# CITY OF POMONA

JUNE 2021

FINAL

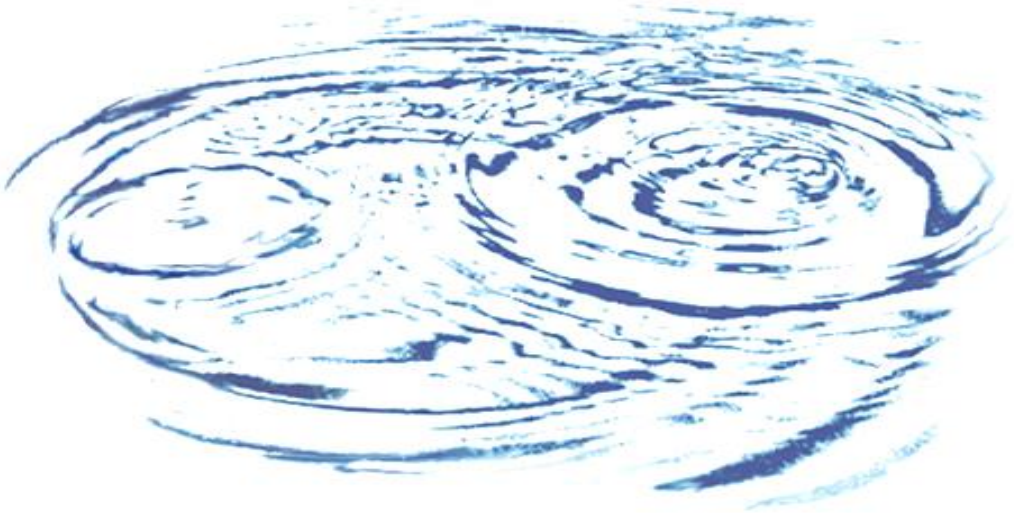
# 2020 URBAN WATER MANAGEMENT PLAN

STETSON ENGINEERS INC.

Northern California • Southern California • Arizona • Colorado • Oregon

# City of Pomona

# 2020
# Urban Water Management Plan



**JUNE 2021**

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### LIST OF ACRONYMS

| | |
|---|---|
| AB | Assembly Bill |
| AF | Acre-Feet |
| AFY | Acre-Feet per Year |
| AWWA | American Water Works Association |
| CY | Calendar Year |
| CIMIS | California Irrigation Management Information System |
| City | The City of Pomona |
| CWC | California Water Code |
| CDA | Chino Basin Desalter Authority |
| CEQA | California Environmental Quality Act |
| DPW | County of Los Angeles Department of Public Works |
| DOF | California Department of Finance |
| DMM | Demand Management Measures |
| DRA | Drought Risk Assessment |
| DWR | California Department of Water Resources |
| DYYP | MWD's Dry-Year Yield Program |
| ERP | Emergency Response Plan |
| ETo | Evapotranspiration |
| FEMA | Federal Emergency Management Agency |
| GCM | General Circulation Model |
| GPCD | Gallons per Capita per Day |
| GPM | Gallons per Minute |
| GIS | Geographical Information Systems |
| GSA | Groundwater Sustainability Agency |
| GSWC | Golden State Water Company |
| GSP | Groundwater Sustainability Plan |
| HECW | High-Efficiency Clothes Washing |
| IEUA | Inland Empire Utilities Agency |
| JWPCP | Joint Water Pollution Control Plant |
| JWL | Joint Water Line |
| LACSD | Sanitation Districts of Los Angeles County |
| LSLS | Chino Basin Local Storage Limitation Solution |
| MGD | Million Gallons per Day |
| mg/L | Milligrams per Liter |
| MWD | Metropolitan Water District of Southern California |
| M&I | Municipal and Industrial |
| OBMP | Chino Basin Optimum Basin Management Program |

| | |
|---|---|
| PCE | Perchloroethylene |
| PFP | Pedley Filtration Plant |
| PHET | Premium High-Efficiency Toilets |
| PVPA | Pomona Valley Protective Association |
| PWRP | Pomona Water Reclamation Plant |
| RCP | Representative Concentration Pathway |
| RDM | Robust Decision Making |
| RRA | Risk and Resilience Assessment |
| SAWCo | San Antonio Water Company |
| SB | Senate Bill |
| SCAG | Southern California Association of Governments |
| SGMA | Sustainable Groundwater Management Act of 2014 |
| SWRCB-DDW | State Water Resources Control Board - Division of Drinking Water |
| TVMWD | Three Valleys Municipal Water District |
| TCE | Trichloroethylene |
| 1,2,3- TCP | Trichloropropane |
| TDS | Total Dissolved Solids |
| USEPA | United States Environmental Protection Agency |
| UWMP | Urban Water Management Plan |
| VOCs | Volatile Organic Chemicals |
| WECWC | West End Consolidated Water Company |
| WEWAC | Water Education Water Awareness Committee |
| WRCC | Western Regional Climate Center |
| WSCP | Water Shortage Contingency Plan |
| WSAP | Water Supply Allocation Plan |
| WUCA | MWD's Water Utility Climate Alliance |

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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.*"

The City of Pomona (City) 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 the City) 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.

The City's most recent update was its 2015 UWMP (or 2015 Plan) which was submitted to, and approved by, the California Department of Water Resources (DWR). Urban water suppliers (including the City) are required to complete and submit their 2020 UWMPs to DWR by July 1st, 2021.

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

The current requirements for preparing the UWMP are included in California Water Code (CWC) Sections 10608 through 10657. The City's 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 the City) 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 UMWP incorporates water supply reliability determinations resulting from potential prolonged drought, regulatory revisions, and/or changing climatic conditions.

The City's 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 the City'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. The City is required to prepare an Urban Water Management Plan.
- The City's 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. The City's 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.
- The City's coordination efforts with other planning agencies are discussed, including coordination efforts with Three Valleys Municipal Water District and the Southern California Association of Governments.
- The City's 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 the City's prior, continued, and projected reduction on imported water supplies obtained (either directly or indirectly) from the Sacramento-San Joaquin Delta (Delta). The City has reduced its reliance on imported water supplies for Calendar Year 2015 and Calendar Year 2020. In addition, the City is projected to continue reducing its reliance on imported water supplies through Calendar Year 2045.

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

## 1.1 RECOMMENDED UWMP ORGANIZATION

The City's 2020 Urban Water Management Plan (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. The City's 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, the City's 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. The City also submitted the UWMP data (standardized tables) electronically through DWR's Online Submittal Tool.

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

## 1.2 UWMPS IN RELATION TO OTHER EFFORTS

The City's 2020 Plan was prepared in coordination with planning agencies including the City of Pomona's Engineering Section of the Water/ Wastewater Operations Department, the Los Angeles County Department of Regional Planning, and the Southern California Association of Governments (SCAG). In addition, the City's 2020 Plan was prepared using management documents including the City's Specific Plans, the "2014 General Plan Update", the "2012 Pomona Natural Hazards Mitigation Plan", the "Draft 2019 Housing Element Update", the "2020 Emergency Response Plan", and Los Angeles County's "2019 County of Los Angeles All-Hazards Mitigation Plan".

The City is a sub-agency of Three Valleys Municipal Water District (TVMWD), a wholesale water agency. TVMWD prepared a 2020 Plan[2] which is incorporated by reference. In addition, the City provided its 2020 Plan to TVMWD 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.

[2] https://www.ieua.org/read-our-reports/other-reports/

## 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*."

The City's 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).*

The City has reduced its reliance on imported water supplies for CY 2015 and CY 2020. In addition, the City is projected to continue reducing its reliance on imported water

supplies through CY 2045. A further discussion which demonstrates the City's measurable reduction in imported water reliance and improvement in regional self-reliance is provided in Appendix B.

## 1.5 TIPS FOR UWMP PREPARERS

The City's 2020 Plan (which includes the City's 2020 Water Shortage Contingency Plan (WSCP)) is considered an update to the City's 2015 Plan. However, the 2020 Plan and the WSCP are considered stand-alone documents. As discussed in Section 1.1, the City's 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 the City's 2020 Plan discusses and provides the following:

- The basis for preparing an Urban Water Management Plan is provided. The City is required to prepare the 2020 Plan because it is an "urban water supplier" (the City serves more than 3,000 customers and it supplies more than 3,000 acre-feet of water annually to its customers for municipal purposes).
- The City is a "Public Water System" and is regulated by the State Water Resources Control Board - Division of Drinking Water. The City's Public Water System number is provided in Table 2-1.
- The City's Plan has been prepared as an "individual" plan rather than a "regional" plan in an effort to provide information specific to the City to best inform its employees, management, and customers.
- Information presented in the City's 2020 Plan is provided on a "Calendar Year" basis which is from January 1 through December 31 of the following year.
- Water quantities presented in the City's 2020 Plan are provided on an "acre-foot" basis.
- The City's coordination and outreach efforts with wholesale water agencies, other retail water agencies, and the community are described. The City coordinated the preparation of its 2020 Plan with the Los Angeles County Department of Regional Planning, the Los Angeles County Sanitation District, Pomona Valley Protection Agency, Chino Basin Watermaster, Six Basins Watermaster, Metropolitan Water

District of Southern California, Three Valleys Municipal Water District, San Antonio Water Company, Monte Vista Water District, Walnut Valley Water District, Rowland Water District, Golden State Water Company – San Dimas, and the Cities of Upland, Claremont, Chino, and Chino Hills.

- The City's notification process to the cities and county within which the City provides water supplies to is discussed.

## 2.1 PLAN PREPARATION

As discussed in Section 1.1, the City's 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 choses to participate in a regional or individual planning effort; selection of reporting year-type; and coordination, notification, and outreach.*"

Pursuant to CWC requirements, the City's 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

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***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.*

---

The City's 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.

The City 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. The City’s 2020 Plan is an update to the City’s 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, the City’s 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. The City also submitted the UWMP data (from the standardized tables) electronically through DWR’s Online Submittal Tool.

In addition, the City is a Public Water System and is regulated by the State Water Resources Control Board - Division of Drinking Water (SWRCB-DDW). The SWRCB-DDW requires water agencies provide the number of connections, water usage, and other information annually. The information provided to SWRCB-DDW indicates the City serves potable water to more than 3,000 customers and supplies more than 3,000 AFY. Table 2-1 provides the City’s Public Water System name and number.

### 2.2.2 SUPPLIERS SERVING MULTIPLE SERVICE AREAS / PUBLIC WATER SYSTEMS

The City serves only a single Public Water System. Table 2-1 provides the City's Public Water System name and number.

**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* | | | |
| 1910126 | City of Pomona | 30,041 | 21,174 |
| | | | |
| | | | |
| | **TOTAL** | 30,041 | 21,174 |
| **** Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.* | | | |
| NOTES: The "Volume of Water Supplied 2020" includes recycled water supplies of 1,702 AF. Source for "Number of Municipal Connections 2020": https://sdwis.waterboards.ca.gov/PDWW/ | | | |

## 2.3 REGIONAL PLANNING

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

## 2.4 INDIVIDUAL OR REGIONAL PLANNING AND COMPLIANCE

As shown in Table 2-2, the City's 2020 Plan is an "Individual UWMP". The City 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). The City notified and coordinated with appropriate regional agencies and constituents (see Section 2.6). The Water Conservation Act of 2009 is incorporated in this Plan by reference.

**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, the City's 2020 Plan was developed as an "Individual UWMP" and not part of a Regional Plan.

### 2.4.2 REGIONAL ALLIANCE

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***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, the City's 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 the City's 2020 Plan is reported on a calendar year (CY) basis, unless noted otherwise, as shown in Table 2-3. A CY 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 the City's 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 the City's 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

The City is a sub-agency of TVMWD, a wholesale agency. As indicated in Table 2-4, the City has provided its 2020 Plan to TVMWD 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* |
| Three Valleys 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…*

The City is a retail water supplier that serves customers in the City of Pomona and portions of the Cities of La Verne, Claremont, Montclair, and Chino Hills, as well as unincorporated areas of Los Angeles County. The City 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, the City coordinated the preparation

of its 2020 Plan with the Los Angeles County Department of Regional Planning, the Los Angeles County Sanitation District, Pomona Valley Protection Agency, Chino Basin Watermaster, Six Basins Watermaster, Metropolitan Water District of Southern California (MWD), TVMWD, San Antonio Water Company, Monte Vista Water District, Walnut Valley Water District, Rowland Water District, Golden State Water Company – San Dimas, and the Cities of Upland, Claremont, Chino, and Chino Hills. As discussed in Section 10.2, the City notified these agencies, as well as the cities and county within which the City 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.

### 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 the City provides water supplies that the City was reviewing and considering amendments (updates) to the previous 2015 Plan, and as a result prepare 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 the City's 2020 Plan discusses and provides the following:

- A description of the City's service area is provided. The City provides water service to a majority of residential, commercial, and industrial customers within the City of Pomona, located in the eastern portion of Los Angeles County, approximately 35 miles from downtown Los Angeles. The City also serves portions of the Cities of La Verne, Claremont, Montclair, and Chino Hills. The City is bounded by the Cities of Claremont and La Verne to the north, the Cities of the City of Industry, Walnut, and San Dimas to the west, the Cities of Diamond Bar and Chino Hills to the south, and the City of Montclair to the east.
- The City's water service area encompasses an area of approximately 22.9 square miles. The location of the City's water service area is provided in Figure 1.
- A description regarding the City's water service area climate is provided. The monthly historical average temperatures (including minimum and maximum), monthly historical average rainfall, and monthly evapotranspiration (ETo) in the vicinity of the City's service area is summarized. The sources of the climate information are also discussed.
- The population within the City's water service area is discussed and projected. The sources of the population information are also discussed. The City provides water service to an area with a current population of 153,988. The City is projected to have a population of 183,826 by CY 2045.

- A discussion of land use information used by the City to develop the 2020 Plan is provided. The City reviewed the current and projected land uses within its service area. The City also reviewed data provided by the Southern California Association of Governments, the Department of Finance (DOF), 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.*

The City of Pomona was officially incorporated in January 1888 and became a charter city in March 1911. The City provides water service to a majority of residential, commercial, and industrial customers within the City of Pomona, located in the eastern portion of Los Angeles County, approximately 35 miles from downtown Los Angeles. The City also serves portions of the Cities of La Verne, Claremont, Montclair, and Chino Hills. The City is bounded by the Cities of Claremont and La Verne to the north, the Cities of the City of Industry, Walnut, and San Dimas to the west, the Cities of Diamond Bar and Chino Hills to the south, and the City of Montclair to the east. The City's water service area encompasses an area of approximately 22.9 square miles. The location of the City's water service area is provided in Figure 1.

The City of Pomona has a seven-member City Council. Six Council members are elected representing six different Districts and serve four-year terms. The City Mayor is elected at-large every four years. The City Manager is appointed by the City Council. Other City managerial positions are filled by the City Manager. The Water/ Wastewater Operations Department is responsible for the operation and management of the City's water system.

The demand within the City's service area is met through a variety of sources including groundwater, local surface water, imported water, recycled water, and non-potable water. The existing potable water systems consists of distribution system pipelines, storage reservoirs, booster pumping stations, groundwater wells, imported water connections, inter-agency connections, permitted water treatment facilities, spreading grounds, and pressure regulating stations. The potable water distribution system has approximately 6,000 fire hydrants and 421 miles of pipelines.

The City obtains its water supplies primarily from groundwater produced from wells located in the Chino Basin, Spadra Basin, and Six Basins. The City obtains local surface water from San Antonio and Evey Canyons. The City also purchases treated imported water from MWD through TVMWD.

## 3.2 SERVICE AREA BOUNDARY MAPS

The location of the City's water service area is provided in Figure 1. As discussed in Section 3.1, the City's service area covers approximately 22.9 square miles, encompassing the majority of the City of Pomona and portions of the Cities of La Verne, Claremont, and Chino Hills. The City's water service area boundary relative to the municipal boundaries of the Cities of Pomona, La Verne, Claremont, Montclair, and Chino Hills is also provided in Figure 2.

The City provides water services to all residential, commercial, and industrial customers within the City of Pomona, except for the following areas:

- Approximately 40 acres south of Foothill Boulevard and west of Towne Avenue served by Golden State Water Company;
- Approximately 20 acres north of Foothill Boulevard and west of Temple Avenue served by Golden State Water Company; and
- A small area located north of Valley Boulevard and west of Temple Avenue served by Walnut Valley Water District.

The City also provides water service to 275 acres of residential property and open space area outside of the City limits in the City of Chino Hills. This area includes the Rolling Ridge Estates located south of the 60 Freeway and west of the 71 Freeway. Additionally, the City provides recycled water to a number of customers including, California State Polytechnic University, Pomona, and Bonelli Park.

The City's 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 the City's service area is summarized in the tabulation below. Historical climate information was obtained from the Western Regional Climate Center, Los Angeles County Department of Public Works, and from DWR's California Irrigation Management Information System.

## Service Area Climate Information

| Month | Average Temperature (F) | Average Minimum Temperature (F) | Average Maximum Temperature (F) | Average Total Precipitation (Inches) | ETo (Inches) |
|---|---|---|---|---|---|
| **January** | 51.9 | 38.5 | 65.6 | 3.4 | 1.95 |
| **February** | 54.2 | 40.8 | 67.7 | 3.5 | 2.41 |
| **March** | 56.4 | 42.6 | 70.3 | 2.7 | 3.75 |
| **April** | 59.9 | 45.9 | 74.1 | 1.2 | 4.55 |
| **May** | 64.0 | 50.2 | 77.9 | 0.4 | 5.19 |
| **June** | 69.1 | 53.9 | 84.3 | 0.1 | 5.97 |
| **July** | 74.4 | 58.0 | 91.0 | 0.0 | 6.60 |
| **August** | 74.7 | 58.3 | 91.2 | 0.1 | 6.41 |
| **September** | 72.0 | 55.6 | 88.6 | 0.3 | 4.88 |
| **October** | 65.3 | 50.2 | 80.6 | 0.8 | 3.46 |
| **November** | 58.1 | 42.9 | 73.2 | 1.5 | 2.31 |
| **December** | 52.7 | 38.7 | 66.5 | 2.7 | 1.72 |
| **Annual** | 62.2 | 47.6 | 77.4 | 17.2 | 49.20 |

**Source:**

Historical average monthly precipitation and temperature information was obtained from the Western Regional Climate Center (http://www.wrcc.dri.edu/) and is based on data collected from Station 047050 (Pomona Fairplex, California) from 1893 through 2017. 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 78 (Pomona).

The historical average rainfall in the vicinity of the City's service area is 17.2 inches. The City's service area in the Pomona Valley has a dry climate and summers can reach average maximum daily temperatures of over 90 degrees Fahrenheit. Although changes in climatic conditions will have an impact, 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 the City's service area is discussed further in Section 7.2.

A discussion of the City's sources of supply, how those sources may be impacted by climate change, and the proactive actions the City 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.*

The City provides water service to an area with a current population of 153,988. Table 3-1 presents the current and projected population of the area encompassed by the City's service area from CY 2020 to CY 2045. The City is projected to have a population of 183,826 by CY 2045.

The City initially reviewed the available historical populations within its service area for population growth trends. The City determined historical U.S. Census populations within its service area using DWR's Population Tool (https://wuedata.water.ca.gov/). The City's 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 a GIS shapefile format and converted into a KML format. The uploaded KML file represents the City's service area boundary from 1990 to present (2020). DWR's Population Tool utilized U.S. Census data from 1990, 2000, and 2010, along with the District's service area boundary, to estimate

the population served by the City in the years 1990, 2000, and 2010. This current CY 2020 population was used to determine compliance with the City's SB X7-7 water use target for 2020, as discussed in Section 5.5.

Projected populations in the City's 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 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)* |
| | 153,988 | 159,683 | 165,589 | 171,713 | 177,666 | 183,826 |
| 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 the City's water management planning. However, increased population will have an impact on water demand.

## 3.5 LAND USES WITHIN SERVICE AREA

The City reviewed the current and projected land uses within its service area during the preparation of this 2020 Plan. Information regarding current and projected land uses is included in the City's "2014 General Plan Update". The existing land uses within the City's service area include residential (single-family and multi-family), commercial, institutional, and open space. The projected land uses within the City's service area are expected to remain similar to the existing land uses. In addition, although mostly built-out, the projected population within the City's 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 the City's service area, which includes the different land uses, is provided in Section 4.2. As discussed in Section 2.6.2, the City coordinated the preparation of the 2020 Plan with the City of Pomona, the County of Los Angeles, and other agencies.

As discussed in Section 3.4, the City 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 the City's 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 Department of Finance 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 the City's 2020 Plan discusses and provides the following:

- The City provides water service to individual "water use sectors". These water use sectors include single-family residential, multi-family, commercial, and institutional (and governmental), and landscape. Individual descriptions for these water use sectors are provided in Section 4.2.1.
- The City's total water demands (including potable and recycled water) over the past 10 years have ranged from 19,782 AFY to 24,801 AFY, with an average of 21,957 AFY. The City currently measures its water use through meter data and billing records.
- The City 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 the City's projected water demands.
- The City's current and projected water demands are provided in five-year increments over the next 25 years are provided (through Calendar Year 2045) as shown on Table 4-3.
- The City's 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 the City's total projected water demands.
- The City's sources of water supply and how those sources may be impacted by climate change are discussed. The proactive actions the City and other local/regional water managers may take to address the potential climate change impacts on water supplies are also discussed.
- The City 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

Chapter 4 addresses the City's potable water demands. Recycled water demands are addressed separately in Section 6.5; however, a summary is provided in Table 4-3. Raw water is not served by the City and is not applicable.

## 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.*

---

The City's 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. The City's 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 the City.

The City provides water service to individual "water use sectors" as identified by the CWC. The water use sectors supplied by the City 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 | 9,078 |
| Multi-Family | | Drinking Water | 3,670 |
| Commercial | | Drinking Water | 3,140 |
| Institutional/Governmental | | Drinking Water | 1,522 |
| Landscape | | Drinking Water | 1,042 |
| Losses | | Drinking Water | 1,020 |
| | | **TOTAL** | 19,472 |

[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 | | 10,423 | 10,808 | 11,208 | 11,597 | 11,999 |
| Multi-Family | | 4,214 | 4,370 | 4,532 | 4,689 | 4,851 |
| Commercial | | 3,606 | 3,739 | 3,877 | 4,012 | 4,151 |
| Institutional/Governmental | | 1,748 | 1,812 | 1,879 | 1,944 | 2,012 |
| Landscape | | 1,196 | 1,241 | 1,287 | 1,331 | 1,377 |
| Losses | | 1,171 | 1,215 | 1,260 | 1,303 | 1,348 |
| | **TOTAL** | 22,358 | 23,185 | 24,043 | 24,876 | 25,738 |

[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* | 19,472 | 22,358 | 23,185 | 24,043 | 24,876 | 25,738 |
| Recycled Water Demand[1] *From Table 6-4* | 1,702 | 2,350 | 2,350 | 2,350 | 2,350 | 2,350 |
| Optional Deduction of Recycled Water Put Into Long-Term Storage[2] | | | | | | |
| **TOTAL WATER USE** | 21,174 | 24,708 | 25,535 | 26,393 | 27,226 | 28,088 |

*[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, the City's 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
  (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 user dedicated to public service. Institutional users include, among other users, higher education institutions, schools, courts, churches, hospitals, government facilities, and nonprofit research institutions.)

- Landscape
  (Landscape connections supply water solely for landscape irrigation. Landscapes users may be associated with multi-family, commercial, industrial, or institutional/governmental sites, but are considered a separate water use sector if the connection is solely for landscape irrigation. Landscape 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

The City's 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 sources of water supply the City uses to meet its water demands. Section 6.1 provides a tabulation of the City's historical annual water demands for each water supply source. Over the past ten years, the City's total water demands (including potable and recycled water) have ranged from 19,782 AFY to 24,801 AFY, with an average of 21,957 AFY. In addition, the City recently experienced a five consecutive year drought within its service area from CY 2011 to CY 2015. The City also reviewed its historical water demands to determine the projected water demands and water supply reliability (discussed in Chapter 7). The City is able to provide sufficient water supplies to meet the projected water demands of its customers, including during long-term drought periods.

### 4.2.4 DISTRIBUTION SYSTEM WATER LOSS

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***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.*

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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. The City has completed the annual water loss audit process through October 1, 2020, as required by the CWC (i.e. the City has completed water loss audits representing calendar years 2016, 2017, 2018, and 2019). The City's 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 the City (provided in Appendix E), are available on DWR's website (https://wuedata.water.ca.gov/awwa_plans).

The City's 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). The City's 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, the City's average distribution system water losses represent approximately 6.4 percent of its total water demands. This average water loss factor was incorporated into the City's 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 the

City) 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 calendar year 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. The City 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 | 1,452 |
| 01/2017 | 1,771 |
| 01/2018 | 615 |
| 01/2019 | 1,778 |
| 01/2020 | 1,021 |
| *[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

The City currently measures its water use through meter data and billing records. The water use for the City's individual water use sectors during CY 2020 are provided in Table 4-1. Recycled water uses are addressed separately in Section 6.5; however, a summary of projected recycled water uses is provided in Table 4-3. The City's total water uses during CY 2020 have been reviewed for compliance with the SB X7-7 water use target for 2020 adopted in the City's 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. However, DWR has deemed the tool as optional and the City is not required by DWR to use the tool. However, Section 6.1 provides a tabulation of the City's historical annual water uses for each water supply source. During the past 10 years, the City experienced a five consecutive year drought within its service area from CY 2011 to CY 2015. In addition, historical records indicate the City's annual water demands typically have been even greater prior to CY 2012. The City 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, the City 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 the City's 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.*

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

provided in Chapter 6. The projected water demands for each of the City's water use sectors are provided in Table 4-2.

The City's 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 the City. 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 the City's water supplies from TVMWD, a wholesaler, are discussed in Section 6.2. As discussed in Section 2.6, the City has coordinated its water demand projections with TVMWD for each water use sector.

The City's 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 City's Municipal Code 62.5.5 "Water Conservation and Water Supply Shortage Program", which was created through the adoption of Ordinance No. 4122, adopted in June 2009 (discussed in Section 9.2), includes methods for current and ongoing reduction in water use and water waste. Prior to adoption of Ordinance No. 4122, the City's water use rate ranged from approximately 145 gallons per capita day to 183 gallons per capita day (from 2000 through 2009). As identified in Section 5.5, the City's actual water use rate during CY 2020 was 113 gallons per capita per day (GPCD) which is a decrease of up to 70 GPCD from the recent historical water use and includes passive savings. The City's 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 the City's 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.*

The City's projected water demands are provided in five-year increments over the next 25 years (and through CY 2045) in Table 4-3. The City's 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.

