



**FINAL**



City of Corcoran

MAY 2022

# 2020 Urban Water Management Plan



CITY OF CORCORAN

# 2020 URBAN WATER MANAGEMENT PLAN

Final

May 2022

**AKEL**  
ENGINEERING GROUP, INC.



5/23/22



May 23<sup>rd</sup>, 2022

City of Corcoran  
832 Whitley Avenue  
Corcoran, CA 93212

Attention: Joe Faulkner, Deputy Public Works Director

Subject: **2020 Urban Water Management Plan**

Dear Joe:

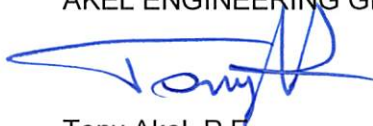
We are pleased to submit the City of Corcoran 2020 Urban Water Management Plan (2020 UWMP) which is intended to address the Urban Water Management Planning Act (UWMPA) of 1983 and amendments thereof.

The City's 2015 UWMP received letters of review and completeness from the Department of Water Resources. This 2020 UWMP addresses additional amendments to the UWMPA and new guidelines established by the Department of Water Resources, including a 2020 Water Shortage Contingency Plan (2020 WSCP), as a separate document. Water supply reliabilities and demands are projected through a planning horizon of 2045.

We extend our thanks to you and other City staff whose courtesy and cooperation were valuable in reviewing and completing this study.

Sincerely,

AKEL ENGINEERING GROUP, INC.



Tony Akel, P.E.  
Principal

Enclosure: 2020 Urban Water Management Plan

City of Corcoran  
2020 Urban Water Management Plan  
**Contact Sheet**

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The Water supplier is a Municipality

The Water supplier is a Retailer

Utility Services provided by the water supplier include: Water, Sewer, Recycled Water

Is this Agency a Bureau of Reclamation Contractor? No

Is this Agency a State Water Project Contractor? No





## Acknowledgements

### City Council

**Patricia Nolen**, Mayor

**Jeanette Zamora-Bragg**, Vice Mayor

**Greg Ojeda**

**Sid Palmerin**

**Jerry Robertson**

### Management Personnel

**Joseph Faulkner**, Director of Public Works

**Dylan Zable**, Corcoran Water Division

# City of Corcoran 2020 Urban Water Management Plan

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## CHAPTER 1 – INTRODUCTION AND OVERVIEW

This chapter introduces the purpose of the Urban Water Management Plan (UWMP) and its importance to the City of Corcoran (City) as well as Department of Water Resources (DWR). This chapter also includes the coordination and outreach that took place for this UWMP to come to fruition as well as documenting the milestones for adopting the UWMP and for submitting it to the DWR.

### 1.1 BACKGROUND AND PURPOSE

Water suppliers must submit an Urban Water Management Plan to the Department of Water Resources in accordance with California Water Code requirements. The purpose of the UWMP is to review and maintain the reliability of urban water supplies, ensure that future beneficial use can be complemented by sufficient water supply, continue to promote policies and programs that benefit water conservation, and provide a means for response during water supply shortages and drought conditions. In addition to being filed every five years, the Urban Water Management Plan must satisfy requirements defined in the Urban Water Management Planning Act (UWMPA) of 1983 and any amendments thereof.

Since the passage of the UWMPA, there have been more than 20 amendments to the Act. According to the UWMPA, a UWMP must be prepared by an urban water supplier that supplies over 3,000 acre-feet (AF) of water a year, or services 3,000 or more connections.

In October 2017, DWR completed the review of the City's 2015 UWMP and its supplements, and issued a letter of completeness. The UWMPA has undergone significant expansion and revision since the last UWMP Guidebook was prepared in 2015. Prolonged droughts, groundwater overdrafts, and regulatory revisions affect not only each Supplier's water reliability determinations, but also the broad picture of statewide water reliability overseen by DWR, the State Water Resources Control Board (State Water Board), and the Legislature. Accordingly, the Act has grown to address changing conditions and it guides California's water resources management.

Thus, this 2020 UWMP includes updates to the 2015 UWMP and addresses additional amendments to the UWMPA and new guidelines established by DWR. This report references the tables required by DWR in their 2020 UWMP Guidebook published in March 2021, which have been completed and included in [Appendix A](#).

