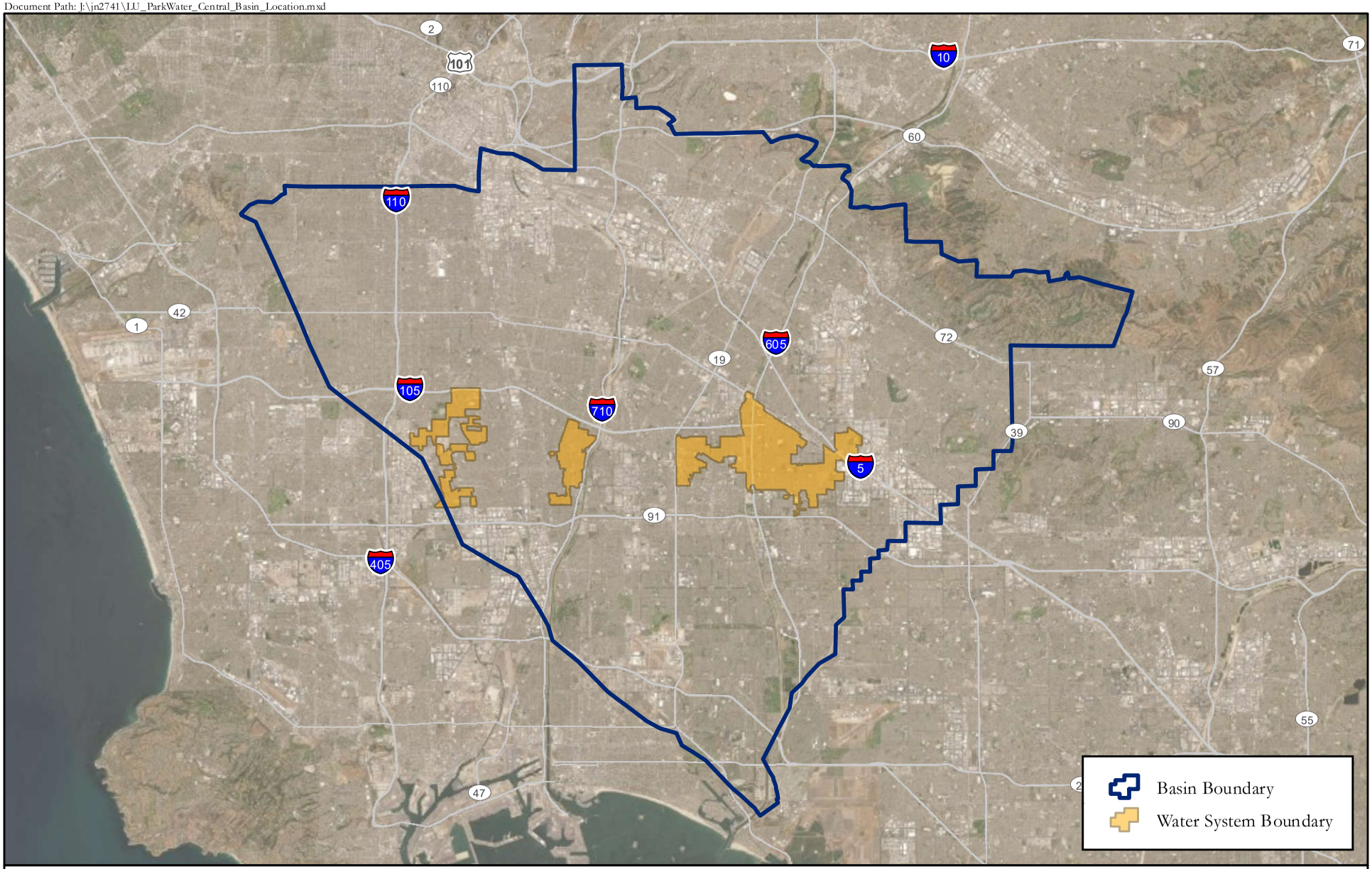
FIGURE 2

Document Path: J:\jn2741\LU_ParkWater_ServiceArea_CityBoundaries.mxd

Document Path: J:\jn2741\LU_ParkWater_Central_Basin_Location.mxd



STETSON ENGINEERS INC.

LIBERTY UTILITIES - PARK WATER
CENTRAL BASIN LOCATION

0 2 4 Miles

N

FIGURE 3