The City's "Drought Risk Assessment" (DRA) for the next five years (from CY 2021 through CY 2025) is discussed in Section 7.3. The DRA includes the City's 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 the City's 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 the City's WSCP (provided in Chapter 8). In addition to historical drought hydrology, the City 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

The City's current and projected water demands, including the water demands for each of the City's 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 the City is not required by DWR to use the tool. In addition, the City has been able to provide sufficient water supplies to its customers, including during long-term droughts and years with historically high water demands. The City 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 the City's water supply sources is provided in Chapter 7.

### 4.3.2 DWR 2020 UWMP SUBMITTAL TABLES

The City's current water demands for each of the water use sectors during CY 2020 are provided in Table 4-1. The City's 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. The City's 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. The City's 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. The City's 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.*

The City's water demand 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 the City's service area was estimated based on billing records provided by the City, a review of the City's "2014 General Plan Update", a review of median household income range statistics provided by the US Census Bureau (https://data.census.gov/cedsci/), and a review of GIS maps of Disadvantaged Communities[3], including block groups, tracts, and places, provided by DWR. The estimated number of lower income households located within the City's service area is approximately 42 percent of the total number of households. As indicated in Table 4-2, the total projected residential (single-family and multi-family) water demands within the City in 2045 is estimated at about 16,850. Based on a 42 percent use factor of total residential water demands, the projected water demand for lower income households will be about 7,082

[3] 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)

AFY by CY 2045. The projected water demands for lower income households were included in the City's 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?**<br>(Refer to Appendix K of UWMP Guidebook)<br>*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?**<br>*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[4]". 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 Plan describes the City's sources of water supply, management practices associated with those sources, and the long-term reliability of those sources. Section 7.3 includes a Drought Risk Assessment which considers the potential impacts of climate change to the City's water supply sources. Chapter 8 provides a detailed discussion of the City's WSCP, including but not limited to, the six standard water

[4] www.merriam-webster.com

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 the City's sources of supply, how those sources may be impacted by climate change, and the proactive actions the City and other local/regional water managers may take to address the potential climate change impacts on water supplies.

Imported Water Supplies

The City receives treated imported water as discussed in Section 6.2.1 and relies on the Chino and Six Basins Watermasters to manage the groundwater supplies of the Chino and Six Basins. Consequently, the City directly and/or indirectly relies on MWD 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, the City is a sub-agency of the TVMWD 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 – Chino Basin

The City relies on groundwater produced from the Chino Basin as discussed in Section 6.2.2. The Chino Basin (Basin Number 8-2.01 pursuant to DWR Bulletin 118) has been identified by DWR as a very low-priority groundwater basin partially due to the fact it is adjudicated. In that regard, the Chino Basin is actively managed by the Chino Basin Watermaster and those management activities are described in detail in Section 6.2.2.

Recognizing the potential impacts of climate change on the Chino Basin groundwater supplies (decreased local runoff and replenishment, along with increased groundwater production which may lead to decreased groundwater levels), the City 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 Chino 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 the City's 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 the City's climate change analysis, the average condition GCM (CanESM2) was selected.

The climate tools available on the Cal-Adapt website were to simulate projected annual precipitation and annual average maximum temperature in the Chino Basin. An electronic boundary of the Chino 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 Chino Basin is projected to be 16.00 over the next 25 years (through 2045), inches compared to historical average of 14.82 inches (from 1950 through 2019). In addition, the average maximum temperature is projected to be 82.1 degrees Fahrenheit compared to a historical average of 78.5 degrees Fahrenheit. Although there may be

more precipitation in the future, it may be more likely to fall as rainfall compared to snowfall. The simulation does not denote the duration or intensity of the storms contributing to the annual precipitation. Notwithstanding, the Santa Ana River watershed (including the area of the Chino Bain) has a complex and interconnected series of dams, reservoirs, and replenishment basins to capture stormwater runoff in the Santa Ana River watershed. Most if not all precipitation (whether it is rain or snowfall) likely will be captured during normal and dry year conditions and will not be 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 Chino 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 the City to use rely on the Chino Basin as a reliable source of supply.

Chino Basin – Storage Management Plan

The Chino Basin Judgment parties adopted as part of the 2000 Chino Basin Peace Agreement, a storage management plan, which consists of three types of storage agreements that result in five types of storage accounts: 1) Excess Carryover, 2) Local Supplemental-Recycled, 3) Local Supplemental-Imported, 4) Pre-2000 Quantified Supplemental, and 5) Storage and Recovery. An Excess Carryover account includes a Party's unproduced rights in the Safe Yield and Basin Water purchased or transferred from other Parties. A Local Supplemental Water account includes any imported and/or recycled water that is recharged by a producer and similar water acquired from other Parties. A Storage and Recovery Account includes Supplemental Water and is intended to produce a broad and mutual benefit to the Judgment Parties. The Chino Basin Watermaster maintains records of the replenishment, production, losses, and end-of-year storage totals for all storage accounts and reports this accounting on an annual basis.

Individual Parties are involved in water transfers of annual unproduced rights in the Safe Yield and water in their storage accounts. Chino Basin Watermaster has an application and review process for these transfers. The Parties engage in conjunctive-use activities individually by storing Chino Basin and Supplemental Water that are in excess of their demands and may recover that water in the future as the need arises. These activities collectively cause temporary adjustment in the managed storage. The Parties' aggregate amount of water in managed storage was 541,845 AF during FY 2019-20.

MWD's Dry-Year Yield Program (DYYP) is the only active Storage and Recovery Program in Chino Basin. The DYYP can store up to 100,000 AF with maximum replenishment of 25,000 AFY and maximum extraction of 33,000 AFY. During FY 2019-20, there was 45,961 AF within the DYYP account, resulting in a total managed storage volume of 587,806 AF (541,845 AF + 45,961 AF). The agreement that authorized the DYYP will expire in 2028.

Inland Empire Utilities Agency's "Addendum No. 2 to the Optimum Basin Management Plan", completed in February 2021, was prepared to address managed storage within the Chino Basin following the termination of the DYYP. Based on the Chino Basin Watermaster's findings, the Local Storage Limitation Solution (LSLS) was developed. From July 1, 2017 through June 30, 2021, the Safe Storage Capacity of the Chino Basin is 600,000 AF. The LSLS proposes a change in the Safe Storage Capacity to 700,000 AF through June 30, 2030, and to 620,000 AFY from July 1, 2030 through June 30, 2035. Full utilization of the allowable increased storage space is expected to occur gradually as additional water is stored and less groundwater is produced. The Safe Storage Capacity of the Chino Basin will revert to 500,000 AF after June 30, 2035.

Reduce Operating Safe Yield

The Chino Basin Judgment established a Safe Yield for the Chino Basin of 140,000 AF. Pursuant to the most recent Safe Yield reset effective July 2020, the Safe Yield in the Chino Basin is determined to be 131,000 AFY (through June 30, 2030). The Safe Yield is recalculated every 10 years and is defined in the Chino Basin Judgment as "the long-term average annual quantity of ground water (excluding replenishment of stored water but including return flow to the Basin from use of replenishment or stored water) which can be produced from the Chino Basin under conditions of a particular year without causing an undesirable result".

Groundwater Supplies – Spadra Basin

The City uses groundwater produced from the Spadra Basin as noted in Section 6.2.2 of this Plan. Recognizing there is no means to replenish the Spadra Basin (other than deep percolation of precipitation, plus subsurface inflow/outflow) the potential impacts of climate change on the Spadra Basin groundwater supplies are less pronounced. As a subbasin to the San Gabriel Valley Basin (Basin Number 4-13 pursuant to DWR Bulletin 118), the Spadra Basin has been identified by DWR as a very low-priority groundwater basin. Although not adjudicated, a GSP is being prepared for the Spadra Basin to address the requirements of Sustainable Groundwater Management Act and those management activities are described in detail in Section 6.2.2.

Nonetheless, the City 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 Spadra 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 the City's 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 the City's 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 Spadra Basin. An electronic boundary of the Spadra 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 Spadra Basin is projected to be 18.73 inches over the next 25 years (through 2045), compared to historical average of 16.99 inches (from 1950 through 2019). In addition, the average maximum temperature is projected to be 81.9 degrees Fahrenheit compared to a historical average of 78.4 degrees Fahrenheit. Although there may be more precipitation in the future, it may be more likely to fall as rainfall compared to snowfall. Notwithstanding, the Spadra Basin does not have any groundwater replenishment facilities and all replenishment is from deep percolation of precipitation,

plus subsurface inflow/outflow. Consequently, increased precipitation may have long term benefits to the Spadra Basin. The simulation does not denote the duration or intensity of the storms contributing to the annual precipitation.

Recognizing these potential impacts to local hydrology resulting from climate change and the resultant impacts to the groundwater supplies, the Spadra Basin producers are developing response actions as part of a Groundwater Sustainability Plan (GSP) (pursuant to the Sustainable Groundwater Management Act), which has not been completed as of the preparation of this Plan. In addition, Spadra Basin producers have an alternative source of water supply.

Groundwater Supplies – Six Basin

The City uses groundwater produced from the Six Basins as noted in Section 6.2.2 of this Plan. As a subbasin to the San Gabriel Valley Basin (Basin Number 4-13 pursuant to DWR Bulletin 118), the Six Basins has been identified by DWR as a very low-priority groundwater basin partially due to the fact it is adjudicated. In that regard, the Six Basins is actively managed by the Six Basins Watermaster and those management activities are described in detail in Section 6.2.2.

Recognizing the potential impacts of climate change on the Six Basins groundwater supplies (decreased local runoff and replenishment, along with increased groundwater production which may lead to decreased groundwater levels), the City 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 Six Basins. 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 the City's 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 the City's climate change analysis, the average condition GCM (CanESM2) was selected.

The climate tools available on the Cal-Adapt website were to simulate projected annual precipitation and annual average maximum temperature in the Six Basins. An electronic boundary of the Six Basins 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 Six Basins is projected to be 19.50 inches over the next 25 years (through 2045), compared to historical average of 17.52 inches (from 1950 through 2019). In addition, the average maximum temperature is projected to be 81.2 degrees Fahrenheit compared to a historical average of 77.7 degrees Fahrenheit. Although there may be more precipitation in the future, it may be more likely to fall as rainfall compared to snowfall. The simulation does not denote the duration or intensity of the storms contributing to the annual precipitation. Notwithstanding, the San Gabriel River and Santa

Ana watersheds include a complex and interconnected series of dams, reservoirs, and replenishment basins to capture stormwater runoff. Consequently, most if not all precipitation (whether it is rain or snowfall) likely will be captured for use in the Six Basins 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 Six Basins 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 the City to use rely on the Six Basins as a reliable source of supply.

Reduce Operating Safe Yield

The adjudicated water rights in the Six Basins are 19,300 AF. Through adoption of an annual Operating Safe Yield the Six Basins Watermaster has the ability to reduce the amount of water rights available to Producers before they must cease production and shift to more expensive imported water. The Operating Safe Yield has been reduced to 13,000 AF which is about 67 percent of the adjudicated total. This action provides producers with an economic incentive to reduce demands and to avoid potential purchase of expensive treated imported water.

# CHAPTER 5

# SB X7-7 BASELINES, 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 the City'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 the City, 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.
- The City 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. The City's SB X7-7 Verification Form has not been modified and is included as part of this 2020 Plan as Appendix G. The City's 2020 Water Use Target is 147 GPCD.
- The City's 2020 Plan incorporates the 2020 Water Use Target and determines compliance based on actual water use.
- The population within the City's service area during Calendar Year 2020 is estimated at 153,988. The City's population was estimated using the California Department of Water Resources' online "Population Tool" which incorporates United States Census data in a Geographic Information Systems (or GIS) format to estimate the population within the City's service area.

- The City's "gross water" use represents the total volume of water entering its distribution system from its water supply sources. The City's gross water use excludes recycled water deliveries or water conveyed to another supplier. The City's annual gross water during Calendar Year 2020 was 19,472 AF.
- The City's per-capita water use is based on the gross water use divided by the population. The City's per-capita water use during Calendar Year 2020 was 113 GPCD. The City's confirmed 2020 Water Use Target is 147 GPCD. The City's per-capita water use during Calendar Year 2020 meets the 2020 Water Use Target.
- The City 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.*

The City 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

The City previously calculated its "Baseline" water periods and a "2020 Water Use Target" in its 2015 Plan. There were two different Baseline periods identified (consisting of a "10-year Baseline" period and a "5-year Baseline" period). The average water use for each of these two Baseline periods, expressed in GPCD, represents the Baseline water use for each period. A 10-year Baseline period was identified by the City and information

regarding the starting year, ending year, and average water use rate during this period is provided in Table 5-1. The City determined its 2020 Water Use Target by incorporating 95 percent of the regional use target for the South Coast Hydrologic Region.

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 the City 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 if the 2020 Water Use Target required any adjustments.

The City's calculated 2020 Water Use Target was compared with the 95 percent of the average water use within the 5-year Baseline to determine if any adjustments were required. The Baseline water uses were used to confirm the City's 2020 Water Use Target (which represents the per capita water use target for 2020 pursuant to SB X7-7).

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

The City's service area has not changed (i.e. expansion or contraction) since the 2015 Plan was prepared. The City's 2020 Plan incorporates the Baseline water uses and 2020 Water Use Target calculated in the 2015 Plan. The City previously prepared standardized tables (SB X7-7 Verification Form) to demonstrate compliance with the Water Conservation Act of 2009 in its 2015 Plan, including compliance with the City's 2015 Interim Water Use Target. The City's 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

The City's compliance with its 2020 Water Use Target is summarized in the following sections. The City 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 | *2000* | *2009* | *163* | *147* |
| 5 Year | *2005* | *2009* | *117* | |
| **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 |
| *113* | *0* | *113* | *147* | *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, the City's 2020 Plan was not developed as part of a Regional Alliance. Information from the City's 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, the City calculated the Baseline water uses and 2020 Water Use Target

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

As discussed in Section 5.2.1, the City prepared standardized tables (SB X7-7 Verification Form) to demonstrate compliance with the Water Conservation Act of 2009. The City's 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. The City's recycled water deliveries were less than 10 percent of its retail water demands during CY 2008. Consequently, a 10-year Baseline period was identified by the City 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.

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 the City 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.

The City's calculated 2020 Water Use Target was compared with the 95 percent of the average water use within the 5-year Baseline to determine whether any adjustments were

required. The City's confirmed 2020 Water Use Target is 147 GPCD and is summarized in Table 5-1.

## 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 the City's 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 the City's water service during CY 2020. Because U.S. Census 2020 population data was not available during the preparation of the 2020 Plan, the City reviewed the methodologies recommended by DWR to estimate the CY 2020 population. The population methodology used by the City in the 2020 Plan is provided below.

The City initially reviewed the available historical populations within its service area for population growth trends. The City determined historical U.S. Census population within its service area using DWR's Population Tool (https://wuedata.water.ca.gov/). The City's 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 a GIS shapefile format and converted into a KML format. The uploaded KML file represents the City's service area boundary from 1990 to present (2020). DWR's Population Tool utilized U.S. Census data from 1990, 2000, and 2010, along with the City's service area boundary, to estimate the population served by the City in the years 1990, 2000, and 2010.

Population data provided by the SCAG was used to estimate the 2020 population within the City's service area. As discussed in Section 3.4, SCAG's "The 2020-2045 Regional Transportation Plan / Sustainable Communities Strategy of the SCAG", dated September 2020, provides population data and projections from 2016 through 2045 by incorporating demographic trends, existing land use, general plan land use policies, and input and projections from the Department of Finance and the US Census Bureau for counties, cities, and unincorporated areas within Southern California. The City performed a GIS analysis (based on the percentage of SCAG population data associated within the City's service area boundaries) to estimate populations within the City's service area. The estimated population within the City's service area for CY 2020 is 153,988 and is consistent with the historical population growth trends. The City's 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. The City's annual gross water use amounts are based on the total amount of water entering the City's distribution system from its water supply sources (including groundwater production wells, local surface water, and purchased imported water). The annual gross water use by the City during CY 2020 was 19,472 AF.

The annual gross water use amounts within the City 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.

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

Industrial process water is not subtracted from the City's gross water use provided in SB X7-7 Verification Form, Table 4. The City 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 the City during CY 2020 was 19,472 AF. As discussed in Section 5.4.1, the estimated population within the City's service area for CY 2020 is 153,988. As a result, the City's per-capita water use during CY 2020 was 113 GPCD. As discussed in Section 5.3, the City's confirmed 2020 Water Use Target is 147 GPCD. The City's per-capita water use during CY 2020 meets the 2020 Water Use Target and is in compliance. The City 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.*

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

### 5.5.2 SPECIAL SITUATIONS

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

### 5.5.3 IF SUPPLIER DOES NOT MEET 2020 TARGET

The City's 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, the City's 2020 Plan was not developed as part of a Regional Alliance. Information from the City's 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 the City's 2020 Plan discusses and provides the following:

- The City's water supply sources include: groundwater pumped from the Chino Basin, Spadra Basin, and Six Basins; treated, imported surface water purchased from Metropolitan Water District of Southern California through Three Valleys Municipal Water District; local surface water from San Antonio Creek; and recycled water purchased from the Los Angeles County Sanitation Districts.
- The City's main source of water supply is groundwater pumped from the Chino Basin. A tabulation of the City's historical water supplies is provided in Section 6.1.
- A discussion regarding the City's imported water supplies from Three Valley Municipal Water District is provided. Information regarding imported water connections, capacities, reliability, and historical production is provided.
- A discussion regarding the City's groundwater supplies from the Chino Basin, Six Basins, and Spadra Basin is provided. Information regarding basin location, adjudication, management, water levels, water quality, water rights, and historical production is provided.
- A discussion regarding the City's surface water supplies from San Antonio Creek is provided. Information regarding diversion locations, water rights, and historical production is provided.

- A discussion regarding the City's recycled water supplies is provided. The City's recycled water supplies are produced by Los Angeles County Sanitation Districts. The City uses recycled water for use in agricultural and landscape irrigation, ornamental plant irrigation, impoundment, and athletic field irrigation.
- The City's proposed future projects to maximize its water supply resources are discussed.
- The City's "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 the City's water management processes was estimated during CY 2020.

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

- Management of each water supply source;
- Current provisions of a basin adjudication or Groundwater Sustainability Plan (GSP), as applicable, pertaining to management of groundwater supplies;
- Measures the City 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 the City's water supply sources 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).*

The City's water supply sources include: groundwater pumped from the Chino Basin, Spadra Basin, and Six Basins; treated, imported surface water purchased from Metropolitan Water District of Southern California through Three Valleys Municipal Water District; local surface water from San Antonio Creek; and recycled water purchased from the Los Angeles County Sanitation Districts. The City's main source of water supply is groundwater pumped from the Chino Basin. A tabulation of the City's historical water supplies is provided below.

| Calendar Year | System Water Supply Sources (AF) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Potable Water | | | | | | | Recycled Water (Pomona Water Reclamation Plant) | Total |
| | Groundwater | | | | Purchased Water | Surface Water (San Antonio Creek) | Subtotal | | |
| | Chino Basin | Six Basins (Pomona) | Six Basins (Claremont Heights) | Spadra Basin | MWD Imported Water | | | | |
| 2011 | 10,784 | 2,333 | 1,514 | 278 | 2,790 | 3,383 | 21,082 | 1,323 | 22,405 |
| 2012 | 12,243 | 2,356 | 1,351 | 178 | 4,127 | 1,864 | 22,118 | 1,724 | 23,842 |
| 2013 | 12,333 | 2,705 | 900 | 166 | 5,821 | 1,143 | 23,068 | 1,733 | 24,801 |
| 2014 | 12,872 | 3,179 | 590 | 134 | 4,951 | 963 | 22,688 | 1,768 | 24,456 |
| 2015 | 11,905 | 2,331 | 538 | 123 | 2,863 | 910 | 18,669 | 1,580 | 20,250 |
| 2016 | 8,400 | 2,878 | 414 | 108 | 5,587 | 1,009 | 18,397 | 1,927 | 20,325 |
| 2017 | 6,967 | 2,824 | 695 | 158 | 6,323 | 2,255 | 19,222 | 2,040 | 21,261 |
| 2018 | 12,271 | 1,794 | 456 | 78 | 3,353 | 1,382 | 19,335 | 1,942 | 21,277 |
| 2019 | 10,273 | 1,458 | 526 | 0 | 3,331 | 2,614 | 18,203 | 1,580 | 19,782 |
| 2020 | 8,826 | 2,171 | 1,016 | 0 | 4,484 | 2,975 | 19,472 | 1,702 | 21,174 |

Source: Data provided by the City

### 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:

- The City's existing and planned sources of water supply are identified;
- Each 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 Drought Risk Assessment (see Chapter 7) are described;
- The management of each water supply in correlation with other identified supplies is described; and,
- Information pertinent to the reliability analysis, including climate change effects, is considered.

The City historically has relied on groundwater pumped from the Chino Basin, Spadra Basin, and Six Basins; treated, imported surface water purchased from Metropolitan Water District of Southern California through Three Valleys Municipal Water District; local surface water from San Antonio Creek; and recycled water purchased from the Los Angeles County Sanitation Districts. The following descriptions summarize the City's sources of supply (detailed descriptions are provided in Section 6.2).

## Existing and Planned Sources of Supply

### Purchased Treated Imported Water

The City has historically purchased treated, imported water from the Metropolitan Water District through Three Valleys Municipal Water District, 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

The City has historically pumped groundwater from the Chino, Spadra, and Six Basins 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

The City has historically diverted water from the San Antonio Creek as described in Section 6.2.3. In addition, Section 6.2.3 provides a detailed discussion of the existing and planned use of the surface water, including a description of the management and reliability of those surface water supplies. Table 6-8 summarizes the actual surface water 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.

Storm Water

The City has historically received groundwater from the Chino, Spadra, and Six Basins and surface water from the San Antonio Creek. Management and use of the stormwater runoff from the groundwater basin watersheds is crucial to groundwater management and surface water supplies. However, the City currently does not have its own program to beneficially use stormwater runoff as a direct source of supply.

Wastewater and Recycled Water

The City has historically purchased recycled water supplies from Three Valleys 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 the City's water system along with a map of its service area is included in Chapter 3. In addition, the agencies which manage the water supplies used by the City 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 the City is not required by DWR to use the tool. Section 6.1 provides a tabulation of the City's historical annual water uses for each water supply source. During the past 10 years, the City experienced a five consecutive year drought within its service area from CY 2011 to CY 2015. In addition, historical records indicate the City's annual water demands typically have been even greater prior to CY 2011-12. The City 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, the City 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 the City's 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

**THREE VALLEYS MUNICIPAL WATER DISTRICT**

The City purchases treated, imported water from MWD through TVMWD. 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 TVMWD's sub-agencies can be treated at MWD's Weymouth Treatment Plant located in the City of La Verne. Water can also be treated by TVMWD at its Miramar Water Treatment Plant located in the City of Claremont.

TVMWD uses a tiered rate structure for water sales to its sub-agencies, including the City. TVMWD allocates each sub-agency a specific quantity of imported water at the Tier 1

water rate for the calendar year. Any water purchases in excess of the Tier 1 allocation may incur Tier 2 rates. During CY 2020, the City had a Tier 1 allocation of 7,052 AFY from TVMWD.

The City can purchase treated, imported water directly from its PM-11 (10 cubic feet per second) connection. Treated water can also be distributed through the Pomona-Walnut-Rowland Joint Water Line (JWL). The JWL provides treated water to the City, Walnut Valley Water District, and Rowland Water District. The City's treated, imported water purchases from TVMWD over the past five years have been tabulated in Section 6.1. Over the past five years, the City purchased 3,331 AFY to 6,323 AFY, with an average of 4,616 AFY from TVMWD. The City's projected purchases of treated, imported water from TVMWD, over the next 25 years in five-year increments, is provided in Table 6-9.

The City's treated imported water supplies from MWD, through TVMWD, 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 the City. 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 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 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.

### 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.*

## CHINO BASIN

### Chino Basin - Sustainable Groundwater Management Act

The Chino Basin is a sub-basin of the Upper Santa Ana Valley Groundwater Basin pursuant to DWR Bulletin 118, Basin Number 8-2.01. Pursuant to the Sustainable Groundwater Management Act of 2014 (SGMA), the Chino Basin was named as an adjudicated groundwater basin and is exempt from the requirements of developing a Groundwater Sustainability Plan and subsequently was designated a very-low-priority basin in DWR's 2019 SGMA Basin Prioritization report. In compliance with SGMA, the Chino Basin Watermaster submits its Annual Report to DWR.

### Chino Basin - Adjudication

The Chino Basin was adjudicated under the Chino Basin Judgment, entered on January 27, 1978 by the Superior Court for the County of San Bernardino. A copy of the Chino Basin Judgment is provided in Appendix I. The provisions of the Judgment are administered and managed by the court-ordered Chino Basin Watermaster.

The Chino Basin Judgment originally established a Safe Yield for the Chino Basin of 140,000 AFY. Pursuant to the most recent Safe Yield reset effective in 2020, the Safe Yield in the Chino Basin is currently 131,000 AFY (July 1 to June 30). The Safe Yield is recalculated every 10 years and is defined in the Chino Basin Judgment as "the long-term average annual quantity of ground water (excluding replenishment of stored water but including return flow to the Basin from use of replenishment or stored water) which can be produced from the Chino Basin under conditions of a particular year without causing an undesirable result". The Chino Basin Judgment's allocation of the Safe Yield includes three separate Pools: (1) the "Overlying Agricultural Pool"; (2) the "Overlying Non-Agricultural Pool"; and (3) the "Appropriative Pool".

Appropriators who are Parties to the Chino Basin Judgment, are authorized to produce groundwater in excess of their rights. Appropriators pay assessments for such production to the Chino Basin Watermaster. The assessments are used to replenish the Chino Basin through replenishment of imported surface water. The Chino Basin Watermaster purchases water from Metropolitan Water District of Southern California through Inland Empire Utilities Agency (IEUA) and TVMWD, on behalf of the Parties, to replenish the Chino Basin. Occasionally, Watermaster has purchased water from storage accounts from parties within the Chino Basin.

The Chino Basin Watermaster reallocates the unused portion of the Chino Basin Safe Yield from the Overlying Agricultural Pool to the Appropriative Pool members as a supplement to the Appropriative Pool share of Operating Safe Yield rights in any year. These transfers are permanent if agricultural land has been converted to non-agricultural use, or temporary if agricultural pool extractions are less than their share of the Safe Yield. From FY 2000-01 to FY 2019-20, the annual quantity of the Agricultural Pool share available for reallocation to Appropriative Pool members[5] ranged from 40,822 AF to 61,014 AF, with an annual average of approximately 50,457 AF. As Agricultural Pool production declines within the Chino Basin, the reallocation of water to the Appropriative Pool will increase.

## Chino Basin - Description

The Chino Basin is located within the Upper Santa Ana Valley, which is located in San Bernardino County and is bounded on the east by the Rialto-Colton fault; on the southeast by the contact with impermeable rocks forming the Jurupa Mountains; on the south by impermeable rocks of the Puente Hills and by the Chino fault; on the northwest by the San Jose fault; and on the north by the impermeable rocks of the San Gabriel Mountains and by the Cucamonga fault. The location of the Chino Basin is provided in Figure 3. The

[5] Pursuant to the Chino Basin Watermaster "*Fiscal Year 2019-20, 43rd Annual Report*", Appendix G

surface area of the Chino Basin is approximately 154,000 acres (or 240 square miles). The San Antonio Creek and Cucamonga Creek drain the Chino Basin area southward and flow into the Santa Ana River. Pursuant to DWR Bulletin 118 (for Basin Number 8-2.01), the total storage capacity of the Chino Basin is approximately 18,300,000 AF.

The water-bearing units in the Chino Basin includes Holocene and Upper Pleistocene alluvium. This Holocene alluvium consists mainly of alluvial-fan deposits, with maximum thickness of 150 feet that are coarsest in and near the mouths of the canyons and are finer away from canyon mouths in the southern part of the Chino Basin. The Pleistocene alluvium is exposed mainly in the northern part of the subbasin and supplies most of the water to wells located within the Chino Basin. The Pleistocene alluvium is about 600 to 700 feet thick throughout most of the Chino Basin. The alluvium contains interfingering finer, alluvial-fan deposits and coarser, fluvial deposits.

The Chino Basin is bounded by three major fault systems. Many of the faults within the Chino Basin form groundwater barriers marked by discontinuities in groundwater elevations. The Rialto-Colton fault forms the eastern boundary of the Chino Basin. Although it has no surface expression, it forms a major barrier to groundwater movement. The San Jose fault forms the northwest boundary of the Chino Basin. The Cucamonga fault zone forms part of the northern boundary of the Chino Basin. Displacement on the Cucamonga fault amounts to about 1,000 feet on its west end to 4,000 feet at its east end.

## Chino Basin - Management

### Basin Production

Over the past 20 years, total groundwater production from the Chino Basin has ranged from approximately 133,275 AFY to 188,910 AFY[6]. A majority of production currently is pumped for municipal and agricultural purposes and the remaining production is pumped by nonagricultural Parties.

### Groundwater Level Monitoring

Groundwater elevation contours in the Chino Basin Watermaster's 2018 State of the Basin Report show a regional depression of groundwater surrounding the Chino-II Desalter well field and the eastern half of the Chino-I Desalter well field. Hydraulic Control of the Chino Basin is achieved east of Chino Desalter Well I-20. The contours also indicate groundwater flowing past the desalter wells west of Chino Desalter Well I-20, indicating Hydraulic Control to less than 5,000 AFY.

### Chino Basin Desalter Authority

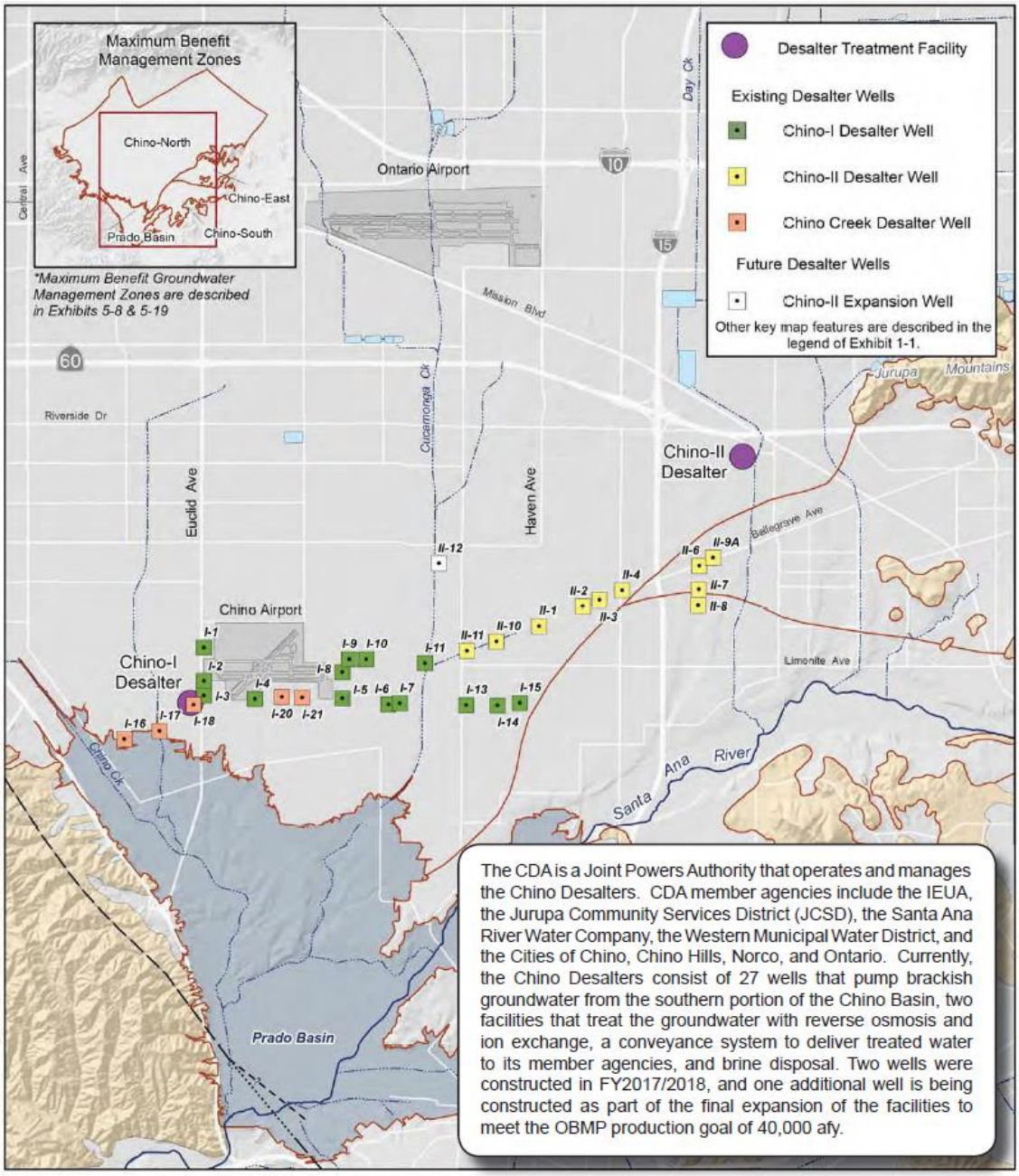
On September 25, 2001, the Chino Basin Desalter Authority (CDA) was formed under a Joint Exercise of Powers Agreement to remove salts from brackish groundwater extracted from the lower Chino Basin. The area which receives water supplies from CDA is 304 square miles. A map showing CDA Desalter facilities and associated wells is provided below.

[6] Pursuant to the Chino Basin Watermaster "*Fiscal Year 2019-20, 43rd Annual Report*", Appendix H http://www.cbwm.org/rep_annual.htm

CDA removes salts from brackish groundwater extracted from the lower Chino Basin through the Chino I and II Desalter facilities. The Chino I Desalter is located in the City of Chino and commenced operation in 2001 and was expanded in 2005 to have a total capacity of 14.2 MGD. The Chino I Desalter includes reverse osmosis, ion exchange, and air stripper treatment for treating brackish water and removing nitrate and volatile organic chemicals (VOCs). The Chino II Desalter is located in Jurupa Valley and began operation in 2006 and was expanded in 2011 and again in 2017 to have a total capacity of 33 MGD. The Chino II Desalter includes reverse osmosis and ion exchange treatment for treating brackish water and removing nitrate. Following the expansion, CDA constructed the Concentrate Reduction Facility in 2017, which utilizes chemical softening to remove the limiting foulants (specifically, calcium and silica) from the reverse osmosis concentrate. Additional components of the Chino II Desalter were constructed as part of the South Archibald Plume Project which will be operational in 2021, with the goal of removing and treated trichloroethylene (TCE) from groundwater wells impacted by the South Archibald Plume.

Treated water is distributed to CDA's member agencies which include the City of Chino, City of Chino Hills, City of Norco, City of Ontario, Inland Empire Utilities Agency, Jurupa Community Services District, Santa Ana River Water Company, and Western Municipal Water District. The CDA's member agencies provide water service within Riverside County and San Bernardino County. The member agencies have contract entitlements to receive a total of 35,200 AFY of treated water from CDA.

## Location of CDA Facilities




(source: Chino Basin Optimum Basin Management Program 2018 State of the Basin Report)

A portion of the production is in-lieu of those CDA member agencies producing an equal amount of groundwater from their own groundwater wells using their individual water rights. An additional portion of the production is temporarily assigned as "controlled overdraft". Pursuant to the Chino Basin Judgment, a total of 200,000 AF was authorized for controlled overdraft between the period of 1978 through 2017. In 2007, the Peace II Agreement was adopted to establish measures for achieving hydraulic control of the Chino Basin. One of the measures put forth included increasing the authorized controlled overdraft to 600,000 AF. This increase in controlled overdraft is separate from, and in addition to, the 200,000 AF authorized in the Chino Basin Judgment and is available for utilization until December 31, 2030. For the balance of the production, the Chino Basin Watermaster levies an annual Replenishment Assessment to purchase replenishment water to replace that overproduced water. The untreated imported water demands are shared proportionally amongst CDA's member agencies.

Chino Basin Optimum Basin Management Program

In 2000, the Chino Basin Watermaster developed the Chino Basin Optimum Basin Management Program (OBMP). The OBMP was developed in a collaborative process that identified the needs of the stakeholders, described the physical state of the basin, defined a set of management goals, identified impediments to these goals, and established a series of actions that would remove these impediments and achieve the management goals. The goals identified in the 2000 OBMP included: (1) Enhance Basin Water Supplied; (2) Protect and Enhance Water Quality; (3) Enhance Management of the Basin; and (4) Equitably Finance the OBMP.

In September 2018, the Chino Basin Watermaster initiated the process to update the OBMP and its Implementation Plan. Throughout 2019, the Chino Basin Watermaster held a series of public listening sessions to support the development process of the 2020 OBMP Update. The purpose of the listening sessions was to confirm the need to update

the OBMP, to identify the issues, needs, and wants of the stakeholders, to define the goals for the 2020 OBMP Update, and to identify new and revised actions that could be included in to 2020 OBMP Update to remove the impediments to achieving the 2020 OBMP Update goals. After an assessment of the basin, the stakeholders concluded that the four (4) goals defined in the 2000 OBMP are unchanged and still relevant for the 2020 OBMP Update.

In 2019, the stakeholders identified and described 12 management activities that, if implemented, would address their issues, needs, and wants. The 12 management activities addressed 55 of the 57 needs identified by the stakeholders. Nine of the activities (A, B, C, D, E, F, G, K, and L) were combined into seven basin management activities and the remaining three activities (H, I, and J) were identified as actions that can be accomplished by incorporating them into the scope of work of every activity or were more appropriate for inclusion within an implementation agreement. The seven basin management activities selected to help achieve the goals of the 2020 OBMP Update are:

- *Activity A – Increase the capacity to store and recharge storm and supplemental water*
- *Activity B – Develop, implement, and optimize Storage and Recovery Programs*
- *Activity C and G – Identify and implement regional conveyance and treatment projects/ programs and optimize the use of all water supply sources*
- *Activity D – Maximize the reuse of recycled water produced by the IEUA and others*
- *Activity E and F – Develop and implement a groundwater-quality management plan to address contaminants of emerging concern*
- *Activity K – Develop a management strategy within the maximum-benefit salt and nutrient management plan to ensure compliance with recycled water recharge dilution requirements*
- *Activity L – Perform the appropriate amount of monitoring and reporting required to fulfill basin management and regulatory requirements*

Each activity is a management process to optimize some aspect of basin management. The actions defined by the stakeholders to remove the impediments to the four OBMP goals were grouped into Program Elements, each of which included a list of implementation actions and an implementation schedule. The nine Program Elements defined in the 2000 OBMP were retained for the 2020 OBMP Update. Each of the seven activities, and the associated implementation actions, were incorporated into Program Elements, which were updated based on feedback from the stakeholders. The Program Elements defined in the 2020 OBMP Update include:

- Program Element 1 - Develop and Implement Comprehensive Monitoring Program
- Program Element 2 - Develop and Implement Comprehensive Recharge Program
- Program Element 3 - Develop and Implement a Water Supply Plan for Impaired Areas
- Program Element 4 - Develop and Implement Comprehensive Groundwater Management Plan for Management Zone 1
- Program Element 5 - Develop and Implement Regional Supplemental Water Program
- Program Element 6 - Develop and Implement Cooperative Programs with the Regional Board and Other Agencies to Improve Basin
- Program Element 7 - Develop and Implement Salt Management Plan
- Program Element 8 - Develop and Implement Groundwater Storage Management Program
- Program Element 9 - Develop and Implement Storage and Recovery Programs

Chino Basin Storage Management Plan

The Chino Basin Storage Management Plan was created to mitigate adverse impacts to the Chino Basin from factors including reductions in net recharge and Safe Yield, and increased groundwater discharge to the Santa Ana River contributing to the loss of Hydraulic Control. The Chino Basin Storage Management Plan identifies technical storage management issues within the Chino Basin, establishes storage management activities, and outlines key measures for the Storage and Recovery Programs.

Since the Chino Basin Judgment came into effect in 1978, the Chino Basin Watermaster developed rules and regulations, standard storage agreements, and related forms. Since 2000, Chino Basin Watermaster administered groundwater storage in the Chino Basin pursuant to the storage management plan described in Program Element 8 of the 2000 OBMP Implementation Plan and evaluated in the Programmatic Environmental Impact Report. Since then, Watermaster has indicated that they will likely exceed the storage space initially estimated in the OBMP Implementation Plan. Thus, Chino Basin Watermaster found it necessary to develop a new storage management plan.

The three types of storage agreements that result in five types of storage accounts: Excess Carryover, Local Supplemental-Recycled, Local Supplemental-Imported, Pre-2000 Quantified Supplemental, and Storage and Recovery. An Excess Carryover account includes a Party's unproduced rights in the Safe Yield and Basin Water purchased or transferred from other Parties. A Local Supplemental Water account includes any imported and/or recycled water that is recharged by a producer and similar water acquired from other Parties. A Storage and Recovery Account includes Supplemental Water and is intended to produce a broad and mutual benefit to the Parties of the Judgement. The Chino Basin Watermaster tracks the puts, takes, losses, and end-of-year storage totals for all storage accounts and reports on this accounting on an annual basis. The Chino Basin Watermaster assesses losses on stored water by considering water in managed storage (excluding Carryover) and offsets the increases in groundwater

discharge to the Santa Ana River and from the Chino Basin attributable to managed storage (excluding Carryover). Chino Basin Watermaster also considers losses due to evaporation on the puts when water is recharged in spreading basins.

The individual Parties are involved in water transfers of annual unproduced rights in the Safe Yield and water in their storage accounts. Chino Basin Watermaster has an application and review process for these transfers. The Parties engage in conjunctive-use activities individually by storing Chino Basin and Supplemental Water that are in excess of their demands and recover/produce that water as necessary. These activities collectively cause a temporary increase in the managed storage. The Parties' aggregate amount of water in managed storage was 541,845 AF as of June 30, 2020. MWD's DYYP is an active storage and Recovery Program in Chino Basin. The DYYP can store up to 100,000 AF with maximum replenishment of 25,000 AFY and maximum extraction of 33,000 AFY. As of June 30, 2020, there was 45,961 AF within the DYYP account, resulting in a total managed storage volume of 587,806 AF (541,845 AF + 45,961 AF). The agreement that authorized the DYYP will expire in 2028. The combined volume of managed storage by Metropolitan's DYYP and the Parties is projected to have a maximum of 790,000 AF in 2028, assuming DYYP has 100,000 AF in storage and that MWD removes the contract rate of 33,000 AFY starting in 2029.

The Parties and IEUA, through the OBMP, have substantially increased the amount of storm and supplemental water recharge capacity in the Chino Basin. The increase in supplemental water recharge capacity was done to ensure that the Chino Basin Watermaster is able to meet replenishment requirements pursuant to Regional Board and Court orders. The Chino Basin Watermaster indicates that it will prioritize the use spreading basins to satisfy replenishment obligations over the use of spreading basins for other uses.

Chino Basin Watermaster will periodically review the Storage Management Plan on no less than a five-year frequency, when the Safe Yield is recalculated, or when the Chino

Basin Watermaster determines an update is warranted based on new information or needs of the Parties or the Chino Basin.

The Storage Management Plan was prepared in parallel with the 2020 OBMP Update. Chino Basin Watermaster published the final Storage Management Plan report and it was incorporated into Program Elements 8 and 9 (Storage and Recovery Programs) of the OBMP update process and was approved in June 2020.

Chino Basin Subsidence Management Plan

The Chino Basin Subsidence Management Plan was developed in 2015 and its purpose was to: minimize subsidence and fissuring; collect information necessary to understand the extent, rate, and mechanisms of subsidence and fissuring; and to establish a management plan to reduce levels or abate future subsidence and fissuring.
From 2001 to 2005, Chino Basin Watermaster developed, coordinated, and conducted the MZ-1 Interim Monitoring Program and the main conclusions derived were:

1. Groundwater production from the deep, confined aquifer system in the southwestern region of MZ-1 causes the greatest stress to the aquifer system.
2. Groundwater-level decline due to pumping of the deep aquifer can cause irreversible compaction of the aquifer-system sediments, resulting in land subsidence.
3. The state of aquifer-system deformation in southern MZ-1 (in the vicinity of Ayala Park) was essentially elastic. Very little non-recoverable compaction was occurring in MZ-1, which contrasted historical measurements when about 2.2 feet of land subsidence occurred from about 1987 to 1995 and was accompanied by ground fissuring.
4. During this study, a previously undetected barrier to groundwater flow, the “Riley Barrier,” was identified. The Riley Barrier is located within the deep aquifer system and aligned with the historical zone of ground fissuring. Pumping from the deep

aquifer system was limited to the area west of the barrier, and the resulting groundwater-level decline did not propagate eastward across the barrier.

5. InSAR and ground-level survey data indicated that subsidence had occurred in the central region of MZ-1 in the past and was continuing to occur. The InSAR data also suggested that the groundwater barrier extends northward into central MZ-1.

The Chino Basin Watermaster currently conducts the monitoring program as described below:

- Production - Production data will be collected from the owners of wells
- Recharge - The volumes of imported, storm, and recycled waters that are artificially recharged at basins in the Area, and of recycled water that is used for direct use will be collected from IEUA for each fiscal year.
- Piezometric Levels - Piezometric levels will be measured and recorded once every 15 minutes using pressure transducers at select wells. The wells used in the monitoring program will be periodically assessed, and transducers in wells will be removed or added as deemed necessary by the Ground-Level Monitoring Committee.
- Vertical Aquifer-System Deformation - Watermaster will measure and record the vertical component of aquifer-system deformation at the Ayala Park Extensometer (MZ-1 Managed Area) and the Chino Creek Extensometer (Southeast Area) once every 15 minutes.
- Vertical Ground-Surface Deformation - Watermaster will measure vertical ground motion via traditional leveling surveys and remote sensing techniques (InSAR). The Ground-Level Monitoring Committee will annually recommend the scope and frequency of leveling surveys and InSAR measurements within the Area.
- Horizontal Ground-Surface Deformation - Watermaster will measure horizontal ground motion across areas that are susceptible to ground fissuring in the MZ-1 Managed Area and Northwest MZ-1 Area via EDMs.

At the beginning of each calendar year, Chino Basin Watermaster staff and engineers will analyze the data generated during the prior calendar year. Results and interpretations generated from the analysis will be documented in an annual report and is used to prepare recommendations for future planning.

Groundwater Clean-up

Groundwater in areas of the Chino Basin is currently contaminated with Perchlorate and VOCs, including 1,2,3-Tricholropropane (1,2,3-TCP), trichloroethylene (TCE), and perchloroethylene (PCE). In addition, nitrates and TDS concentrations in areas of the Chino Basin exceed drinking water quality standards. Wellhead treatment is necessary in these areas to allow delivery of the groundwater for potable purposes.

## Chino Basin - Historical and Projected Basin Production

The City currently produces groundwater from the Chino Basin. The City's share of the Operating Safe Yield is 20.454 percent. Over the past five years, the City has produced 6,967 AFY to 12,271 AFY, with an average of 9,348 AFY from the Chino Basin. The City's projected production from the Chino Basin, over the next 25 years in five-year increments, is provided in Table 6-9.

## SIX BASINS

### Six Basins - Sustainable Groundwater Management Act

Six Basins is a subbasin of the San Gabriel Valley Groundwater Basin pursuant to DWR Bulletin 118, Basin Number 4-13. Pursuant to the Sustainable Groundwater Management Act of 2014 (SGMA), the Six Basins is named as an adjudicated groundwater basin, is exempt from the requirements of developing a Groundwater Sustainability Plan, and is designated a low-priority basin. In compliance with SGMA, the Six Basins Watermaster submits its Annual Report to DWR.

### Six Basins - Adjudication

Six Basins was adjudicated in 1998 and a copy of the Six Basins Judgment is provided in Appendix J. Parties include the City, the Cities of Claremont, La Verne, and Upland; the Golden State Water Company (GSWC, formally known as the Southern California Water Company), the San Antonio Water Company (SAWCo), TVMWD, the West End Consolidated Water Company (WECWC), and the Pomona Valley Protective Association (PVPA). The provisions of the Judgment are administered and managed by the court-ordered Six Basins Watermaster.

### Six Basins - Description

Six Basins is a group of six interconnected groundwater basins that underlie areas of the Cities of Claremont, La Verne, Pomona, and Upland, and surrounding unincorporated areas of Los Angeles and San Bernardino Counties. Six Basins is comprised of alluvium or other water-bearing formations. Six Basins covers an area of approximately twenty-one (21) square miles and is located in the northeasterly portion of the San Gabriel Valley Groundwater Basin. Six Basins is bounded by the San Jose Hills to the south, the Chino

Basin to the east, the San Gabriel Mountains to the north, and the Main San Gabriel Basin to the west. The location of the Six Basins provided in Figure 4.

Six Basins is comprised of the Upper Claremont Heights, Lower Claremont Heights, Canyon, Live Oak, Ganesha, and Pomona Basins, and their locations are described as follows:

- The Upper Claremont Heights Basin is bounded by the Sierra Madre/ Cucamonga Fault to the north, Indian Hill Fault to the south, the Chino Basin to the east, and the Claremont Heights Barrier to the west.
- The Lower Claremont Heights Basin is bounded by the Sierra Madre/ Cucamonga Fault to the north, Indian Hill Fault to the south, the Claremont Heights Barrier to the east, and the Thompson Wash Barrier to the west.
- The Canyon Basin is bounded by the Sierra Madre/ Cucamonga Fault to the south and east, and by the surface trace of the bedrock and alluvium interface to the north and west.
- The Live Oak Basin is bounded by the Sierra Madre/ Cucamonga Fault to the north, the Indian Hill Fault line to the south, the Thompson Wash Barrier to the east, and the Main San Gabriel Basin to the west.
- The Ganesha Basin is bounded by the Indian Hill Fault to the north, the San Antonio Fault to the south and east, and the Main San Gabriel Basin to the west.
- The Pomona Basin is bounded by the Indian Hill Fault line to the north, the bedrock and alluvium boundary between the San Antonio Fault and the Chino Basin to the south, and the San Antonio Fault to the west.

A court-appointed Watermaster is responsible for the administration of the Six Basins Judgment. Pursuant to the Judgment, the safe yield of the Six Basins is 19,300 AFY, which is defined as the amount of water that can be produced from the parties on an annual basis to ensure long-term, sustainable groundwater production. The production,

replenishment, and recovery of the Live Oak and Ganesha Basins (collectively referred to as Two Basins) are reserved solely for the City of La Verne and are not subject to any groundwater production limitations, provided that production by the City of La Verne does not substantially injure the rights of any other Six Basin parties. However, the Canyon, Upper Claremont Heights, Lower Claremont Heights, and Pomona Basins (collectively referred to as Four Basins) are subject to individual Operating Safe Yields determined annually by the Six Basins Watermaster.

The Six Basins Watermaster annually determines the Operating Safe Yield for the Four Basins based on recent and expected groundwater replenishment, production, and groundwater levels. The Operating Safe Yield allocation for each party is based on the percentage share of the adjudicated base annual production rights. The base annual production rights are the average annual production for each party during calendar years 1985 and 1986. The tabulation below provides the base annual production rights and the percent share of the Six Basins parties for use of groundwater in the Four Basins.

| **Six Basins Watermaster Party** | **% Share** | **Base Annual Production Right (AFY)** |
|---|---|---|
| City of Claremont | 2.772% | 535 |
| City of La Verne | 7.601% | 1467 |
| City of Pomona | 20.798% | 4013 |
| City of Upland | 9.544% | 1842 |
| GSWC | 34.741% | 6705 |
| Pomona College | 1.850% | 357 |
| SAWCo | 7.166% | 1383 |
| TVMWD | 0.130% | 25 |
| WECWC | 15.399% | 2972 |
| **Totals** | **100%** | **19,300** |

Parties are allowed to carry-over portions of their unused annual pumping rights for up to one year. Carryover rights are limited to a maximum of 25 percent of the Parties'

respective share of the operating safe yield. However, any amount extracted in excess of the water rights will then be deducted from the following year's water rights.

Parties are allowed to utilize storage capacity in the Four Basins, subject to entering into an agreement with the Watermaster. Storage agreements define the type of water that may be stored, acceptable locations for spreading, volume of recoverable water, and annual and total storage limitations. Currently, three parties have storage agreements with the Watermaster, including the City, SAWCo, and TVMWD.

Each year, a party's total allowable production right is the sum of its share of the operating safe yield, carryover rights from the previous year, total recoverable water in storage, transfers from other parties, water produced by an approved special project, and temporary surplus water. If a party's total production exceeds its total allowable production for the year, that party is obligated to spread replacement water in an amount equal to the excess production. The City owns and operates the Pomona spreading grounds (located adjacent to its Pedley Water Treatment Plant) through which the City has historically spread local surface runoff. Pursuant to the City's storage agreement with the Six Basin Watermaster, the first 130 AF of water spread by the City is designated as replenishment water.

Watermaster collects and tabulates groundwater level data for wells in Six Basins, including data from wells maintained by Watermaster, data collected by the parties, and data available through SWRCB's Geotracker database for groundwater remediation sites. Groundwater level data are reported to Watermaster to evaluate groundwater conditions and support the annual determination of operating safe yields. Pursuant to Six Basins Watermaster Annual Reports, groundwater levels steadily declined during the drought period from 2012 to 2016. However, 2017 to 2019 were relatively wet and in combination with spreading at the San Antonio Spreading Grounds (into Six Basins), resulted in either a decreased in the rate of decline of, or an increase in, groundwater levels. From 1999 to 2019, the annual operating safe yield in the Six Basins ranged from 13,000 AF to 24,000 AF. In consideration of the recent amount of groundwater in storage and the need

to control groundwater levels, Watermaster set an operating safe yield of 16,000 AF for 2016, 14,000 AF in 2017, 13,500 AF in 2018, and 13,000 AF for 2019 and 2020.

Three Valleys Municipal Water District may purchase surface water supplies diverted by the City from the San Antonio Creek. In the spring of 2015, TVMWD connected to the City's Canon pipeline that conveys water from San Antonio Creek (behind San Antonio Dam) to the City's Pedley Filtration Plant located in the City of Claremont. TVMWD has the ability to purchase this surface water and direct it into spreading basins via spreading pipeline extensions within the San Antonio Spreading Grounds that benefit TVMWD's groundwater wells located in Six Basins.

Groundwater quality in the northerly portion of Six Basins has been observed to be generally good as this area includes geology and land use that promote natural and artificial replenishment through surface spreading. The southerly and westerly portions of Six Basins generally see higher concentrations of perchlorate, nitrate, and volatile organic compounds due to past agricultural land use and industrial contamination. Wellhead treatment is necessary in these areas to allow delivery of the groundwater for potable use. The City currently treats contaminated groundwater through a combination of blending and treatment facilities (including ion exchange for nitrate and air strippers for VOCs).

## Six Basins - Historical and Projected Basin Production

The City currently produces groundwater from 9 wells located in the Upper Claremont Heights, Lower Claremont Heights, and Pomona Basins. The City's share of the operating safe yield is 20.798 percent. The City's production over the past five years is tabulated in Section 6.1. Over the past five years, the City has produced 1,984 AFY to 3,519 AFY, with an average of 2,846 AFY from the Six Basins. The City's projected production from the Six Basins, over the next 25 years in five-year increments, is provided in Table 6-9.

## SPADRA BASIN

### Spadra Basin - Sustainable Groundwater Management Act

The Spadra Basin is an un-adjudicated sub-basin of the San Gabriel Valley Groundwater Basin (DWR Bulletin 118 Groundwater Basin Number 4-13). Pursuant to the Sustainable Groundwater Management Act of 2014 (SGMA), DWR has designated the San Gabriel Valley Groundwater Basin as a "Very Low Priority". A Groundwater Sustainability Plan is not required to be developed for an adjudicated sub-basin of the San Gabriel Valley Groundwater Basin. However, the Spadra Basin is unadjudicated. Consequently, local water agencies including Walnut Valley Water District and the City of Pomona collectively formed a Groundwater Sustainability Agency (GSA) for the Spadra Basin (Spadra Basin GSA) in February 2017. Although the Walnut Valley Water District and the City of Pomona are the primary stakeholders of the Spadra Basin GSA, California State Polytechnic University Pomona, and the Walnut Hills Mobile Home Community were invited to be part of the Spadra Basin Advisory Committee. The Spadra Basin GSA is in the process of preparing and adopting a GSP with the purpose of maximizing the beneficial use of the Spadra Basin while ensuring long-term sustainability. The Spadra Basin GSA's GSP will be completed by January 31, 2022. The Spadra Basin GSP will include the following components:

- Description of the Spadra Basin and basin settings
- Development of sustainable management criteria
- Evaluation of the sustainability of future baseline conditions
- Evaluation of basin optimization scenarios to achieve sustainability
- Preparation and adoption

Following issuance of the GSP, additional information will be available regarding groundwater use and reliability. That information will be included in future UWMPs.

## Spadra Basin - Description

The Spadra Basin is located at the southeasterly portion of the San Gabriel Valley and covers an area of approximately 4,200 acres. The Spadra Basin is a small, unconfined, alluvial aquifer system. The Spadra Basin is surrounded by four adjudicated groundwater basins consisting of the Chino Basin to the east, the Main San Gabriel Basin to the northwest, the Puente Basin to the west, and the Six Basins to the north. The location of the Spadra Basin is provided in Figure 5.

San Jose Creek is the main stream that drains the Spadra Basin. The source of the San Jose Creek is waters originating from the San Gabriel Mountains (through Thompson Creek). San Jose Creek flows through the Spadra Basin towards the west until it ultimately merges with the San Gabriel River. However, the urbanization of local areas as well as the lining of San Jose Creek have limited the amount of natural recharge and return flow recharge to the Spadra Basin. Pursuant to DWR Bulletin 45, the storage capacity of the 50-foot zone above the water table is estimated at 15,000 AF, and the storage capacity of a similar zone below the water table is estimated at 11,000 AF. Groundwater from the Spadra Basin has been produced by the City of Pomona, Walnut Valley Water District, California State Polytechnic University, Pomona, and the Walnut Hills Mobile Home Community.

The Spadra Basin is shallow and contains high concentrations of total dissolved solids and nitrate, resulting in poor quality groundwater. Groundwater produced from the Spadra Basin that is used for potable water uses often require treatment or blending prior to use to comply with SWRCB-DDW drinking water standards. As a result, groundwater produced from the Spadra Basin is used primarily for non-potable overlying uses by local water agencies. Due to limited natural recharge and poor water quality, the Spadra Basin's ability to support additional wells is restricted.

## Spadra Basin - Historical and Projected Basin Production

The City currently produces groundwater from the Spadra Basin for potable water purposes. The City's production over the past five years has been tabulated in Section 6.1. Over the past five years, the City has produced 0 AFY to 158 AFY, with an average of 69 AFY from the Spadra Basin. The City's projected production from the Spadra 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 | Chino Basin | 8,400 | 6,967 | 12,271 | 10,273 | 8,826 |
| Alluvial Basin | Six Basins | 3,292 | 3,519 | 2,250 | 1,984 | 3,187 |
| Alluvial Basin | Spadra Basin | 108 | 158 | 78 | 0 | 0 |
| | **TOTAL** | 11,800 | 10,644 | 14,599 | 12,257 | 12,013 |
| **** Units of measure (AF, CCF, MG)*** *must remain consistent throughout the UWMP as reported in Table 2-3.* | | | | | | |
| NOTES: | | | | | | |

### 6.2.3 SURFACE WATER

**SAN ANTONIO CREEK SURFACE WATER**

The City has surface water facilities which are located near the base of the San Antonio Canyon and Evey Canyon watersheds that discharge runoff from the San Gabriel Mountains into local spreading grounds through the San Antonio Creek. The amount of surface water runoff that is discharged to the San Antonio Creek is dependent on local precipitation and snowmelt from the San Gabriel Mountains. The City owns the water rights to 40 percent of the first 10,000 AFY of flow from the San Antonio Creek and owns the rights to receive water all the water from the Evey Canyon. The City has the infrastructure to produce up to 4,000 AFY of that surface water for supply.

The City's surface water facilities include: (1) an intake/weir structure at the San Antonio Canyon; (2) the City's Pedley Filtration Plant (PFP) located in the City of Claremont; and (3) the Canon Waterline that connects the San Antonio Canyon and Evey Canyon watersheds to the PFP. The intake/weir structure at the San Antonio Canyon distributes the flow between the San Antonio Water Company and the City (i.e. 40 percent) plus water from Evey Canyon. From the intake/weir structure, the Canon Waterline transfers the raw surface water collected from both watersheds to the PFP for treatment. At the PFP, the waterline discharges into a diversion structure which transfers all instantaneous flows less than or equal to 4 MGD into treatment. Any excess flow greater than 4 MGD is diverted to the Pomona Spreading Grounds, located adjacent to the PFP.

The San Antonio Creek provides high quality untreated surface water. However, during extreme wet weather events, the surface water may exhibit high turbidity levels. The PFP is shut down an average of two weeks per year due to high turbidity levels. When the PFP is shutdown, untreated surface water from the San Antonio Creek is diverted to the adjacent Pomona Spreading Grounds for groundwater recharge to the Six Basins.

The City's production of treated surface water originating from San Antonio Creek over the past five years has been tabulated in Section 6.1. Over the past five years, the City has produced 1,009 AFY to 2,975 AFY, with an average of 2,047 AFY from San Antonio Creek. The City's projected production from San Antonio Creek, over the next 25 years in five-year increments.

### 6.2.4 STORMWATER

The City does not directly use stormwater 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 from a municipal wastewater facility 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."

The City uses recycled water wholesaled by the Los Angeles County Sanitation District (LACSD) from the Pomona Water Reclamation Plant (PWRP). The City serves recycled water to customers within and outside of the City's service area. A portion of the City's non-potable supply is also pumped by the City from the Spadra Basin.

#### 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…*

The City's 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. The

City's recycled water has been wholesaled by LACSD from PWRP since December 1973. Treated, tertiary effluent is then sent to contracting agencies, including the City. The City also receives non-potable water from the Spadra Basin. Flow from PWRP exceeding 11 MGD is routinely diverted to the LACSD Joint Water Pollution Control Plant (JWPCP) in Carson, California.

The City provides sewer service to an area of approximately 14,680 acres within the City limits and approximately six acres outside of the City limits. The City's connections into LACSD's trunk sewers for treatment are not metered. Approximately 2,000 acres in the City drain to other serving entities or currently produce no sewage.

In accordance with the City's "2009 Recycled Water Master Plan", additional sources of water were required to support new maximum daily demand upon expansion of the recycled water distribution system. These sources include potable water, non-potable groundwater from existing or rehabilitated wells, increased wastewater flow to the PWRP, and recycled water from the Inland Empire Utilities Agency. However, potential recycled water customers have left the area since preparation of the Master Plan. The City is currently preparing a "Water, Sewer and Recycled Water Strategic Plan" to modify the recycled water system to include projects pending additional funding.

### 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 the City is treated by LACSD. Wastewater is collected within the City's local sewer collection system. The City's local sewers tie into LACSD's regional

trunk sewers at multiple locations within the City. The regional trunk sewer lines deliver wastewater to one or more water reclamation plants owned by LACSD for treatment.

The City collects wastewater from customers within the City's municipal boundaries with the exception of customers within the Cities of Claremont, La Verne, Chino Hills, and Chino. The City sewers connect to LACSD trunk sewers at approximately 200 locations. Approximately 300 accounts within the City of Claremont connect at two locations to an 8-inch Pomona sewer line before being discharged into a 10-inch LACSD trunk sewer. Approximately 11 commercial and industrial properties located in the City of Chino are also provided sewer service by the City. Flow from the northern, central, and eastern areas of the City travels southwest and flow from the west travels into LACSD gravity lines. A map showing the City's sewer system within its service area is provided in Appendix K.

The City's sewer system dates back to the early 1900's. Majority of the system was built in the 1950's and 1960's. It consists of approximately 300 miles of gravity sewer, four (4) pump stations, 1.4 miles of force mains, approximately 3,600 manholes, and two (2) siphons. City sewer pipeline diameters range in size from four (4) inches to forty-two (42) inches where majority of the pipes are eight (8) inches in diameter and are made out of vitrified clay. City staff regularly maintains and cleans sewer pipes. Specialized equipment is used to inspect and record pipeline condition without excavating roadways. The City expects future projects will be needed for the removal and replacement of deteriorating pipelines or to provide additional capacity.

Furthermore, there are four (4) pump stations conveying flow from the southern area of the City. These pump stations are owned, maintained, and operated by LACSD. Pump stations 1 and 4 are upstream of pump station 2, which is upstream of pump station 3. Pump stations 1 and 4 only pump local flow. Pump station 2 pumps local flow in addition to relifting flow from pump stations 1 and 4. Pump station 3 pumps local flow and relifts flow from pump station 2.

The water reclamation plants serving the City include PWRP and JWPCP; however, the percentage breakdown between these two plants in treating the City's wastewater is unknown. LACSD estimates approximately 69 gallons per person per day of wastewater is generated within LACSD's service area. Based on a CY 2020 population of 153,988 within the City, the estimated amount of wastewater collected by the City is approximately 10.6 million gallons per day (about 11,900 AFY), as shown in Table 6-2.

Municipal wastewater is treated and disposed of at LACSD's PWRP, located at 295 Humane Way near the western edge of the City, just east of the 57 freeway and north of the Phillips Ranch development area. PWRP has a capacity to treat 15 MGD of wastewater and produces an average of 9 MGD of recycled water. The plant treats approximately 13 MGD of influent flow to Title 22 standards through primary, secondary, and tertiary treatment. Disinfected tertiary effluent from PWRP is sent to contracting agencies.

The City currently has the right to purchase and sell two-thirds of the plant's recycled water. Based on the plant's average production rate, the City has approximately 6 MGD available for beneficial reuse. The plant distributes the remainder to Walnut Valley Water District. Any unused recycled water is discharged to the south fork of San Jose Creek, which is tributary to the unlined portion of the San Gabriel River.

Flow exceeding 11 MGD is routinely diverted from PWRP to JWPCP in Carson, California. 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.

Table 6-3 describes the City's volume of treated water that is recycled and disposed of.

**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* |
| Sanitation Districts of Los Angeles County | Metered | 11,900 | Sanitation Districts of Los Angeles County | Pomona Water Reclamation Plant | Yes | No |
| | | | | | | |
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| | | | | | | |
| | | | | | | |
| **Total Wastewater Collected from Service Area in 2020:** | | 11,900 | | | | |
| **** 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 |
| Pomona Water Reclamation Plant | NPDES Permit: Discharge Point #001 | South fork of San Jose Creek | 4B190107019 | River or creek outfall | Yes | Tertiary | 7,480 | 1,514 | 1,702 | 4,264 | |
| | | | | | | | | | | | |
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| | | | | | | | | | | | |
| | | | | | | **Total** | 7,480 | 1,514 | 1,702 | 4,264 | 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: The PWRP is located within the City's service area; however; the water reclamation plant is wholly owned and operated by LACSD. Information regarding "2020 volumes" is estimated based on the "30th Annual Status Report on Recycled Water Use FY 2018-19", prepared by LACSD. Recycled water volumes (within the serviced area) are for fiscal year 2019-20. Because the City does not own the water reclamation plant, information regarding "Instream Flow Permit Requirement" is not available and is not applicable.

## 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.*

The City collects wastewater from the Cities of Pomona, La Verne, Chino Hills, Chino, and Claremont. Wastewater is then treated at PWRP to serve recycled water to the City. The City also has seven non-potable wells available for use in its recycled water system.

A map of the City's recycled water system (from the City's 2009 Recycled Water Master Plan) is provided in Appendix L.

The City currently provides recycled water to customers inside and outside of the City's service area. The City's distribution system is located entirely within the City's municipal boundaries where it delivers recycled water to two booster pumping stations that serves the following locations outside of the City's municipal boundaries:

- California State Polytechnic University (Cal Poly): This pump station is located southwest of the interchange of the 10 Freeway and the 57 Freeway. Recycled water is boosted to a recycled water reservoir on the western part of the campus through a pipeline owned and operated by the university. The University provides recycled water to the Forest Lawn Memorial Park in Covina.

- Bonelli Park: This pump station is located south of the 10 Freeway and west of the 57 Freeway. Recycled water is boosted to a recycled water reservoir in Bonelli park, serving Bonelli Park, the East Shore Recreational Vehicle Park, and the Mountain Meadows Golf Course.

The distribution system has a combined length of approximately three miles. The distribution system consists of a 490 HP, 9,000 GPM pump station that feeds two, 21-inch pipelines. One 21-inch line runs east along Pomona Boulevard and Vernon Avenue, while the other runs north along Ridgeway Street to a T-section at South Campus Drive and the 71 Freeway. From the second line, an 18-inch line continues north along Ridgeway Street, then east along Murchison Avenue where it terminates at a 4.5-million-gallon storage reservoir in Bonellli Park. At the T-section, a 16-inch line runs west along South Campus Drive, serving the parkway, Cal Poly and the 57 and 71 Freeways. The Forest Lawn Memorial Park uses a pumpstation to lift recycled water from Cal Poly's onsite recycled water reservoir up to Forest Lawn's irrigation water tanks.

The City's recycled water system facilities are either City-owned or customer-owned. Active City-owned facilities include the PWRP booster pump station, Well 19, Well 31, a 0.7 MG reservoir, and 3 MG reservoir. Inactive, city-owned facilities include non-potable wells; Wells S5, S1, W33, S2A, and S2B. Customer- owned facilities include reservoirs and booster pump stations owned and operated by California State Polytechnic University, Pomona; Bonelli Park; and Caltrans.

The City's recycled water system operates primarily to distribute recycled water from PWRP to its customers. Tertiary treated effluent is discharged over a free-flowing weir into a small pump station wet well. PWRP draws recycled water from this pump station and distributes two-thirds of the effluent flow to the City. Any unused effluent is diverted to the San Jose Creek.

Historically, recycled water use within the City's service area has been used mainly for irrigation, with some commercial and industrial users. Table 6-4 shows that over the past five years, recycled water use has decreased within the City due to key industrial users going out of business or leaving the City. Exports have remained relatively steady between 2016 and 2020.

#### 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 the City. 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, the City delivers recycled water to several locations for use in agricultural and landscape irrigation, ornamental plant irrigation, impoundment, and athletic field irrigation. The City's 2009 Recycled Water Master Plan identifies potential recycled water users (See appendix L). The City is currently preparing a "Water, Sewer and Recycled Water Strategic Plan" to modify the recycled water system to include projects pending additional funding. The Forest Lawn Memorial Park has already upgraded Cal Poly's irrigation water lift station to increase maximum flow rate from 3,000 to 4,000 GPM to accommodate the cemetery's demands, which will increase gradually until the final build-out of the cemetery occurs in the year 2160, with an ultimate projected irrigation demand of 900 AFY.

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: | City of Pomona | | | | | | | | | | |
| Supplemental Water Added in 2020 (volume) *Include units* | 0 | | | | | | | | | | |
| Source of 2020 Supplemental Water | N/A | | | | | | | | | | |
| 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 | 2,336 | Schools, Parks, City Landscape | Tertiary | 1,692 | 2,336 | 2,336 | 2,336 | 2,336 | 2,336 | |
| Golf course irrigation | | | | | | | | | | | |
| Commercial use | | | | | | | | | | | |
| Industrial use | Industrial use | 14 | Robertson Ready Mix | Tertiary | 10 | 14 | 14 | 14 | 14 | 14 | |
| 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:** | 1,702 | 2,350 | 2,350 | 2,350 | 2,350 | 2,350 | |
| | | | | **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) | 2,078 | 1,692 |
| Golf course irrigation | 500 | 0 |
| Commercial use | | |
| Industrial use | 15 | 10 |
| Geothermal and other energy production | | |
| Seawater intrusion barrier | | |
| Recreational impoundment | | |
| Wetlands or wildlife habitat | | |
| Groundwater recharge (IPR) | | |
| Reservoir water augmentation (IPR) | 1,000 | 0 |
| Direct potable reuse | | |
| Other (Description Required) | | |
| **Total** | 3,593 | 1,702 |
| [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.*

The City currently provides financial incentives for the use of recycled water. The cost of recycled water to customers is less than the cost of potable water (as discussed in Chapter 9 of this UWMP). It is anticipated this financial incentive will encourage additional recycled water use. As noted above, the City's 2009 Recycled Water Master Plan identifies potential recycled water uses, including golf course, residential landscape, commercial, industrial, park, and school uses. In addition, the City is currently preparing a "Water, Sewer and Recycled Water Strategic Plan" to modify the recycled water system to include projects pending additional funding.

**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 Master Plan | Potential recycled water demands identified in City of Pomona's 2009 Water Master Plan | Future | 2,750 |
| Draft Water, Sewer and Recycled Water Strategic Plan | Implement recommendatios from Water, Sewer and Recycled Water Strategic Plan | Future | |
| | | | |
| | | **Total** | 2,750 |
| ***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.*

Six Basins

The City pumps groundwater from Six Basins which is low in total dissolved solids and does not require desalination. The SWRCB-DDW recommended level is 500 milligrams per liter (mg/L) and water can be provided for long-term domestic use with TDS concentrations of up to 1,000 mg/L. Recent water quality data indicates the TDS values

for the City's groundwater wells are less than 500 mg/L. Due to the low TDS concentration of the groundwater from Six Basins, the City does not need to investigate the use of desalination as a long-term supply. However, there may be opportunities for use of desalinated ocean water as a potential water supply source in the future, through coordination with other agencies that have ocean desalination programs.

Chino Basin

The City also pumps groundwater from the Chino Basin. The TDS concentrations for Chino Basin groundwater are less than its secondary MCL of 1,000 mg/l, based on most recent available data in the City's groundwater wells. Consequently, the City 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.*"

The City is currently able to exchange surface and/or groundwater with the following utilities:

- City of Upland: Groundwater between Six Basins and Chino Basins -- Existing groundwater agreements include the “bucket for bucket” exchanges with the City of Upland.
- San Antonio Water Company: Surface water - Canon Water Line diverted and exchanged for 110 percent of groundwater credit.

In addition, Three Valleys Municipal Water District participates in MWD’s Dry-Year Yield Program (DYYP). The DYYP is a groundwater storage and recovery program where supplemental water is stored in the Chino Basin during surplus years and could be recovered in-lieu of imported water from MWD through IEUA. The DYYP allows maximum use of imported water supplies available during wet years and stored groundwater in the Chino Basin during dry years. The DYYP can store up to 100,000 AF with maximum replenishment of 25,000 AFY and maximum extraction of 33,000 AFY. During FY 2019-20, there was 45,961 AF within the DYYP account. The agreement that authorized the DYYP will expire in 2028.

#### 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 Chino Basin Judgment (discussed in Section 6.2.2), transfers include the assignment, lease, or sale of a right to produce water to another producer within the Chino Basin or to another person or entity for use outside the basin whether the transfer is

temporary or permanent. The leasing of water rights is also permissible. In addition, the Chino Basin Watermaster accounts for transfers of stored water between producers. The City is able to utilize the transfer opportunities available for Chino Basin water when necessary.

As discussed in Section 6.2.2, water rights under the Six Basins Judgment can be transferred by assignment, sale, contract, or lease so long as such transfers meet the requirements of the Judgment. However, a Party's right to produce, store or recover groundwater in the Four Basins Area may not be transferred, exchanged or exercised in the Two Basins Area. In addition, a Party's right to produce, store or recover groundwater in the Two Basins Area may not be transferred, exchanged or exercised in the Four Basins Area. The City is able to utilize the transfer opportunities available for Six Basins water when necessary.

#### 6.2.7.3 EMERGENCY INTERTIES

The City has emergency interties with other water agencies that service short-term emergency water supplies. Emergency 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.

The City has the ability to receive water from interconnections with the following water agencies:

- Two emergency connections with the Walnut Valley Water District:
  - 12-inch intertie located at the corner of Valley Boulevard and Temple Avenue with a capacity of 400 to 550 GPM (0.6 to 0.8 MGD).
  - 6-inch intertie located near the intersection of Temple Avenue and Rancho Novato Drive with a capacity of 400 to 550 GPM (0.6 to 0.8 MGD). This interconnects the Phillips Ranch and Diamond Bar areas.

Previous planning efforts have included the possibility of adding additional emergency interconnections. These potentially include interconnections with the City of La Verne, Monte Vista Water District, Golden State Water Company, and San Bernardino County Water Works District No. 8. None of these connections have been implemented to date.

### 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.*

The City is currently pursuing several projects to increase water supply reliability. Future projects include:

- Constructing an additional Regional Nitrate/ Perchlorate Treatment Plant in the Six Basins to treat wells and reduce dependency on purchased water from MWD

Table 6-7 quantifies the increase in the City's water supply reliability per completion of these projects.

**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* | | | | | | |
| Additional Regional Nitrate/Perchlorate Treatment Plant | Yes | Three Valleys Municipal Water District, Rowland Water District, and Walnut Valley Water District | to treat wells in Six Basins and reduce dependency on purchased imported water | 2025 | Average Year | 1,667 |
| | | | | | | |
| ***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, the City's water supply sources consist of treated imported water purchased from MWD through TVMWD (see Section 6.2.1), groundwater from the Chino, Six, and Spadra Basins (see Section 6.2.2), local surface water from San Antonio Creek (see Section 6.2.3), and recycled water (see Section 6.2.5). The actual quantities of the water supply sources available to the City during CY 2019 are summarized in Table 6-8. The reliable quantities of projected water supply sources available to the City in five-year increments through CY 2044 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 the City's projected reliable water supplies from FY 2019-20 through FY 2044-45 in five-year increments is based on historical practices, water supply

availability, and the cost of water. It is anticipated the City will initially use groundwater produced from the Chino Basin, Six Basins, and Spadra Basin. At the same time the City will continue to use recycled water for non-potable demands. The City will then use treated local surface water, to the extent it is available. The City will also use treated imported water. It is important to note that the Chino Basin is adjudicated (as discussed in Section 6.2.2) and that there is no limit to the amount of groundwater which can be produced annually. Consequently, in the event local treated surface water and/or treated imported water may be limited, the City has the flexibility to increase groundwater production from the Chino Basin.

#### 6.2.9.2 QUANTIFICATION OF SUPPLIES

The actual quantities of the water supply sources available to the City during CY 2019 are summarized in Table 6-8. The reliable quantities of projected water supply sources available to the City in five-year increments through CY 2044 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.

The City's projected quantities of groundwater supplies from Spadra Basin and Six Basins, treated imported water supplies, and/or local surface water supplies are based on historical long-term averages and available supplies during previous dry year conditions. The City's projected quantities of recycled water supplies to meet non-potable demands are based on historical long-term averages. The City's projected quantities of groundwater supplies from the Chino Basin are based on meeting the remainder of the City's total water demands. As noted above, in the event local treated surface water and/or treated imported water may be limited, the City has the flexibility to increase groundwater production from the Chino Basin. Consequently, it is anticipated the City 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) | Chino Basin | 8,826 | Drinking Water | |
| Groundwater (not desalinated) | Six Basins | 3,187 | Drinking Water | |
| Purchased or Imported Water | MWD | 4,484 | Drinking Water | |
| Surface water (not desalinated) | San Antonio Creek | 2,975 | Drinking Water | |
| Recycled Water | Pomona Water Reclamation Plant | 1,702 | Recycled Water | |
| | **Total** | 21,174 | | 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) | Chino Basin | 10,858 | | 11,685 | | 12,543 | | 13,376 | | 14,238 | |
| Groundwater (not desalinated) | Six Basins | 3,350 | | 3,350 | | 3,350 | | 3,350 | | 3,350 | |
| Groundwater (not desalinated) | Spadra Basin | 150 | | 150 | | 150 | | 150 | | 150 | |
| Purchased or Imported Water | MWD | 6,000 | | 6,000 | | 6,000 | | 6,000 | | 6,000 | |
| Surface water (not desalinated) | San Antonio Creek | 2,000 | | 2,000 | | 2,000 | | 2,000 | | 2,000 | |
| Recycled Water | Pomona Water Reclamation Plant | 2,350 | | 2,350 | | 2,350 | | 2,350 | | 2,350 | |
| | **Total** | 24,708 | 0 | 25,535 | 0 | 26,393 | 0 | 27,226 | 0 | 28,088 | 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

The City considered the issues described below when developing its planned sources 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 the City's various sources of supply.

#### 6.2.10.2 REGULATORY CONDITIONS AND PROJECT DEVELOPMENT

The City 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 Delta water supplies.

#### 6.2.10.3 OTHER LOCALLY APPLICABLE CRITERIA

There are no locally applicable criteria which applies to the City.

## 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 the City is not required by DWR to use the tool. Section 6.1 provides a tabulation of the City’s historical annual water uses for each water supply source. During the past 10 years, the City experienced a five consecutive year drought within its service area from CY 2011 to CY 2015. In addition, historical records indicate the City’s annual water demands typically have been even greater prior to CY 2012. The City 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, the City 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 the City’s 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 the City's 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.

The City has tabulated its energy intensity using readily obtainable energy consumption data obtained from monthly electricity bills from Southern California Edison for the whole water system and the corresponding water use data obtained from available water meter readings. The City has reported the energy intensity associated with the water management processes which occur within its operational control. Because the City does

not track individual energy usage for each water management process identified above, the City has estimated the energy intensity using the "total utility approach" (i.e. sum of all water management processes). The total energy consumed was approximately 12,151,607 kWh during Calendar Year 2020. Although the total energy consumption reported includes electricity usage for general administration (e.g. at City Hall) 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 19,472 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 the City's water management processes is estimated at 624 kWh/AF. The energy intensity data and calculations based on the "total utility approach" are provided in Table O-1B below.

The City's 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). The City's 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, the City's 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:*** *City of Pomona*

**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)* | | *19471* | *0* | *19471* |
| *Energy Consumed (kWh)* | | *12151607* | *0* | *12151607* |
| *Energy Intensity (kWh/volume)* | | *624.1* | *0.0* | *624.1* |

**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 and surface 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 the City's 2020 Plan discusses and provides the following:

- Calendar Year 2016 represents an "average" or "normal" water year for the City in which the total amount of rainfall was similar to the historical average rainfall.
- A "single dry" year for the City 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 the City 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.
- The City's 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.
- The City's 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.
- The City's 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 the City's 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 the City's ability to provide a reliable supply of water to its customers.

- A Drought Risk Assessment (or DRA) is provided which includes an assessment of the City's water supply reliability over a five consecutive year drought period. The City's 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. The City's water system has experienced a prior five consecutive year drought with no limitation to its collective water supplies. However, the cost of those water supplies may have increased based on the mix of water supplies which are used. Consequently, the City 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 the City's UWMP describes the City's ability to meet retail customer water demands by analyzing a variety of factors which affect the City's water supply. This section assesses the City's 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 DRA which provides a mechanism for the City 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 the City's water supplies is based on the historical precipitation data in the San Gabriel Valley. Historical annual precipitation in the San Gabriel Valley is discussed in Section 3.3 and is based on historical data collected from Station 047050 (Pomona Fairplex, 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 the City's 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 the City's service area is 17.2 inches. CY 2016 represents an average or normal water year for the City in which the total amount of rainfall was similar to the historical average rainfall. A single dry year for the City 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 the City 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 the City during those base years. The following discussion assesses the water service reliability of the City's water supply sources.

## Water Service Reliability - Imported Water

The City's treated imported water supplies from MWD, through TVMWD), 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 the City. 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) 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 agencies. 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

### Chino Basin

The Chino Basin groundwater supplies are managed by the Chino Basin Watermaster, as discussed in Section 6.2.2. During a normal year (CY 2016), the City met about 41 percent of its total demands with supplies from the Chino Basin. During a single dry year (CY 2017), the City met about 33 percent of its total demands with supplies from the Chino Basin. During a five consecutive year drought multiple dry year period (CY 2011 to

CY 2015), the City met between 48 and 59 percent of its total demands with supplies from the Chino Basin.

## Water Service Reliability - Surface Water

Section 6.2.3 describes the City's surface water supplies from the San Antonio Creek. These water supplies are dependent on runoff and may be impacted by climate change induced changes to local hydrology. In those cases, the City has created the operational to shift to groundwater and/or imported water supplies to augment its sources of supply in addition to implementing actions under the WSCP (see Chapter 8) to reduce customer demand. During a normal year (CY 2016), the City met about 5 percent of its total demands with supplies from the San Antonio Creek. During a single dry year (CY 2017), the City met about 11 percent of its total demands with supplies from the San Antonio Creek. During a five consecutive year drought period (CY 2011 to CY 2015), the City met between 4 and 15 percent of its total demands with supplies from the San Antonio Creek.

## 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 the City's diverse water supply portfolio, water supplies may be re-apportioned during a five consecutive year drought to meet the City's 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.*

The City's sources of supplies consist of groundwater pumped from the Chino Basin, Spadra Basin, and Six Basins; treated, imported surface water purchased from Metropolitan Water District of Southern California through Three Valleys Municipal Water District; local surface water from San Antonio Creek; and, recycled water purchased from the Los Angeles County Sanitation Districts, as described in Section 6.2. Although all of these supplies are managed, the following constraints may occur which the City has considered in this reliability analysis.

Chino Basin

The City produces groundwater from the Chino Basin. The groundwater historically had been impacted by contamination. However, the City 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.

Imported Water

The City also receives treated surface water from MWD through TVMWD. Water quality from MWD relating to supply reliability is addressed separately in MWD's 2020 Regional Urban Water Management Plan.

## 7.2.2 SERVICE RELIABILITY - YEAR TYPE CHARACTERIZATION

### 7.2.2.1 TYPES OF YEARS

The City's 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, the City's water supplies sources have been sufficient in meeting the City's 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 the City's service area. Because a single dry year or a five consecutive year drought period will not compromise the City's ability to provide a reliable supply of water to its customers, a single dry year in this Plan was selected based on 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 the City's service area is 17.2 inches. CY 2016 represents an average or normal water year for the City in which the total amount of rainfall was similar to the historical average rainfall. A single dry year for the City 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 the City 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 the City 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 | 2016 | 20,325 | 100% |
| Single-Dry Year | 2017 | 21,261 | 104.6% |
| Consecutive Dry Years 1st Year | 2011 | 22,405 | 110.2% |
| Consecutive Dry Years 2nd Year | 2012 | 23,842 | 117.3% |
| Consecutive Dry Years 3rd Year | 2013 | 24,801 | 122.0% |
| Consecutive Dry Years 4th Year | 2014 | 24,456 | 120.3% |
| Consecutive Dry Years 5th Year | 2015 | 20,250 | 99.6% |
| | | | |
| *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 evapotranspiration in the vicinity of the

City's service area are discussed in Section 3.3 Historical climate information was obtained from the WRCC, DPW, 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.*

The City primarily obtains its water supplies from groundwater wells located in the Chino Basin. As discussed in Section 7.3 and shown in Table 7-2, Table 7-3, and Table 7-4, each of the City's 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 the City's ability to provide a reliable supply of water to its customers.

As previously discussed in Section 4.2.6, the City's projected normal year water demands over the next 25 years, in five-year increments, were based on the City's 2020 Water Use Target of 147 GPCD for potable water demands. The ratio of total water supplies (including potable and recycled water supplies) available to the City during a historical average year in CY 2016 (or 20,325 AF) and during a historical single dry year in CY 2017 (or 21,261 AF) was used to estimate the City's projected water demands during single dry years. The ratio of total water supplies available to the City during a historical average year in CY 2019 (or 19,782 AF) and a historical five consecutive year drought period from CY 2011 to CY 2015 (or22,405 AF, 23,842 AF, 24,801 AF, 24,456 AF, and 20,250

AF, respectively) was used to estimate the City's projected water demands during a five consecutive year drought period. The City's projected dry year water supplies over the next 25 years were based on the minimum supplies needed by the City to meet projected single-dry year demands. Table 7-2, Table 7-3, and Table 7-4 summarize the City's 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 the City can meet water demands during normal years, single dry years, and a five consecutive year drought periods over the next 25 years.

### 7.2.3.1 WATER SERVICE RELIABILITY – NORMAL YEAR

Table 7-2 summarizes the City's projected water demands and supplies over the next 25 years in five-year increments during normal years. Table 7-2 indicates the City 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)* | 24,708 | 25,535 | 26,393 | 27,226 | 28,088 |
| Demand totals *(autofill from Table 4-3)* | 24,708 | 25,535 | 26,393 | 27,226 | 28,088 |
| Difference | 0 | 0 | 0 | 0 | 0 |
| NOTES: | | | | | |

### 7.2.3.2 WATER SERVICE RELIABILITY – SINGLE DRY YEAR

Table 7-3 summarizes the City's projected water demands and supplies over the next 25 years in five-year increments during single dry years. Table 7-3 indicates the City 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* | 25,847 | 26,712 | 27,609 | 28,481 | 29,383 |
| Demand totals* | 25,847 | 26,712 | 27,609 | 28,481 | 29,383 |
| 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 the City's projected water demands and supplies over the next 25 years in five-year increments during five consecutive year drought periods. Table 7-4 indicates the City 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 | 27,237 | 28,148 | 29,094 | 30,012 | 30,963 |
| | Demand totals | 27,237 | 28,148 | 29,094 | 30,012 | 30,963 |
| | Difference | 0 | 0 | 0 | 0 | 0 |
| Second year | Supply totals | 28,985 | 29,955 | 30,961 | 31,939 | 32,950 |
| | Demand totals | 28,985 | 29,955 | 30,961 | 31,939 | 32,950 |
| | Difference | 0 | 0 | 0 | 0 | 0 |
| Third year | Supply totals | 30,150 | 31,159 | 32,205 | 33,222 | 34,275 |
| | Demand totals | 30,150 | 31,159 | 32,205 | 33,222 | 34,275 |
| | Difference | 0 | 0 | 0 | 0 | 0 |
| Fourth year | Supply totals | 29,731 | 30,726 | 31,758 | 32,761 | 33,799 |
| | Demand totals | 29,731 | 30,726 | 31,758 | 32,761 | 33,799 |
| | Difference | 0 | 0 | 0 | 0 | 0 |
| Fifth year | Supply totals | 24,617 | 25,441 | 26,296 | 27,126 | 27,985 |
| | Demand totals | 24,617 | 25,441 | 26,296 | 27,126 | 27,985 |
| | 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.*

Chino Basin

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

Section 6.2.2 provides a description of the management of groundwater resources in the Chino Basin, as well as information on basin management. Chapter 6 also demonstrates the management structure of the Chino Basin which provides a reliable source of groundwater supply for the City during a normal year, a single-dry year and a five consecutive year drought. Historical data indicates the Chino 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 6.5) and the continued use of recycled water for groundwater replenishment in the Chino Basin to reduce the need to import water from other regions. Therefore, the groundwater supplies in the Chino Basin are deemed reliable.

Six Basins

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

Section 6.2.2 provides a description of the management of groundwater resources in Six Basins, as well as information on basin management. Chapter 6 also demonstrates the management structure of Six Basins which provides a reliable source of groundwater supply for the City during a normal year, a single-dry year and a five consecutive year drought. Historical data indicates Six Basins 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 6.5) to reduce the need to import water from other regions. Therefore, the groundwater supplies in Six Basins 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.*

The City's sources of supplies consist of groundwater pumped from the Chino Basin, Spadra Basin, and Six Basins; treated, imported surface water purchased from Metropolitan Water District of Southern California through Three Valleys Municipal Water District; local surface water from San Antonio Creek; and recycled water purchased from the Los Angeles County Sanitation Districts. The following discussion provides a DRA which assesses the City's water supply reliability over a five consecutive year drought period. The City's 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 CONDITIONS

The City's DRA was prepared using historical production data from the City's water supply sources. The following assumptions were considered during the preparation of the City's 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 2016 (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 methodologies were considered during the preparation of the City's 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 increased water use for outdoor irrigation to compensate for lack of precipitation. Groundwater and imported water supplies have not been impacted. Local surface 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 because local surface water supplies have been significantly impacted.
- 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 because local surface water supplies continue to be significantly impacted.
- 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 because local surface water supplies continue to be significantly impacted.

### 7.3.2 DRA INDIVIDUAL WATER SOURCE RELIABILITY

The City's 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 the City's DRA is assumed to be the same as the quantity of water supplies produced by the City (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 each water source for each year of the five consecutive year drought based on recent experience.

Groundwater – Chino Basin

The City receives water supplies from the Chino Basin which is actively managed by the Chino Basin Watermaster, as described in Section 6.2.2. Each year, the Chino Basin Watermaster reviews water supply conditions including local rainfall, groundwater levels, local stormwater runoff available for replenishment, imported water availability, and the amount of imported water stored in the groundwater basin for future demands. The Watermaster identifies the annual amount of groundwater which may be pumped (such as an Operating Safe Yield) before more expensive imported water would need to be purchased from MWD through TVMWD to replenish the Basin for all production in excess of the water rights. Regardless of the annual safe yield adopted, there is never a restriction on the amount of water which may be pumped from the Chino Basin, only the cost of producing the groundwater is impacted. The Chino Basin Watermaster is not restricted as to when or how much untreated imported water be delivered to the Chino Basin, only that it ultimately be delivered. 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. During this period, the City was able to increase its production of its groundwater supplies from an adjudicated and managed groundwater basin. The City 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 to five consecutive year droughts), the City does not anticipate a water supply shortage from the Chino Basin.

Groundwater – Six Basins

The City receives water supplies from Six Basins which is actively managed by the Six Basins Watermaster, as described in Section 6.2.2. Each year, the Six Basins Watermaster reviews water supply conditions including local rainfall, groundwater levels, local stormwater runoff available for replenishment, imported water availability, and the amount of imported water stored in the groundwater basin for future demands. The Watermaster identifies the annual amount of groundwater which may be pumped (such as an Operating Safe Yield) before more expensive imported water would need to be purchased from MWD through TVMWD to replenish the Basin for all production in excess of the water rights. Regardless of the annual safe yield adopted, there is never a restriction on the amount of water which may be pumped from Six Basins, only the cost of producing the groundwater is impacted. The Six Basins Watermaster is not restricted as to when or how much untreated imported water be delivered to Six Basins, only that it ultimately be delivered. 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. During this period, the City was able to increase its production of its groundwater supplies from an adjudicated and managed groundwater basin. The City 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 to five consecutive year droughts), the City does not anticipate a water supply shortage from Six Basins.

Imported Water

The City obtains imported water from the Metropolitan Water District of Southern California through TVMWD. Section 6.2.1 describes the planning conducted by MWD regarding treated imported water supplies available to the City. The reliability of MWD's supplies is also discussed in its 2020 Regional UWMP and is incorporated by reference. The City purchases treated imported water which is delivered directly within its distribution system. The City's 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, the City will rely on its groundwater production and will pay the applicable assessments to purchase untreated imported water to be delivered in the future when supplies are available.

The imported water purchases by the City during the most recent and historical five consecutive year drought period have been tabulated in Section 6.1. Because the City's 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.

Local Surface Water

The City uses treated surface water from the San Antonio Creek as described in Section 6.2.3. Similar to treated imported water, available treated surface water supplies are managed and supplemented as needed with groundwater supplies. In the event of a drought which limits local surface water supplies, the City will rely on its groundwater production and will pay the applicable assessments to purchase untreated imported water to be delivered in the future when supplies are available.

The treated surface water used during the most recent and historical five consecutive year drought period have been tabulated in Section 6.1. When necessary, the City has decreased its use of treated surface water during this period. Although the amount of local surface water supplies decreased, those water supplies were supplemented by additional groundwater production as noted above. Consequently, the quantities tabulated in Section 6.1 constitute the minimum amount of local surface water which may be available in a five consecutive year drought.

Recycled Water

The City 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

The City's water system has previously experienced a five consecutive year drought with no limitation to its collective water supplies. However, the cost of those water supplies may have increased based on the mix of supplies which are used. Consequently, the City 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 the City will rely on during a five consecutive year drought. The annual quantities are summed and are also provided on Table 7-5. The most important aspect of the City's water supplies is the groundwater, which can be produced from a managed groundwater basin without restriction on the amount the City is allowed to produce. However, for the purposes of the City's DRA, as a worst-case scenario, the City has considered no water supply augmentation (as indicated in Table 7-5) from its groundwater supplies. When necessary, the City 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 the City shown in Table 7-5 are based on the quantity of supplies produced by the City (i.e. demands) during the most recent historical five consecutive 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, the City 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 | 24,119 |
| Total Supplies | 22,405 |
| Surplus/Shortfall w/o WSCP Action | (1,714) |
| **Planned WSCP Actions** (use reduction and supply augmentation) | |
| WSCP - supply augmentation benefit | 0 |
| WSCP - use reduction savings benefit | 1,714 |
| Revised Surplus/(shortfall) | 0 |
| Resulting % Use Reduction from WSCP action | 7% |
| **2022** | **Total** |
| Total Water Use | 26,496 |
| Total Supplies | 23,842 |
| Surplus/Shortfall w/o WSCP Action | (2,654) |
| **Planned WSCP Actions** (use reduction and supply augmentation) | |
| WSCP - supply augmentation benefit | 0 |
| WSCP - use reduction savings benefit | 2,654 |
| Revised Surplus/(shortfall) | 0 |
| Resulting % Use Reduction from WSCP action | 10% |
| **2023** | **Total** |
| Total Water Use | 28,424 |
| Total Supplies | 24,801 |
| Surplus/Shortfall w/o WSCP Action | (3,623) |
| **Planned WSCP Actions** (use reduction and supply augmentation) | |
| WSCP - supply augmentation benefit | 0 |
| WSCP - use reduction savings benefit | 3,623 |
| Revised Surplus/(shortfall) | 0 |
| Resulting % Use Reduction from WSCP action | 13% |
| **2024** | **Total** |
| Total Water Use | 28,880 |
| Total Supplies | 24,456 |
| Surplus/Shortfall w/o WSCP Action | (4,424) |
| **Planned WSCP Actions** (use reduction and supply augmentation) | |
| WSCP - supply augmentation benefit | 0 |
| WSCP - use reduction savings benefit | 4,424 |
| Revised Surplus/(shortfall) | 0 |
| Resulting % Use Reduction from WSCP action | 15% |
| **2025** | **Total** |
| Total Water Use | 24,617 |
| Total Supplies | 20,250 |
| Surplus/Shortfall w/o WSCP Action | (4,367) |
| **Planned WSCP Actions** (use reduction and supply augmentation) | |
| WSCP - supply augmentation benefit | 0 |
| WSCP - use reduction savings benefit | 4,367 |
| Revised Surplus/(shortfall) | 0 |
| Resulting % Use Reduction from WSCP action | 18% |

### 7.3.4 OPTIONAL PLANNING TOOL WORKBOOK

DWR has deemed the “Planning Tool Worksheet” as optional and the City is not required by DWR to use the tool. The City has provided sufficient water supplies to its customers, including during long-term droughts and years with historically high water demands. The City has also been able to provide water service to meet maximum day water demands for these years, including during the summer months. The City obtains the majority of its water supplies from managed groundwater basins which are 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 the City's 2020 Plan discusses and provides the following:

- The City's Water Shortage Contingency Plan is a detailed approach which presents how the City intends to act, or respond, in the case of an actual water shortage contingency.
- Preparation of the City's "Annual Water Supply and Demand Assessment" (or Annual Assessment) is discussed. Commencing July 1, 2022, the City is required to submit the Annual Assessment. The Annual Assessment will include a review of the City's "unconstrained" water demands for the current year and for a potential upcoming single dry year. Unconstrained water demands represent the City's water demands prior to any "response actions" the City may invoke pursuant to the City's Water Shortage Contingency Plan.
- The City will manage water supplies to minimize the adverse impacts of water shortages. The City's 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, the City 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 the City 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.
- The City's Emergency Response Plan is summarized. The Emergency Response Plan provides the management, procedures, and designated actions the City 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 the City's seismic risk assessment and mitigation plan is discussed. The locations of earthquake faults in the vicinity of the City's water service area are provided.
- The effectiveness of the shortage response actions for each of the City's standard water shortage levels is presented. The City 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 the City when it declares any water shortage level are presented.
- The compliance and enforcement procedures associated with City's standard water shortage levels are presented.
- The legal authorities associated with City's standard water shortage levels are presented.
- The financial consequences associated with City's standard water shortage levels are presented.
- The City 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 the City to adopt and amend its Water Shortage Contingency Plan are presented.

The following Water Shortage Contingency Plan includes references to Chapters and Sections from the City of Pomona'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.

The City's sources of supply were discussed in Section 6.2 of the 2020 UWMP and consist of groundwater from Six Basins, groundwater from Chino Basin, groundwater from Spadra Basin, treated surface water from San Antonio Creek, and treated imported water purchased from TVMWD. In addition, the City provides recycled water for irrigation instead of potable supplies. Both Six Basins and Chino Basin are adjudicated, and groundwater supplies are managed. The reliability of the various sources of supply are discussed in Chapter 7 of the 2020 UWMP. Based on the adjudication provisions in the two groundwater basins, the City is able to produce groundwater without limitation, provided an applicable assessment is paid to the respective Watermaster service to purchase untreated imported water for groundwater replenishment. Imported water supplies (both treated and untreated) 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, the City 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 the City's unconstrained water demands (i.e. water demands prior to any projected response actions the City may

trigger under this WSCP) for the current year and the upcoming (potential single dry) year. The City will also include information regarding anticipated shortages, triggered shortage response actions, compliance and enforcement actions, and communication actions consistent with the City's WSCP.

For each Annual Assessment, the City 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

The City produces groundwater from the Chino Basin, Spadra Basin, and Six Basins as its primary sources of water supply and these basins are managed on a fiscal year basis. Consequently, during the third quarter of each fiscal year, the City 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 the City for peer review and comment. Based on comments received, a redraft will be prepared and provided to City managers during the Spring of each year. The draft subsequently will be provided to the City Manager for final review. Subsequently, a final draft of the Annual Assessment will be provided to the City Council for review and included in the agenda as part of a City Council 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 the City 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 supply resources are available to the City.

### 8.2.2 DATA AND METHODOLOGIES

The key data inputs and methodologies which will be evaluated by the City 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, Urban Water Management Plans, 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 for each source 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.*

The City will manage water supplies to prudently minimize the adverse impacts of water shortages. The City's 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 shortages, 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. 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.

The City's Ordinance No. 4122 ("Water Conservation and Water Supply Shortage Program and Regulations"), adopted in June 2009, previously established three (3) water shortage levels. A copy of Ordinance No. 4122 is provided in Appendix M. In accordance with the CWC in which urban water suppliers are required to define six standard water shortage levels, the City has developed the crosswalk illustrated below that translates the City's 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 | Supply Condition/ Shortage |
|---|---|
| 1 | 10% |
| 2 | 11 to 30% |
| 3 | > 30% |

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

Table 8-1 provides a description of the six standard water shortage levels which may be triggered by a shortage in one or more of the City's water supply sources, depending on the severity of the shortage and its anticipated duration.

**Table 8-1 Water Shortage Contingency Planning Levels**

| Submittal Table 8-1<br>Water Shortage Contingency Plan Levels | | |
|---|---|---|
| **Shortage Level** | **Percent Shortage Range** | **Shortage Response Actions** (*Narrative description*) |
| 1 | Up to 10% | Watering or irrigating is limited to a maximum of 3 days per week during April through October and a maximum of 1 day per week during November through March. All leaks, breaks, or other malfunctions must be repaired within 72 hours. |
| 2 | Up to 20% | In addition to Shortage Level 1, actions include increased limitation on watering or irrigating; all leaks, breaks, or other malfunctions must be repaired within 48 hours; Limits on filling ornamental lakes, washing vehicles, and filling residential swimming pools and spas. |
| 3 | Up to 30% | In addition to Shortage Level 2, actions include implementation of other prohibitions, restrictions, or operational changes on water uses as determined by the City. These actions include, but are not limited to, an increase in the water rate structure and increased performance of customer water loss audits. |
| 4 | Up to 40% | In addition to Shortage Level 3, actions include restrictions on watering or irrigating and all leaks, breaks, or other malfunctions must be repaired within 24 hours. The City in its sole discretion may decide not to provide new potable water service or may discontinue service. |
| 5 | Up to 50% | In addition to Shortage Level 4, actions include implementation of other prohibitions, restrictions, or operational changes on water uses as determined by the City. These actions include, but are not limited to, an increase in the water rate structure and increased performance of customer water loss audits. |
| 6 | >50% | In addition to Shortage Level 5, actions include implementation of other prohibitions, restrictions, or operational changes on water uses as determined by the City. These actions include, but are not limited to, an increase in the water rate structure and increased performance of customer water loss audits. |
| 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.

### 8.4.1 DEMAND REDUCTION

The City has established 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 the City's water supply and corresponding water shortage level, regulations have been made to conserve water and reduce the shortage gap in normal supply levels. Many demand reduction actions are applicable to all levels of water shortages while others are exclusive to certain levels of shortage. The structure of demand reduction actions under a specific water shortage level are designed to encourage those customers with high gallon per capita usage to achieve proportionally greater reduction than those with low use. Violations of these demand reduction actions

may 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.

The following demand reduction actions are applicable to all water shortage levels and are in effect at all times:

- Watering or irrigating of any lawn, landscape, or other vegetated area in a manner that causes or allows excessive water runoff onto an adjoining sidewalk, driveway, street, alley gutter, or ditch is prohibited.
- Watering or irrigating of lawn, landscape, or other vegetated area with potable water using a landscape irrigation system or a watering device, that is not continuously attended, is limited to no more than 15 minutes watering per day per station. This does not apply to landscape irrigation systems that exclusively use very low-flow drip type irrigation systems when no emitter produces more than two gallons of water per hour and weather-based controllers or stream rotor sprinklers that meet a 70 percent efficiency standard. Operating a water fountain or other decorative water feature that does not use recirculated water is prohibited.
- Washing down hard or paved surfaces, including but not limited to sidewalks, walkways, driveways, parking areas, tennis courts, patios, or alleys, is prohibited except when necessary to alleviate safety or sanitary hazards, and then only by use of a hand-held bucket or similar container, a hand-held hose equipped with a positive self-closing water shut-off device, or a low-volume, high-pressure cleaning machine equipped to recycle any water used, or a low-volume high-pressure water broom.
- Using water to wash or clean a vehicle, including but not limited to any automobile, truck, van, bus, motorcycle, boat, motor home, or trailer, whether motorized or not is prohibited, except by use of a hand-held bucket or similar container or a hand-held hose equipped with a positive self-closing water shut-off nozzle or device, or at a commercial car washing facility that utilizes a recirculating water system. Installation of nonrecirculating water systems is prohibited in new commercial

conveyor car wash, new commercial laundry systems, or new other water intensive operations as determined by the City.

- Commercial lodging establishments must provide customers optional daily towel and linen laundering service. Commercial lodging establishments must prominently display notice of this option in each bathroom. Contingent on available funding and materials as determined by the City in its sole discretion, the City will annually provide display materials to establishments for notice on these items.
- Food preparation establishments are prohibited from using non-water conserving dish wash spray valves.
- Eating or drinking establishments, including but not limited to a restaurant, hotel, cafe, cafeteria, bar, club, or other public place where food or drinks are sold, served, or offered for sale, are prohibited from providing drinking water to any person unless expressly requested.

Water Supply Shortage Level 1:

- Limits on Watering Days: Watering or irrigating of lawn, landscape, or other vegetated area with potable water during the months of April through October is limited to three days per week on a schedule established by the City. (By way of example - Odd addresses on Monday, Wednesday, and Friday; even addresses on Tuesday, Thursday, and Saturday.) During the months of November through March, watering or irrigating of lawn, landscape, or other vegetated area with potable water is limited to no more than one day per week on a schedule established and noticed by the City. (By way of example - Odd addresses on Tuesday, even addresses on Thursday.) This provision does not apply to landscape irrigation zones that exclusively use very low flow drip type irrigation systems when no emitter produces more than two gallons of water 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 self-closing water

shut-off nozzle or device, or for very short periods of time for the express purpose of adjusting or repairing an irrigation system.

- Obligation to Fix Leaks, Breaks, or Malfunctions: All leaks, breaks, or other malfunctions in the customer's plumbing or distribution system must be repaired within seventy- two (72) hours of notification by the City unless other arrangements are made with the City.
- Other Prohibited Uses: The City may implement other prohibitions, restrictions or operational changes on water uses as determined by the City, upon reasonable notice to customers. This includes an increase in the conservation rate structure and increased performance of water loss audits.

Water Supply Shortage Level 2:

In addition to the restrictions identified in Water Supply Shortage Level 1, the following additional water conservation requirements apply:

- Limits on Watering Days: Watering or irrigating of lawn, landscape, or other vegetated area with potable water during the months of April through October is limited to two days per week on a schedule established by the City. (By way of example - Odd addresses on Monday and Thursday, even addresses on Tuesday and Friday). During the months of November through March, watering or irrigating of lawn, landscape or other vegetated area with potable water is limited to no more than one day per week on a schedule established by the City. (By way of example - Odd addresses on Tuesday, even addresses on Thursday). This provision does not apply to landscape irrigation zones that exclusively use very low flow drip type irrigation systems when no emitter produces more than two gallons of water 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 self-closing water shut-off nozzle or device, or for very short periods of time for the express purpose of adjusting or repairing an irrigation system.

- Obligation to Fix Leaks, Breaks, or Malfunctions: All leaks, breaks, or other malfunctions in the customer's plumbing or distribution system must be repaired within forty-eight (48) hours of notification by the City unless other arrangements are made with the City.
- Limits on Filling Ornamental Lakes or Ponds: Filling or refilling ornamental lakes or ponds is prohibited, except to the extent needed to sustain aquatic life, provided that such animals are of significant value and have been actively managed within the water feature prior to declaration of a standard Water Shortage Level 2.
- Limits on Washing Vehicles: Using water to wash or clean a vehicle, including but not limited to, any automobile, truck, van, bus, motorcycle, boat, motor home, or trailer, whether motorized or not, is prohibited except by use of a hand-held bucket or similar container, a hand-held hose equipped with a positive self-closing water shut-off nozzle or device, by high pressure/low volume wash systems, or at a commercial car washing facility that utilizes a recirculating water system to capture or reuse water.
- Limits on Filling Residential Swimming Pools and Spas: Refilling of more than one foot per week, and initial filling of residential swimming pools or outdoor spas with potable water is prohibited, except upon written authorization from the City Manager or designee.
- Other Prohibited Uses: The City may implement other prohibitions, restrictions or operational changes on water uses as determined by the City, upon reasonable notice to customers. This includes an increase in the conservation rate structure and increased performance of water loss audits.

Water Supply Shortage Level 3:

In addition to the restrictions identified in Water Supply Shortage Level 2, the following additional water conservation requirements apply:

- Limits on Watering Days: Watering or irrigating of lawn, landscape, or other vegetated area with potable water during the months of April through October is limited to two days per week on a schedule established by the City. (By way of example - Odd addresses on Monday and Thursday, even addresses on Tuesday and Friday). During the months of November through March, watering or irrigating of lawn, landscape or other vegetated area with potable water is limited to no more than one day per week on a schedule established by the City. (By way of example - Odd addresses on Tuesday, even addresses on Thursday). This provision does not apply to landscape irrigation zones that exclusively use very low flow drip type irrigation systems when no emitter produces more than two gallons of water 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 self-closing water shut-off nozzle or device, or for very short periods of time for the express purpose of adjusting or repairing an irrigation system.
- Obligation to Fix Leaks, Breaks, or Malfunctions: All leaks, breaks, or other malfunctions in the customer's plumbing or distribution system must be repaired within forty-eight (48) hours of notification by the City unless other arrangements are made with the City.
- Limits on Filling Ornamental Lakes or Ponds: Filling or refilling ornamental lakes or ponds is prohibited, except to the extent needed to sustain aquatic life, provided that such animals are of significant value and have been actively managed within the water feature prior to declaration of a standard Water Shortage Level 3.
- Limits on Washing Vehicles: Using water to wash or clean a vehicle, including but not limited to, any automobile, truck, van, bus, motorcycle, boat, motor home, or trailer, whether motorized or not, is prohibited except by use of a hand-held bucket

or similar container, a hand-held hose equipped with a positive self-closing water shut-off nozzle or device, by high pressure/low volume wash systems, or at a commercial car washing facility that utilizes a recirculating water system to capture or reuse water.

- Limits on Filling Residential Swimming Pools and Spas: Refilling of more than one foot per week, and initial filling of residential swimming pools or outdoor spas with potable water is prohibited, except upon written authorization from the City Manager or designee.
- Other Prohibited Uses: The City may implement other prohibitions, restrictions, or operational changes on water uses as determined by the City, upon reasonable notice to customers. This includes an increase in the conservation rate structure and increased performance of water loss audits.

Water Supply Shortage Level 4:

In addition to the restrictions identified in Water Supply Shortage Level 3, the following additional water conservation requirements apply:

- No Watering or Irrigating: Watering or irrigating of lawn, landscape, or other vegetated area with potable water is prohibited. This restriction does not apply to the following categories of use unless the City has determined that recycled water is available and may be lawfully applied to the use:
    a) Maintenance of vegetation excluding turf, but including trees and shrubs, that are watered using a hand-held bucket or similar container, hand-held hose equipped with a positive self-closing water shut-off nozzle or device, or a very low-flow drip type irrigation system when no emitter produces more than two gallons of water per hour subject to the watering hour restrictions;
    b) Maintenance of existing landscape necessary for fire protection;
    c) Maintenance of existing landscape for soil erosion control;

d) Maintenance of plant materials identified to be rare or essential to the wellbeing of rare animals;

e) Maintenance of landscape within active public parks and playing fields, day care centers, school grounds, cemeteries, and golf course greens, provided that such irrigation does not exceed two days per week according to the established watering schedule and time restrictions;

- Obligation to Fix Leaks, Breaks or Malfunctions: All leaks, breaks, or other malfunctions in the customer's plumbing or distribution system must be repaired within 24 hours of notification by the City unless other arrangements are made with the City.
- New Potable Water Service: The City, dependent on an analysis of water supply, may decide not to (a) provide new potable water service; (b) provide new temporary meters or permanent meters, and (c) issue any statements of immediate ability to serve or provide potable water service (such as, will serve letters, certificates, or letters of availability), except under the following circumstances:
  a) A valid, unexpired building permit has been issued for the project; or
  b) The project is necessary to protect the public's health, safety, and welfare; or
  c) The applicant provides substantial evidence of an enforceable commitment that water demands for the project will be offset prior to the provision of a new water meter(s) to the satisfaction of the City.

  This provision does not preclude the resetting or turn-on of meters to provide continuation of water service or the restoration of service that has been interrupted for a period of one year or less, or as determined by the City Manager or designee.
- Discontinue Service: The City, in its sole discretion, may discontinue service to consumers who willfully violate provisions of this WSCP.
- Other Prohibited Uses: The City may implement other prohibitions, restrictions or operational changes on water uses as determined by the City, upon reasonable

notice to customers. This includes an increase in the conservation rate structure and increased water loss audits.

Water Supply Shortage Level 5:

In addition to the restrictions identified in Water Supply Shortage Level 4, the following additional water conservation requirements apply:

- No Watering or Irrigating: Watering or irrigating of lawn, landscape or other vegetated area with potable water is prohibited. This restriction does not apply to the following categories of use unless the City has determined that recycled water is available and may be lawfully applied to the use:
    a) Maintenance of vegetation excluding turf, but including trees and shrubs, that are watered using a hand-held bucket or similar container, hand-held hose equipped with a positive self-closing water shut-off nozzle or device, or a very low-flow drip type irrigation system when no emitter produces more than two gallons of water per hour subject to the watering hour restrictions;
    b) Maintenance of existing landscape necessary for fire protection;
    c) Maintenance of existing landscape for soil erosion control;
    d) Maintenance of plant materials identified to be rare or essential to the wellbeing of rare animals;
    e) Maintenance of landscape within active public parks and playing fields, day care centers, school grounds, cemeteries, and golf course greens, provided that such irrigation does not exceed two days per week according to the established watering schedule and time restrictions;
- Obligation to Fix Leaks, Breaks or Malfunctions: All leaks, breaks, or other malfunctions in the customer's plumbing or distribution system must be repaired within 24 hours of notification by the City unless other arrangements are made with the City.

- New Potable Water Service: The City, dependent on an analysis of water supply, may decide not to (a) provide new potable water service; (b) provide new temporary meters or permanent meters, and (c) issue any statements of immediate ability to serve or provide potable water service (such as, will serve letters, certificates, or letters of availability), except under the following circumstances:
    a) A valid, unexpired building permit has been issued for the project; or
    b) The project is necessary to protect the public's health, safety, and welfare; or
    c) The applicant provides substantial evidence of an enforceable commitment that water demands for the project will be offset prior to the provision of a new water meter(s) to the satisfaction of the City.

  This provision does not preclude the resetting or turn-on of meters to provide continuation of water service or the restoration of service that has been interrupted for a period of one year or less, or as determined by the City Manager or designee.
- Discontinue Service: The City, in its sole discretion, may discontinue service to consumers who willfully violate provisions of this WSCP.
- Other Prohibited Uses: The City may implement other prohibitions, restrictions or operational changes on water uses as determined by the City, upon reasonable notice to customers. This includes an increase in the conservation rate structure and increased water loss audits.

Water Supply Shortage Level 6:

In addition to the restrictions identified in Water Supply Shortage Level 5, the following additional water conservation requirements apply:

- No Watering or Irrigating: Watering or irrigating of lawn, landscape, or other vegetated area with potable water is prohibited. This restriction does not apply to the following categories of use unless the City has determined that recycled water is available and may be lawfully applied to the use:
    a) Maintenance of vegetation excluding turf, but including trees and shrubs, that are watered using a hand-held bucket or similar container, hand-held hose equipped with a positive self-closing water shut-off nozzle or device, or a very low-flow drip type irrigation system when no emitter produces more than two gallons of water per hour subject to the watering hour restrictions;
    b) Maintenance of existing landscape necessary for fire protection;
    c) Maintenance of existing landscape for soil erosion control;
    d) Maintenance of plant materials identified to be rare or essential to the wellbeing of rare animals;
    e) Maintenance of landscape within active public parks and playing fields, day care centers, school grounds, cemeteries, and golf course greens, provided that such irrigation does not exceed two days per week according to the established watering schedule and time restrictions;
- Obligation to Fix Leaks, Breaks, or Malfunctions: All leaks, breaks, or other malfunctions in the customer's plumbing or distribution system must be repaired within 24 hours of notification by the City unless other arrangements are made with the City.

- New Potable Water Service: The City, dependent on an analysis of water supply, may decide not to (a) provide new potable water service; (b) provide new temporary meters or permanent meters, and (c) issue any statements of immediate ability to serve or provide potable water service (such as, will serve letters, certificates, or letters of availability), except under the following circumstances:

    a) A valid, unexpired building permit has been issued for the project; or
    b) The project is necessary to protect the public's health, safety, and welfare; or
    c) The applicant provides substantial evidence of an enforceable commitment that water demands for the project will be offset prior to the provision of a new water meter(s) to the satisfaction of the City.

  This provision does not preclude the resetting or turn-on of meters to provide continuation of water service or the restoration of service that has been interrupted for a period of one year or less, or as determined by the City Manager or designee.

- Discontinue Service: The City, in its sole discretion, may discontinue service to consumers who willfully violate provisions of this WSCP.
- Other Prohibited Uses: The City may implement other prohibitions, restrictions or operational changes on water uses as determined by the City, upon reasonable notice to customers. This includes an increase in the conservation rate structure and increased water loss audits.

## Table 8-2 Demand Reduction Actions

| Submittal Table 8-2: Demand Reduction Actions | | | | |
|---|---|---|---|---|
| Shortage Level | Demand Reduction Actions<br>***Drop down list***<br>*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?<br>*Include units used (volume type or percentage)* | Additional Explanation or Reference<br>*(optional)* | Penalty, Charge, or Other Enforcement?<br>***For Retail Suppliers Only***<br>*Drop Down List* |
| *Add additional rows as needed* | | | | |
| 1 | Landscape - Restrict or prohibit runoff from landscape irrigation | Collective reduction from all Shortage Level 1 actions is up to 1,814 AFY | No excessive runoff. | Yes |
| 1 | Landscape - Prohibit certain types of landscape irrigation | Collective reduction from all Shortage Level 1 actions is up to 1,814 AFY | No watering/irrigating for more than 15 min/day/station. | Yes |
| 1 | CII - Lodging establishment must offer opt out of linen service | Collective reduction from all Shortage Level 1 actions is up to 1,814 AFY | | Yes |
| 1 | CII - Commercial kitchens required to use pre-rinse spray valves | Collective reduction from all Shortage Level 1 actions is up to 1,814 AFY | | Yes |
| 1 | Water Features - Restrict water use for decorative water features, such as fountains | Collective reduction from all Shortage Level 1 actions is up to 1,814 AFY | Water features must operate with recirculated water. | Yes |
| 1 | Other - Prohibit use of potable water for washing hard surfaces | Collective reduction from all Shortage Level 1 actions is up to 1,814 AFY | | Yes |
| 1 | Other - Prohibit vehicle washing except at facilities using recycled or recirculating water | Collective reduction from all Shortage Level 1 actions is up to 1,814 AFY | | Yes |
| 1 | Other - Customers must repair leaks, breaks, and malfunctions in a timely manner | Collective reduction from all Shortage Level 1 actions is up to 1,814 AFY | Must be repaired within 72 hours of notification. | Yes |
| 1 | Landscape - Limit landscape irrigation to specific days | Collective reduction from all Shortage Level 1 actions is up to 1,814 AFY | Maximum 3 days a week. | Yes |
| 1 | Increase Frequency of Meter Reading | Collective reduction from all Shortage Level 1 actions is up to 1,814 AFY | Per evaluation of annual water loss audits. | No |
| 1 | Implement or Modify Drought Rate Structure or Surcharge | Collective reduction from all Shortage Level 1 actions is up to 1,814 AFY | At the sole discretion of City Council. | Yes |
| 2 | Other | Collective reduction from Shortage Level 1 plus all Shortage Level 2 actions is up to 3,627 AFY | All actions under Shortage Level 1 | Yes |
| 2 | Landscape - Limit landscape irrigation to specific days | Collective reduction from all Shortage Level 2 actions is up to 3,627 AFY | Maximum 2 days a week. | Yes |

| | | | | |
|---|---|---|---|---|
| 2 | Other water feature or swimming pool restriction | Collective reduction from all Shortage Level 2 actions is up to 3,627 AFY | Filling ornamental, lakes, ponds, pools, or spas is prohibited. | Yes |
| 2 | Other - Customers must repair leaks, breaks, and malfunctions in a timely manner | Collective reduction from all Shortage Level 2 actions is up to 3,627 AFY | Must be repaired within 48 hours of notification. | Yes |
| 3 | Other | Collective reduction from Shortage Level 2 plus all Shortage Level 3 actions is up to 5,441 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 7,254 AFY | All actions under Shortage Level 3 | Yes |
| 4 | Moratorium or Net Zero Demand Increase on New Connections | Collective reduction from all Shortage Level 4 actions is up to 7,254 AFY | The City may decide to not provide new or discontinue water service. | Yes |
| 4 | Landscape - Prohibit all landscape irrigation | Collective reduction from all Shortage Level 4 actions is up to 7,254 AFY | | Yes |
| 4 | Other - Customers must repair leaks, breaks, and malfunctions in a timely manner | Collective reduction from all Shortage Level 4 actions is up to 7,254 AFY | Must be repaired within 24 hours of notification. | Yes |
| 5 | Other | Collective reduction from Shortage Level 4 plus all Shortage Level 5 actions is up to 9,068 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 9,068 AFY | All actions under Shortage Level 5 | Yes |
| NOTES: | | | | |

### 8.4.2 SUPPLY AUGMENTATION

The City 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, the City 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, the City's sources of water supply include groundwater produced from the Chino Basin, Spadra Basin, and Six Basins, treated imported water purchased from MWD through TVMWD, and recycled water supplies provided by LACSD. As noted in Section 8.2, beginning July 1, 2022, the City 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. In the event the City is currently in, or considers entering into, one of the standard water shortage levels identified in Section 8.3, the City will consider the water supply (augmentation actions described below.

For each water shortage level discussed in Section 8.3, the City will consider supplementing its existing treated imported water supplies through increased production of groundwater supplies, to the extent possible. Due to previous critically dry conditions, MWD developed the WSAP whereby available supplies are equitably allocated to its member agencies, including TVMWD. The WSAP establishes ten different shortage levels and a corresponding drought allocation to each member agency. Based on the shortage level established by MWD, the WSAP provides a reduced drought allocation to a member agency for its M&I retail demand. The ratio of MWD water supply drought allocation to local water supply will change based on the WSAP stage. The MWD drought allocation can be used to make Full Service water deliveries at the Tier 1 rate up to a Tier 1 allocation. Any Full Service water delivered in excess of a drought allocation is subject to a penalty rate in addition to the normal rate paid for the water.

In addition to the WSAP, MWD describes supply augmentation actions in its Regional 2020 UWMP, which is incorporated by reference. MWD's primary first response to any gap between core supplies (from the State Water Project and Colorado River) and demand is to make optimal use of its supply augmentation options, consisting of drawing from flexible supply programs and storage reserves. MWD has developed and actively manages a portfolio of water supply programs including water transfer, storage, and exchange agreements. MWD pursues voluntary water transfer and exchange programs to help mitigate supply/demand imbalances and provide additional dry-year supply sources. In addition, MWD has developed significant storage capacity in reservoirs, conjunctive use, and other groundwater storage programs totaling approximately 6.0 million AF. Pursuant to MWD's "Emergency Storage Objective", updated in 2019, approximately 750,000 AF of total stored water is emergency storage reserved by MWD

for use in the event of supply interruptions. Based on MWD's historical and on-going water supply and storage programs and management practices, the City will use up to the treated imported water supply made available from MWD through TVMWD in association with each of the standard water shortage levels identified in Section 8.3. Water demands will be addressed through increased use of the local groundwater supplies and implementation of demand reduction measures through the various stages of action.

The City has the flexibility to augment its existing water supplies through production of groundwater from the Six Basins and Chino Basin. As noted in Section 6.2.2, the Six Basins is managed by the Six Basins Watermaster and the Chino Basin is managed by the Chino Basin Watermaster. During the periods of management under the Six Basin Judgment and the Chino Basin Judgment, significant drought events have occurred. In each drought cycle, both the Six Basins and the Chino Basin have been managed to maintain water levels. Parties to the Six Basins Basin Judgment and Chino Basin Judgment, including the City, are authorized to produce groundwater in excess of their rights and pay assessments for such production to the respective Watermaster. The assessments are used to purchase untreated imported water to replenish the Six Basins and Chino Basin. The Six Basins Watermaster purchases untreated imported water to replenish the Six Basins from MWD through TVMWD. The Chino Basin Watermaster purchases untreated imported water to replenish the Chino Basin from MWD through IEUA. In addition, groundwater quality in the Six Basins and the Chino Basin is not expected to impact potable supplies or constrain supply reliability. Groundwater quality is carefully monitored and managed by the Watermaster for each respective basin. In addition, treatment facilities in the Chino Basin have been developed at existing contamination sites to meet potable water standards and to prevent the spread of any groundwater contamination. Based on historical and on-going management practices, the City will be able to continue relying on the Six Basins and Chino Basin for adequate supplies in response to each of the standard water shortage levels identified in Section 8.3.

The City will consider supplementing its existing water supplies through production of additional groundwater from the Chino Basin. As noted in Section 6.2.2, the Chino Basin is managed by the Chino Basin Watermaster. During the period of management under the Chino Basin Judgment, significant drought events have occurred. In each drought cycle the Chino Basin has been managed to maintain water levels. Parties to the Chino Basin Judgment, including the City, are authorized to produce groundwater in excess of their rights and pay assessments for such production to the Chino Basin Watermaster. The assessments are used to purchase untreated imported water to replenish the Chino Basin. The Chino Basin Watermaster purchases untreated imported water to replenish the Chino Basin from MWD through IEUA. An additional potential source of replenishment water is recycled water. Groundwater quality is carefully monitored and managed by the Chino Basin Watermaster. Treatment facilities and/or blend plans have been developed by water agencies to meet potable water standards and to prevent the spread of any groundwater contamination. Groundwater quality in the Chino Basin is not expected to impact potable supplies or constrain supply reliability. Based on historical and on-going management practices, the City will be able to continue relying on the Chino Basin for adequate supplies in response to each of the standard water shortage levels identified in Section 8.3.

**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: The City will consider increased production from Six Basins and the Chino Basin using existing facilities to address increased demands. As noted on Table 8-2, the City 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, the City will manage its water supply resources to provide sufficient water supplies capable of meeting the demands of its customers. Section 8.4.2 describes the City's water supply sources and water supply augmentation actions available. Section 8.4.2 describes the City's 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 the City to utilize all available water supply sources in response to water shortage situations.

As noted in Section 8.2, beginning July 1, 2022, the City 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 the City in determining any potential operational changes. In addition, the City's standard water shortage levels and the associated demand reduction

measures, in conjunction with the City's existing Demand Management Measures (discussed in Chapter 9), will be essential to the City in reducing water demands during any water shortage period. The operational changes the City 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 the City to reduce customer demands are discussed in Section 8.4.2. There are no additional mandatory restrictions planned at this time.

### 8.4.5 EMERGENCY RESPONSE PLAN

Catastrophic water shortages are incorporated in the City's 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 the City may consider in order to continue providing sufficient water supplies, the City 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 the City, 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.

The City's RRA, prepared in 2020, evaluates the vulnerabilities, threats, and consequences from potential hazards to the City's water system. The City prepared its RRA (which is incorporated by reference) 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.

The City's RRA evaluated 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 the City's water facility assets. The cost-effectiveness of implementing potential countermeasures to reduce risks was also reviewed.

The City's ERP, prepared in 2020, provides the management, procedures, and designated actions the City and its employees will implement during emergency situations (including catastrophic water shortages) resulting from natural disasters, system failures, and other unforeseen circumstances. The City's 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 the City's 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; and
- Strategies to detect natural hazards or malevolent act.

The City 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. The City 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.*

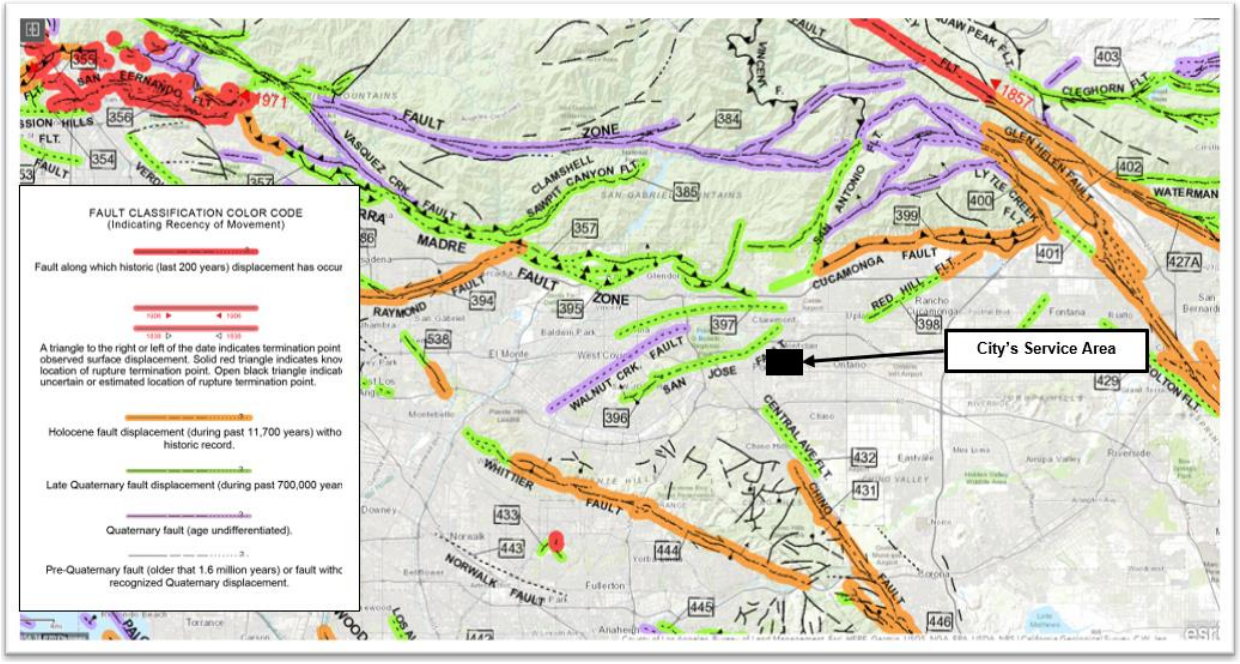
*(c) An urban water supplier may comply with this section by submitting, pursuant to Section 10644, a copy of the most recent adopted local hazard mitigation plan or multihazard mitigation plan under the federal Disaster Mitigation Act of 2000 (Public Law 106-390) if the local hazard mitigation plan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

The City prepared a local "Natural Hazards Mitigation Plan Update" which was approved by the Federal Emergency Management Agency (FEMA) in 2012. The "Natural Hazards Mitigation Plan Update" identifies effective ways to assess the significant natural hazards (including earthquakes) that may affect the City and its residents. The "Natural Hazards Mitigation Plan Update" provides resources, information, and strategies to reduce the City's vulnerability to these hazards, while providing guidance for the coordination of mitigation activities throughout the City. The "Natural Hazards Mitigation Plan Update" includes mitigation projects necessary to reduce seismic risk to the City's water distribution system facilities (including its distribution system pipelines, groundwater wells, booster pumps, and storage reservoirs) and potential disruptions in providing water service. The City's "Natural Hazards Mitigation Plan Update" is provided in Appendix N.

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 O.

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 the City's 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 the City's water service area include the San Andreas fault, the Whittier fault, the San Jose fault, the Chino fault, the Central Avenue fault, and the Sierra Madre fault.

**Location of Earthquake Faults**

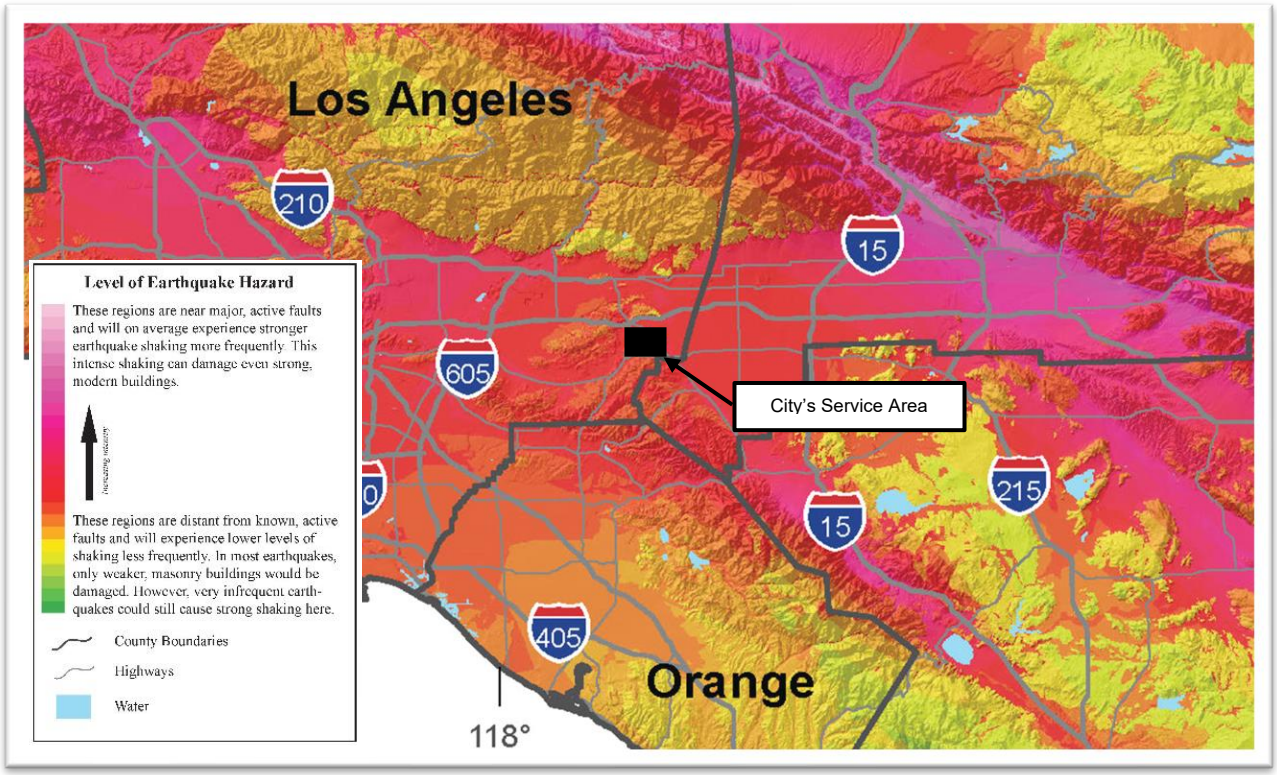



Source: https://maps.conservation.ca.gov/cgs/fam/App/

The following figure provides the relative intensity of ground shaking in the vicinity of the City's service area from anticipated future earthquakes. The locations of relatively long-period (1.0 second) earthquake shaking, including the City's 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, the City has prepared an Emergency Response Plan which provides the management, procedures, and designated actions the City 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. The City's 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 the City's historical ability to meet its customer's water demands in response to a water supply shortage. In addition, the City 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 the City's 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 the City's historical annual water demands for each water supply source. During the past 10 years, the City experienced a five-year consecutive drought within its service area from CY 2011 to CY 2015. Throughout this extended dry year period, the City's annual water production ranged from 20,250 AF to 24,801 AF, with an average of approximately 23,151 AF. In addition, historical records indicate the City previously produced a maximum of up to 24,801 AF during CY 2013. The City 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, the City has been able to provide water service to meet maximum day water demands for these years, including during the summer months.

The City's water demands during the most recent five years (from CY 2016 to CY 2020) averaged approximately 21,957 AFY. Due to conservation efforts and demand management measures (discussed in Chapter 9), the City's recent water demands have been less than its historical water demands, including during long-term droughts. The City's 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 the

City's projected water demands are similar to its historical water demands, it is anticipated the City 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, the City will be able to continue relying on its water supply sources from the Chino Basin, Spadra Basin, and Six Basins for adequate supply augmentation in response to each of the standard water shortage levels identified in Section 8.3.

The City previously adopted Resolution No. 2015-41 in May 2015 which declared a water supply shortage and established water-use restrictions and regulations equivalent to the standard water shortage level 2 identified in Section 8.3. During this Level 2 water shortage period, the City was able to reduce water demands by up to 20 percent and provide sufficient water supplies to its customers. Subsequently, the City adopted Resolution No. 2016-105 in July 2016 which rescinded the Level 2 water supply shortage and declared a water supply shortage equivalent to standard water shortage Level 1. During this Level 1 water shortage period, the City was able to reduce water demands by up to 10 percent and provide sufficient water supplies to its customers. Copies of the resolutions are provided in Appendix M.

Based on the City's demonstrated ability to meet water demands during past water supply shortages, the adopted water shortage levels, the adjusted operating safe yields, and water supplies through long-term droughts, it is anticipated that the City 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. The City 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 the City's 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 the City's

shortage response actions is based on the City's water demands prior to 2015 (unconstrained demands). The City 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. The City's actual water demand reduction during this period was used to estimate the extent of water use reductions for the City's Water Shortage Stages. The City's 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, the City 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 the City's unconstrained water demands (i.e. water demands prior to any projected response actions the City may trigger under this WSCP) for the current year and the upcoming (potential single dry) year. The City will also include information regarding anticipated shortages, triggered shortage response actions, compliance and enforcement actions, and communication actions

consistent with the City's WSCP. See Section 8.2 for more information regarding the Annual Assessment.

Standard water shortage levels may be declared by resolution of the City Council, adopted at a regular or special public meeting held in accordance with state law. The mandatory conservation requirements applicable to the shortage level conditions will take effect on the 10th day after the date the shortage level is declared. Within seven days following the declaration of the shortage level, the City must publish a copy of the resolution in a newspaper used for publication of official notices. If the City establishes a water allocation, it must provide notice of the allocation by including it in the regular billing statement. A water allocation will be effective on the 5th day following the date of mailing or at such later date as specified in the notice. The City may declare an end to any water shortage level upon recommendation by the City Manager, or designee, and resolution by the City Council at any regular or special meeting of the City Council.

Under unique circumstances where a specific requirement of this WSCP would result in undue hardship to a customer that is disproportionate to the impacts on other customers, the customer may apply for a waiver pursuant to the requirements as provided in this WSCP. The waiver may be granted or conditionally granted only upon a written finding of the existence of facts demonstrating an undue hardship to the customer. The customer must provide the following documents for review:

(1) The application for a waiver prescribed by the City and accompanied by a non-refundable processing fee in an amount set by City Council resolution.

(2) Photographs, maps, drawings, and other information, including a written statement of the applicant.

An application for a waiver will be denied unless the City finds, based on the information provided in the application, supporting documents, or such additional information that may be requested, and on water use information for the property as shown by the records of the City or its agent, all of the following:

(1) That the waiver does not constitute a grant of special privilege inconsistent with the limitations upon other customers;

(2) That because of special circumstances applicable to the property or its use, the strict application of this division would have a disproportionate impact on the property or use that exceeds the impacts to residents and businesses generally;

(3) That the authorizing of such waiver will not be of substantial detriment to adjacent properties, and will not materially affect the ability of the City to effectuate the purpose of this division and will not be detrimental to the public interest; and

(4) That the condition or situation of the subject property or the intended use of the property for which the waiver is sought is not common, recurrent, or general in nature.

The City Manager or designee must act upon any completed application no later than ten business days after submittal and may approve, conditionally approve, or deny the waiver. The applicant requesting the waiver must be promptly notified in writing of any action taken. Unless specified otherwise at the time a waiver is approved, the waiver will apply to the subject property during the period of the mandatory water supply shortage condition. The decision of the City Manager, or designee, shall be final.

## 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. The City will track violations by analyzing the City water loss audits for potential leak locations and by the documenting correspondence of the City Water Watcher Reporting Line, a 24-Hour Service where customers can report witness of abuse of water supplies.

Any violation of this WSCP may be prosecuted as a misdemeanor or as an infraction, at the discretion of the City, pursuant to Article X of the Pomona Municipal Code (Code). Pursuant to Section 1-7 of this Code, a misdemeanor is punishable by imprisonment in the county jail for no more than 30 days, or by a fine not exceeding $1,000.00, or by both.

The City Manager and respective departments shall have the authority to administer and enforce this division.

Pursuant to this WSCP, penalties for failure to comply with any provisions of the WSCP are as follows:

(1) A fine not exceeding $100.00 for a first violation.

(2) A fine not exceeding $200.00 for a second violation of the same provision within one year.

(3) A fine not exceeding $500.00 for each additional violation of the same provision within one year.

a. *Water flow restrictor:* In addition to any fines, the City may install a water flow restrictor device of approximately one gallon per minute capacity for services up to one and one-half inch size and comparatively sized restrictors for larger services after written notice of intent to install a flow restrictor for a minimum of 48 hours.

b. *Termination of service:* In addition to any fines and the installation of a water flow restrictor, the City may disconnect and/or terminate a customer's water service.

A person or entity that violates this division is responsible for payment of the City's charges for installing and/or removing any flow restricting device and for disconnecting and/or reconnecting service per the City's schedule of charges then in effect. The charge for installing and/or removing any flow restricting device must be paid to the City before the device is removed. Nonpayment will be subject to the same remedies as nonpayment of basic water rates.

Pursuant to this WSCP, each day that a violation of this ordinance occurs is a separate offense.

The City will issue a notice of violation by mail or personal delivery at least ten days before taking enforcement action. Such notice must describe the violation and the date by which corrective action must be taken. A customer may appeal the notice of violation by filing a written notice of appeal, pursuant to this WSCP.

Pending receipt of a written appeal or pending a hearing pursuant to an appeal, the City may take appropriate steps to prevent the unauthorized use of water as appropriate to the nature and extent of the violations and the current declared water shortage level condition.

## 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.*

The City is responsible for implementing and enforcing the water shortage response actions described in Section 8.4. This WSCP is subject to any changes deemed necessary by the City.

The City Manager, or designee, may declare a water shortage emergency and may immediately enact the mandatory requirements of any of the levels designated herein. The required measures of the designated water shortage level will be effective immediately and will be communicated to the public. The emergency implementation will be ratified by resolution of the City Council at its next meeting.

The City shall coordinate with any city or county within which it provides water supply services for the possible proclamation of a local emergency. This includes the Cities of Chino Hills, Claremont, La Verne, and Montclair, and the County of Los Angeles.

## 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.*

The City's primary source of revenue is user service charges, which consists of bimonthly fixed readiness-to-serve charges according to meter size and a volumetric charge per unit of water consumed. The bimonthly fixed readiness-to-serve charges are sufficient to meet about 45 percent of the City's operations and maintenance expenses. The revenue from the consumption charge is designed to be sufficient to fund the remaining 55 percent of the operations and maintenance expenses plus all of the variable expenses associated with the cost of water. The current water rates are provided in Appendix P.

The City Council may adopt resolutions to make additional adjustments to the water rates based on the City's increased costs to provide water to its customers.

The City has historically maintained a financial reserve in its Water Fund. The City may use financial reserves for water system expenditures to make up for shortfalls in water revenue associated with unanticipated reduced water sales.

## 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.*

Customer compliance of the provisions adopted by declaration of a WSCP are monitored and reported through water loss audits performed by the City's Water Resource Department. Staff prepares annual Distribution System Water Audits to monitor water losses. Staff reviews the audits to track real and apparent losses. Losses are monitored by comparing water production to sales. The City regularly monitors its system and repairs leaks in a timely manner. To help in its effort to reduce and eliminate losses, the City has purchased various sound correlators for identifying system leaks. In those areas where a leak is visible, staff is dispatched to a site to pinpoint the leak to minimize the excavation area and save resources.

The City's Water Resources Department is also the first point of contact of the City Water Watcher Reporting Line, a 24-Hour Service where customers can report witness of abuse of water supplies. Reports are documented for record of offenses and necessary penalties.

## 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.*

The City's WSCP has been prepared as an adaptive management plan. As discussed in Section 8.9, the City will monitor and report on the implementation of the WSCP. The City will review the implementation results for any current or potential shortage gaps between water supplies and demands. The City will evaluate the need for revising the WSCP in order to resolve any shortage gaps, as necessary. The City 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 8.4.2).
- 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 City staff or other interested parties.

The City 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 the City's 2020 UWMP adoption process discussed in Section 10.3. It is anticipated the City will review, revise, and adopt an updated WSCP as part of preparing its 2025 UWMP, as necessary. However, the City will continue to review the monitoring and reporting data, and if needed, update the WSCP more frequently. Any updates to the City's WSCP will include a public hearing and adoption process by City Council (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.*

The City's 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, the City's 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 8.4.2. for specific 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.*

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

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

The City will conduct a public hearing and make the amended WSCP available for public inspection.

- The City Council will adopt the amended WSCP.
- The City 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 the City's WSCP (and 2020 Urban Water Management Plan) is provided in Chapter 10.

# CHAPTER 9

# DEMAND MANAGEMENT MEASURES

## LAY DESCRIPTION – CHAPTER 9

### DEMAND MANAGEMENT MEASURES

Chapter 9 (Demand Management Measures) of the City's 2020 Plan discusses and provides the following:

- The City has implemented "Demand Management Measures" to reduce its water demands and achieve its water use targets (discussed in Chapter 5).
- The City's Demand Management Measures include metering of all its water supply connections with its retail member agencies.
- The City's Demand Management Measures include public education and outreach programs regarding water conservation.
- The City's 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 the City has implemented over the past five (5) years is provided.
- The City's Demand Management Measures include adoption of an ordinance to prevent water waste.
- The City's Demand Management Measures include metering of all customer connections, including separate metering for single-family residential, commercial, industrial, large landscape and institutional/governmental facilities.

- The City's Demand Management Measures include public education and outreach programs regarding water conservation.
- The City's 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 the City has implemented over the past five (5) years is provided. The City 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.*

The City 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

The City adopted Ordinance No. 4122 ("Water Conservation and Water Supply Shortage Program and Regulations") in June 2009, which established regulations to prevent water waste. Ordinance No. 4122 includes the following restrictions:

- Limitations on watering hours except by use of a hand-held bucket or hand-held hose equipped with a self-closing water shut-off nozzle.
- Limitations on watering duration to no more than 15 minutes per day per irrigation station.
- Prohibitions on excessive water flow or runoff.
- Prohibitions on washing down hard or paved surfaces.
- Prohibitions on excessive pipeline leaks, breaks or, malfunctions.
- Prohibitions on operating a water fountain or other decorative water feature that does not use re-circulated water.
- Limitations of washing vehicles.
- Prohibitions on serving drinking water at eating or drinking establishments (unless requested).
- Commercial lodging establishments must provide the option to not launder daily.
- Prohibitions on the installation of single-pass cooling systems in buildings requesting new water service.
- Prohibitions on the installation of non-recirculating water systems in new commercial car washes, new laundry systems, or other new water intensive operations.
- Restaurants are required to use water conserving dish wash spray valves.

A copy of this Ordinance No. 4122 is provided in Appendix M.

### 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.*

The City meters all customer connections, including separate metering for single-family residential, commercial, industrial, and landscape customers. Furthermore, if there is new development within the City, each facility is individually metered. Service charges for the City are based on the customers' connection size. Further information regarding the City's service fees and conservation pricing is provided in Section 9.2.3.

### 9.2.3 CONSERVATION PRICING

The City's current water rates structure is tiered based on the cost of service, which also promotes water conservation. Domestic and irrigation customers are billed on separate inclining block rate structures, with a fixed service charge based on meter size. The rate structures include three tiers. The City's current rate structures showing pricing is provided in Appendix P.

### 9.2.4 PUBLIC EDUCATION AND OUTREACH

The City offers public information programs for their customers to promote water conservation. The City provides marketing and outreach materials to its customers by using social media platforms, the City's website, community outreach events, quarterly newsletters, school education programs, and direct communication to customers regarding their water use. Customers learn about rebates and additional programs through the City's website.

The City conducts water conservation school education programs to Pomona elementary schools. Programs include school assemblies and lesson materials to educate students on the topics of water conservation. The City is also a member of the Water Education Water Awareness Committee (WEWAC) that promotes the education of water issues to local schools, including the Pomona Unified School District. WEWAC hosts art and essay contests and provides financial support for lesson plan materials about water issues. The City will continue the school education programs to promote water conservation.

The City provides public information programs to promote and educate customers on water conservation by hosting and participating in City and regional community events, providing bill inserts, and attending community meetings. Events include the Drinking Water Week, Imagine a Day Without Water, Storm Water Awareness Week, Wyland National Mayor's Challenge for Water Conservation, Fix a Leak Week, San Antonio Watershed Clean Up, Pomona Police Department Open House, National Night Out, City of Pomona Business Meeting, the annual Christmas Parade, Environmental Expo, the LA County Fair, Earth Day, the Chalk Art Festival, Concert in the Park, City Movie Night, CicLAvia, and Public Works Day. All outreach event flyers, rebate information, and general conservation program information are provided at City Hall or on the City's website. The City will continue these programs to promote water conservation.

### 9.2.5 PROGRAMS TO ASSESS AND MANAGE DISTRIBUTION SYSTEM REAL LOSS

The City's system is comprised mainly of single-family and multi-family dwellings. The City estimates water system losses at approximately 6.4 percent, as discussed in Section 4.2.4. The City has water conservation literature that alerts customers to be on the lookout for water system leaks and to correct them promptly. The City is available to assist customers in answering questions regarding system leaks or higher than expected water usage.

The City prepares annual water loss audits (discussed in Section 4.2.4) to monitor water losses. City staff reviews the audits to track real and apparent losses. Losses are monitored by comparing water production to sales. The City regularly monitors its system and repairs leaks in a timely manner. To help in its effort to reduce and eliminate losses, the City has purchased various sound correlators for identifying system leaks. In areas where a leak is visible, staff is dispatched to a site to pinpoint the leak to minimize the excavation area and save resources. The City will continue these programs to assess and manage distribution system real losses.

### 9.2.6 WATER CONSERVATION PROGRAM COORDINATION AND STAFFING SUPPORT

The City’s Environmental Program Division of the Water Resources Department employs a full-time Environmental Programs Supervisor and one part-time office assistant for water conservation program coordination. Water conservation program staff are responsible for the following:

- Answering the Water Watcher 24-Hour Reporting Line.
- Sending letters to residents and businesses not complying with water conservation standards.
- Creating outreach materials and the quarterly newsletter.
- Staffing outreach table at City events.
- Creating and sending NPDES invoices to non-compliant businesses.
- Attending all WEWAC meetings and distributing program and scholarship information to school district, teachers, and principals.
- Organizing various conservation events.
- Creating social media posts.

The City will continue to provide water conservation program coordination and staffing support.

### 9.2.7 OTHER DEMAND MANAGEMENT MEASURES

In addition to the above DMMs, the City implements its own programs and collaborates with regional partners such as MWD.

The City participates in MWD's Residential Landscape Transformation Program to reward customers whose landscape designs utilize water-saving plants, technology, irrigation systems, and hardware. Incentives are presented on the City's website.

Through TVMWD, the City participates in MWD's regional rebate program, the SoCal Water$mart Program, which is available to the City's residential and commercial customers. There are rebates available for the purchase of high-efficiency clothes washing (HECW) machines, premium high-efficiency toilets (PHET), weather-based irrigation controllers (Smart Controllers), rain barrels, rain cistern, and turf removal to both residential and commercial customers to promote water conservation. The City's

commercial customers are offered plumbing, landscaping, HVAC, and medical and dental equipment rebates. The City provides information about these programs to customers on its website.

The City plans to continue implementation of these programs 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.*

The City is committed to implementing water conservation programs and works collaboratively with TVMWD to provide water conservation programs for its residents. As a sub-agency of TVMWD, the City's residents have the benefit of participating in TVMWD's conservation efforts. The highlights of DMM implementation over the past five years are described below.

As discussed in Section 9.2.1, the City adopted Ordinance No. 4122 ("Water Conservation and Water Supply Shortage Program and Regulations") to reduce water consumption by establishing water use restrictions including limitations on watering hours, watering duration, excessive runoff, washing down of hard surfaces, excessive pipeline leaks, and washing vehicles. As discussed in Section 8.4.7, the City previously adopted Resolution No. 2015-41 in May 2015 which declared a water supply shortage

and established water-use restrictions and regulations equivalent to the standard water shortage level 2 identified in Section 8.3. During this Level 2 water shortage period, the City was able to reduce water demands by up to 20 percent and provide sufficient water supplies to its customers. Subsequently, the City adopted Resolution No. 2016-105 in July 2016 which rescinded the Level 2 water supply shortage and declared a water supply shortage equivalent to standard water shortage Level 1. During this Level 1 water shortage period, the City was able to reduce water demands by up to 10 percent and provide sufficient water supplies to its customers. Copies of the resolutions are provided in Appendix M.

As discussed in Section 9.2.2, the City metered all customer connections, including separate metering for single-family residential, commercial, industrial, and landscape customers during the past five years. Furthermore, if there was new development within the City, each facility was individually metered. Service charges for the City are based on the customers' connection size.

As discussed in Section 9.2.3, the City implements a three-tiered pricing rate structure on its domestic and irrigation customers. Water connection fees are added to the quantity rates to comprise the total water bill. The water connection fees are based on the size of the meter.

As discussed in Section 9.2.4, the City offered public information programs for their customers to promote water conservation. The City provided marketing and outreach materials to its customers by using social media platforms, the City's website, community outreach events, quarterly newsletters, school education programs, bill inserts, and direct communication to customers regarding their water use. School education programs included school assemblies and lesson materials to educate students on the topics of water conservation. As a WEWAC member, the City hosted school art and essay contests and was provided financial support for lesson plan materials about water issues. The City also hosted and participated in City and regional community events including Drinking

Water Week, Imagine a Day Without Water, Storm Water Awareness Week, Wyland National Mayor's Challenge for Water Conservation, Fix a Leak Week, San Antonio Watershed Clean Up, Pomona Police Department Open House, National Night Out, City of Pomona Business Meeting, the annual Christmas Parade, Environmental Expo, the LA County Fair, Earth Day, the Chalk Art Festival, Concert in the Park, City Movie Night, CicLAvia, and Public Works Day.

As discussed in Section 9.2.5, the City prepares annual Distribution System Water Audits to monitor water losses. To help in its effort to reduce and eliminate losses, the City has purchased various sound correlators to identify system leaks. Staff is dispatched to a site to pinpoint the leak so as to minimize the excavation area and save resources.

As described in Section 9.2.6, The City maintains a fully staffed Environmental Program Division within The City's Water Resources Department. Water conservation program staff are responsible for the following:

- Answering the Water Watcher 24 Hour Reporting Line, sending letters to residents and businesses not complying with water conservation standards.
- Creating outreach materials and the quarterly newsletter
- Staffing outreach table at City events
- Creating and sending NPDES invoices to delinquent businesses
- Attending all WEWAC meetings and distributing program and scholarship information to school district, teachers, and principals
- Organizing various conservation events
- Creating social media posts

In addition to the above DMMs, other DMMs employed by the City are discussed in Section 9.2.7. and include the following:

- Residential Landscape Transformation Program: The City offers MWD's Residential Landscape Transformation Program to reward customers whose landscape designs utilize water-saving plants, technology, irrigation systems, and hardware. Rebate Programs: The City continued to participate in MWD's SoCal Water$mart rebate program for the purchase of HECW machines, PHET, weather-based irrigation controllers (Smart Controllers), rain barrels, rain cistern, and turf removal to both residential and commercial customers to promote water conservation.

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

As discussed in Section 5.4.2, the City's per-capita water use during CY 2020 was 113 GPCD. The City's confirmed 2020 Water Use Target is 147 GPCD. The City's per-capita water use during CY 2020 meets the 2020 Water Use Target and is in compliance. The

City 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 the City in meeting water use targets and objectives.

## 9.4 WATER USE OBJECTIVES (FUTURE REQUIREMENTS)

The City is currently working with DWR to develop Water Use Objectives pursuant to AB 1668 and SB 606. Beginning in 2024, water agencies, including the City, 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. The City 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 the City's 2020 Plan discusses and provides the following:

- The steps the City has performed to adopt and submit its 2020 Plan are detailed.
- The steps the City has performed to adopt and submit its Water Shortage Contingency Plan are detailed.
- The City coordinated the preparation of its 2020 Plan with the Los Angeles County Department of Regional Planning, the Los Angeles County Sanitation District, Pomona Valley Protection Agency, Chino Basin Watermaster, Six Basins Watermaster, MWD, TVMWD, San Antonio Water Company, Monte Vista Water District, Walnut Valley Water District, Rowland Water District, Golden State Water Company – San Dimas, and the Cities of Upland, Claremont, Chino, and Chino Hills. The City 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.
- The City provided a notice of the public hearing to the same agencies regarding the time, date, and place of the public hearing.
- The City published a newspaper notification of the public hearing, once a week for two successive weeks
- The City conducted a public hearing to discuss and adopt the City's 2020 Plan and City's Water Shortage Contingency Plan.

- Within 30 days of adoption, the City submitted the 2020 Plan and Water Shortage Contingency Plan to the California Department of Water Resources.
- Within 30 days of adoption, the City submitted all data tables associated with the 2020 Plan to the California Department of Water Resources.
- Within 30 days of adoption, the City submitted a copy of the 2020 Plan to the State of California Library.
- Within 30 days of adoption, the City submitted a copy of the 2020 Plan (and Water Shortage Contingency Plan) to the County of Los Angeles Registrar / Recorder's office and the City Clerk's Office.
- Within 30 days after submittal of the 2020 Plan to the California Department of Water Resources, the City made the 2020 Plan (including the Water Shortage Contingency Plan) available at the City Clerk's Office and on the City's website.
- The steps the City 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 the City's 2020 Plan and the WSCP is provided on a CY basis through December 31, 2020 (as discussed in Section 2.5).

## 10.2 NOTICE OF PUBLIC HEARING

The City's 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., the City coordinated the preparation of the 2020 Plan with the Los Angeles County Department of Regional Planning, the Los Angeles County Sanitation District, Pomona Valley Protection Agency, Chino Basin Watermaster, Six Basins Watermaster, MWD, TVMWD, San Antonio Water Company, Monte Vista Water District, Walnut Valley Water District, Rowland Water District, Golden State Water Company – San Dimas, and the Cities of Upland, Claremont, Chino, and Chino Hills. The City notified these agencies, as well as the cities and county within which the City 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

The City provided a notice of the public hearing to the with the Los Angeles County Department of Regional Planning, the Los Angeles County Sanitation District, Pomona Valley Protection Agency, Chino Basin Watermaster, Six Basins Watermaster, MWD,

TVMWD, San Antonio Water Company, Monte Vista Water District, Walnut Valley Water District, Rowland Water District, Golden State Water Company – San Dimas, and the Cities of Upland, Claremont, Chino, and Chino Hills. The notice includes the time and place of the public hearing. To ensure that the Plan and the WSCP were available for review, the City placed a copy of the draft 2020 Plan and the draft WSCP at the City Clerk's Office located at City Hall 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 the City.

**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* | | |
| Chino | Yes | Yes |
| Chino Hills | Yes | Yes |
| Claremont | Yes | Yes |
| Upland | 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.*

The City 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, the City published a notice of public hearing in the newspaper during the weeks of June 4, 2021 and June 11, 2021. A notice of public hearing was also provided to the City Clerk's office and was posted throughout the City of Pomona and on the City's 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, the City placed a copy at the City Clerk's Office located at City Hall 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, the City held a public hearing on June 21, 2021 which included input from the community regarding the City's draft 2020 Plan and the draft WSCP. As part of the public hearing, the City 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, the City 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, the City 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 Q.

## 10.4 PLAN SUBMITTAL

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***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.*

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The City's 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

The City Council adopted the 2020 plan on June 21, 2021 and within 30 days of adoption, the City 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 the City to assist DWR with its determination that the City's 2020 Plan has addressed the requirements of the CWC. The

City has completed the DWR checklist by indicating where the required CWC elements can be found within the City's 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, the City 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 the City Council, 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 the City's 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 the City Council, a copy of the 2020 Plan was submitted to the County of Los Angeles Registrar / Recorders office and the City Clerk's Office. A copy of the letter to the County of Los Angeles will be maintained in the City's 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, the City made the 2020 Plan (including the WSCP) available at the City Clerk's Office located at City Hall during normal business hours and on the City's 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.*

The City is not regulated by the California Public Utilities Commission.

## 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.*

The City's amendment process for its 2020 Plan is discussed below.

### 10.7.1 AMENDING A UWMP

If the City amends the adopted 2020 Plan, the amended Plan will undergo adoption by the City's governing board. Within 30 days of adoption, the amended Plan will then be submitted to DWR, the State of California Library, the County of Los Angeles Registrar / Recorders office, and the City Clerk's Office.

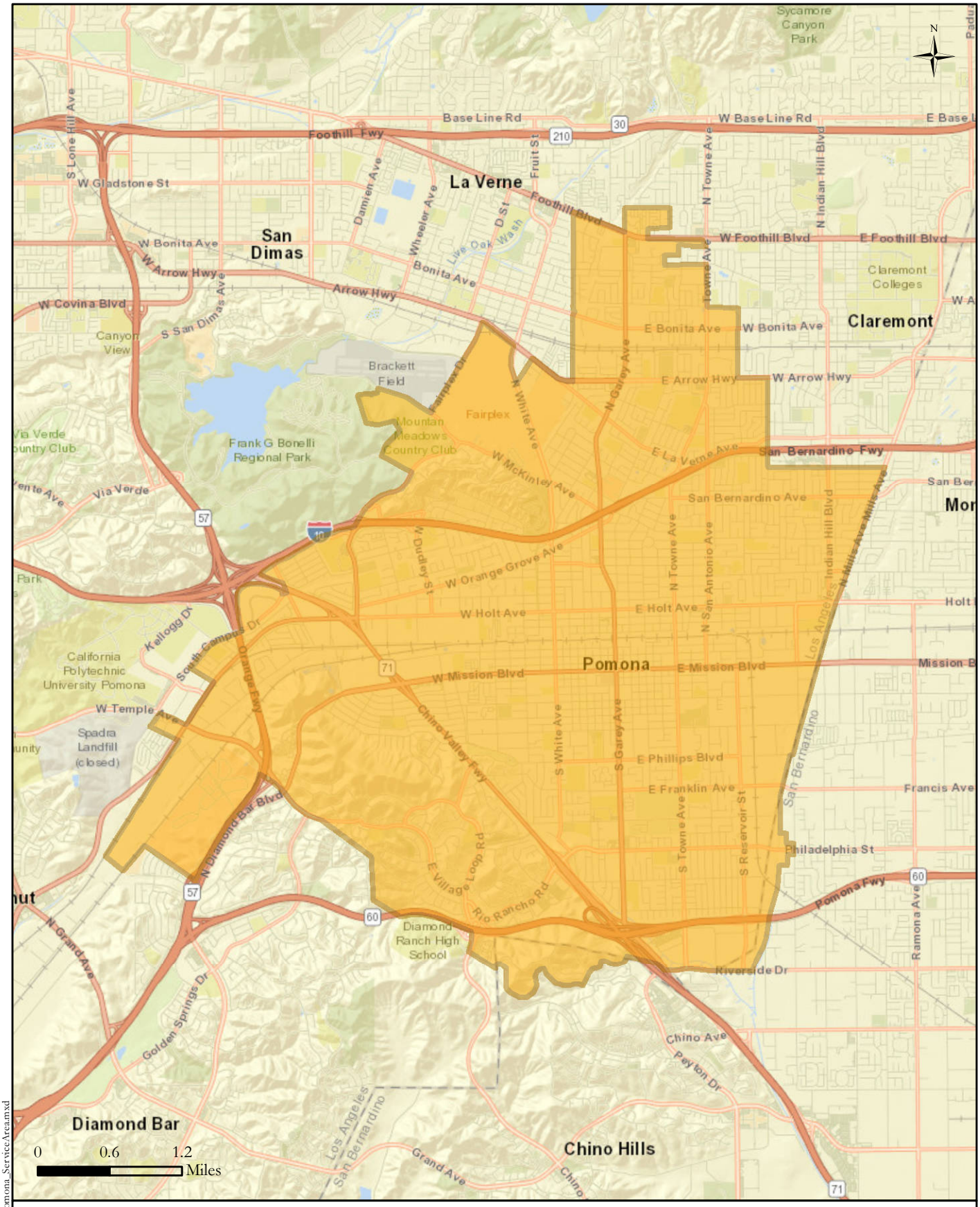
### 10.7.2 AMENDING A WATER SHORTAGE CONTINGENCY PLAN

***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 the City amends the adopted 2020 Plan (including the WSCP), the amended Plan (and WSCP) will undergo adoption by the City's governing board. Within 30 days of adoption, the amended Plan (and WSCP) will then be submitted to DWR, the State of California Library, the County of Los Angeles Registrar / Recorders office, and the City Clerk's Office.

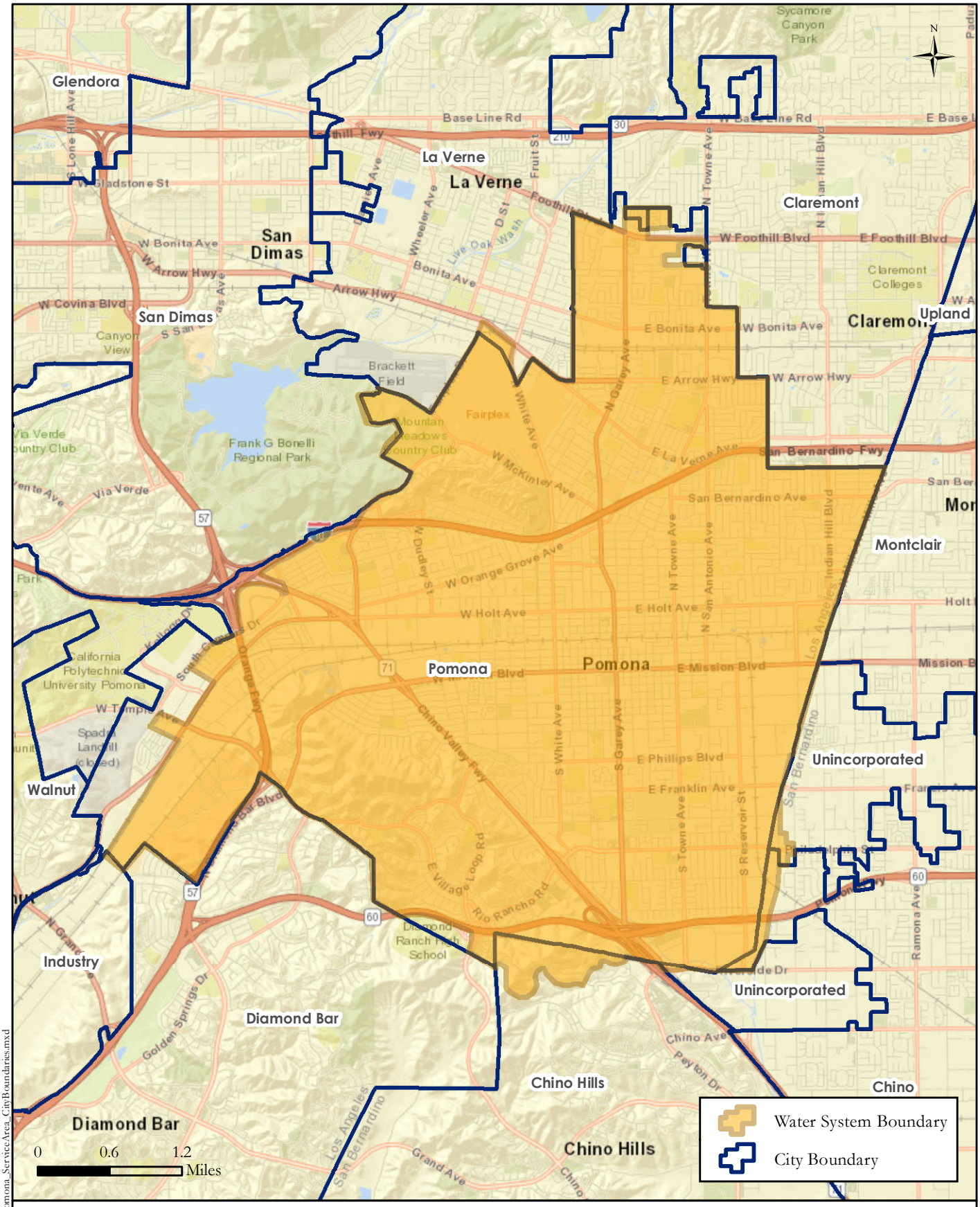
FIGURE 1




Document Path: J:\jn2741\Pomona_ServiceArea.mxd

STETSON ENGINEERS INC.

**CITY OF POMONA**
**WATER SERVICE AREA**

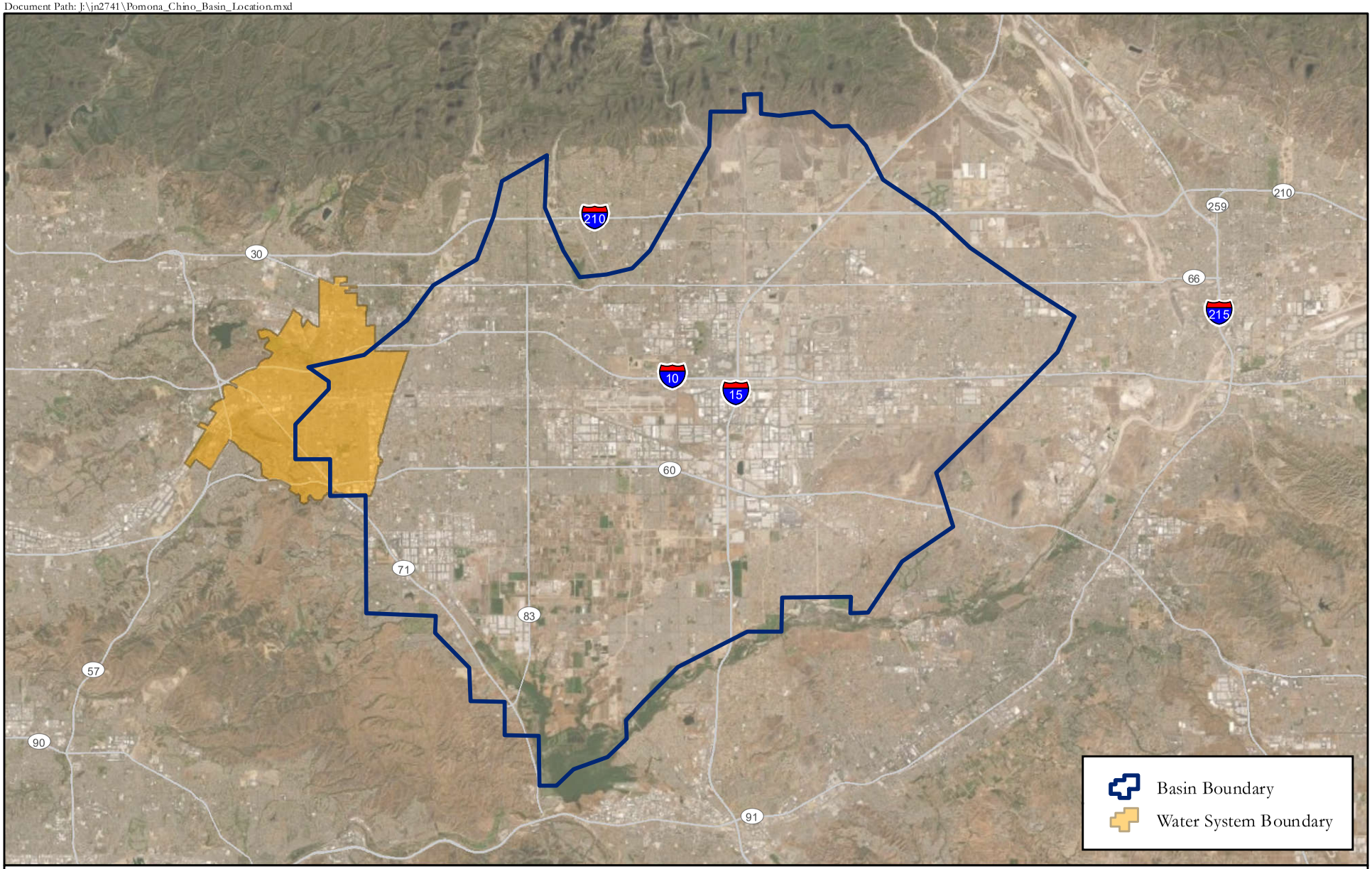



Document Path: J:\jn2741\Pomona_ServiceArea_CityBoundaries.mxd

STETSON ENGINEERS INC.

**CITY OF POMONA**
**WATER SERVICE AREA**
**AND CITY BOUNDARIES**

Document Path: J:\jn2741\Pomona_Chino_Basin_Location.mxd




STETSON ENGINEERS INC.

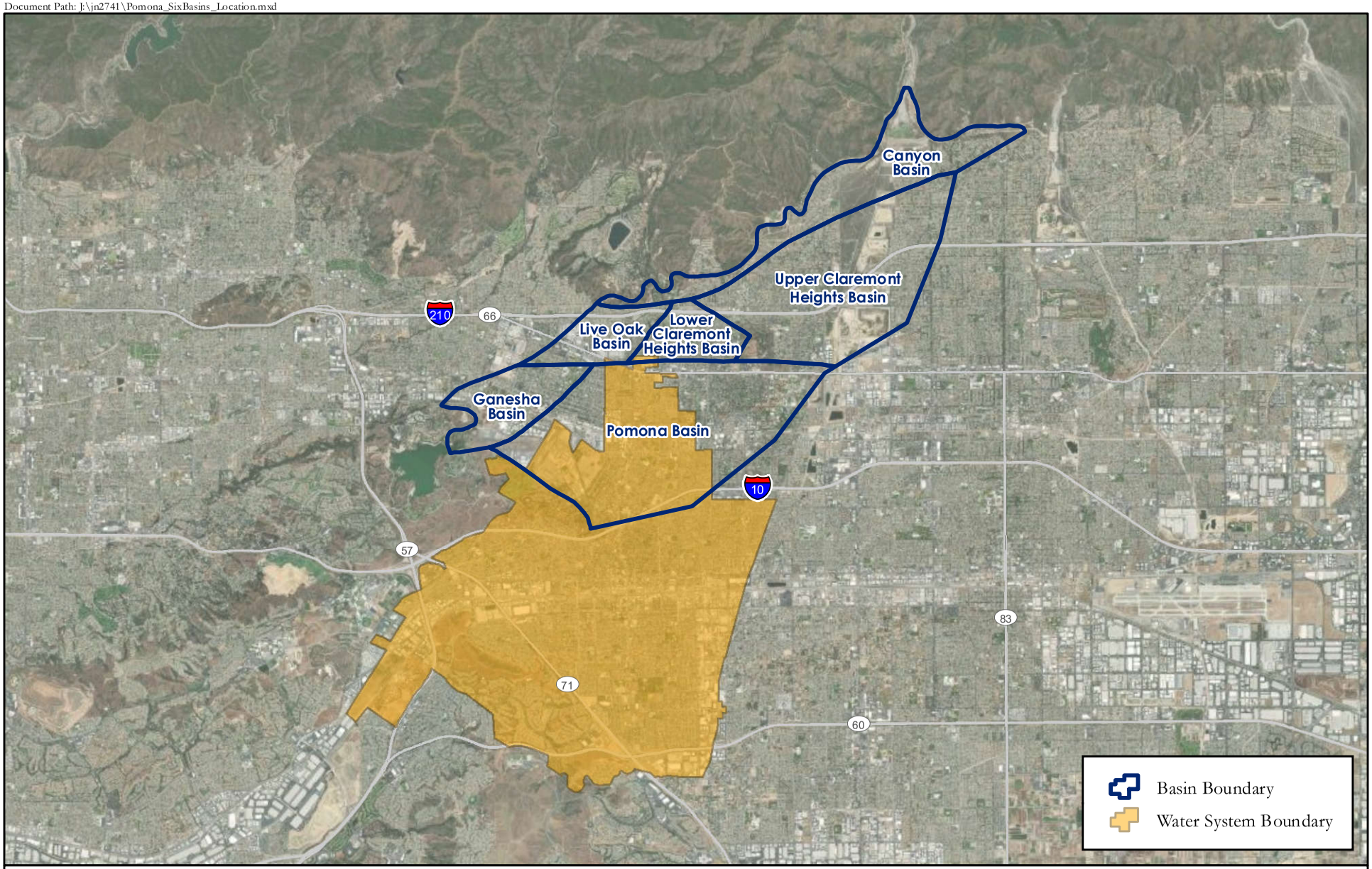
**CITY OF POMONA**
**CHINO BASIN LOCATION**

0 1.5 3 Miles

N

FIGURE 3

Document Path: J:\jn2741\Pomona_SixBasins_Location.mxd




STETSON ENGINEERS INC.

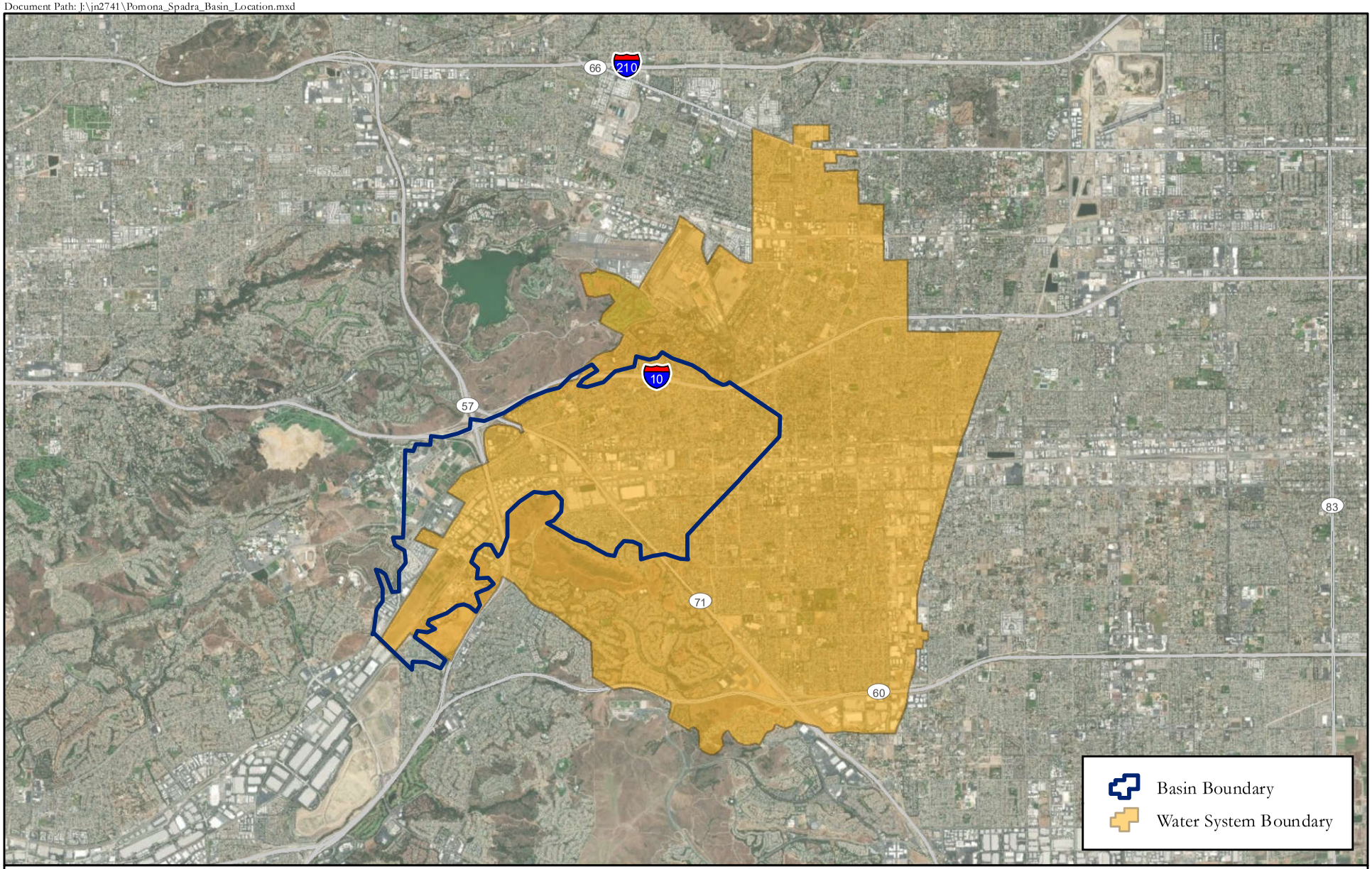
**CITY OF POMONA**
**SIX BASINS LOCATION**

0 1 2 Miles

N

FIGURE 4

Document Path: J:\jn2741\Pomona_Spadra_Basin_Location.mxd




STETSON ENGINEERS INC.

**CITY OF POMONA**
**SPADRA BASIN LOCATION**

0 0.5 1 Miles

N

FIGURE 5