## 1.2 URBAN WATER MANAGEMENT PLANNING AND THE CALIFORNIA WATER CODE

The drought of 1976-1977 created shortages of water supplies throughout California. With several cities and water districts/agencies witnessing reductions in their water supplies and having to look for additional water sources elsewhere, an immediate need for a statewide, local level, long-term water management planning arose. To dramatically reduce future emergencies caused by inadequate planning of water resources, the Urban Water Management Planning Act was proposed and adopted in 1983. State Assembly Bill 797 modified the California Water Code Division 6 in 1983, creating the UWMPA. Since this Assembly Bill, more than 20 amendments have changed the quantity of data required, as well as increasing the planning elements included in this 2020 plan.

Early amendments to the UWMPA required 20-year planning horizons in 5-year increments for the comparison of water use to sources of water supply. More recently, these planning projections have been extended to 25-year planning horizons in order to maintain the 20-year projections, while the subsequent UWMP is completed.

Additional amendments included requirements that water supplier's UWMP provides provisions for a Water Shortage Contingency Plan, which would meet the specifications set forth in the UWMPA; demand management measures; and provisions for recycled water use. Recycled water use was added to reporting requirements due to its additional reliability for alternative water supply, and most notably, as an additional supply for future water use demand. Individual water purveyors, in coordination with other water purveyors in the same general area and to the extent practicable, must work to prepare the Water Shortage Contingency Plan. The individual water supplier must also describe the water demand management measures that are currently in practice, or those scheduled to be practiced.

More than 15 amendments have been passed since the year 2000, amending the UWMPA and increasing reporting for the UWMP. Included in these amendments are SB 610 (Costa, 2001) and AB 901 (Daucher, 2001), which require urban water purveyors to review information regarding water to supply new large developments. Additionally, SB 318 (Alpert, 2004) requires the plan to review opportunities involved in the development of desalinated water, included but not limited to, ocean, brackish, and groundwater, as a long-term supply. AB 105 (Wiggins, 2004) requires suppliers to submit their completed UWMP to the California State Library. SBX7-7 requires the state and its municipal water purveyors to achieve a 20 percent reduction in urban per capita water usage by the year 2020. The "20X2020" plan is intended to reduce water usage per capita by 10% by the year 2015, and 20% by the year 2020.

The most recent of these amendments are:

- **AB2242** (2018) requires an urban water supplier to include in its UWMP an assessment of the reliability of its water service to customers during normal, dry, and multiple dry years,

including a repeat of the five consecutive historic driest years the urban water supplier has experienced.

- **SB606** (2018) adds new requirements to the UWMP process as well as established updated urban water use objectives and water use reporting requirements,
  - Prepare a drought risk assessment that examines water shortage risks for a drought lasting for the next five years.
  - Prepare a comprehensive Water Shortage Contingency Plan that will include water budgeting forecast procedures, standard water shortage levels, shortage response actions, and other protocols.
  - Enacts an annually required water supply and demand assessment wherein an urban water supplier will assess local demand and supply conditions and provide that information to DWR.

### 1.3 REPORT ORGANIZATION

This report is organized in accordance with the outline suggested by the Department of Water Resources for the 2020 Urban Water Management Plans.

**Chapter 1 – Introduction and Overview.** This chapter introduces the purpose of the Urban Water Management Plan (UWMP) and its importance to the City of Corcoran (City) as well as the Department of Water Resources (DWR).

**Chapter 2 – Plan Preparation.** This chapter describes the process that was used for the development of the UWMP. This chapter also includes the coordination and outreach that took place for this UWMP to come to fruition, as well as documenting the milestones for adopting the UWMP and for submitting it to the DWR.

**Chapter 3 – System Description.** This chapter describes the City’s water service area. This description includes discussion of the City’s location, the boundaries of the water service area, existing and future land use types, and climate. This chapter also summarizes the historical and projected population as well as a review of the City’s demographics and socioeconomic conditions.

**Chapter 4 – System Water Use.** This chapter provides a description of the current and projected water uses within the City’s service area. Additionally, a description of potential recycled water uses is provided. Water demands are projected through the year 2045.

**Chapter 5 – Baseline and Targets.** This chapter summarizes the methods used to estimate the target water use. As part of the 2020 UWMP update, this chapter evaluates if the City achieved the required water use reduction target.



**Chapter 6 – System Supplies.** The purpose of this chapter is to summarize the City’s current and planned water supply sources and volumes. This includes a description of the groundwater basins used by the City as a source of supply. Ongoing planning efforts for the potential use of recycled water within the City’s service area are also summarized.

**Chapter 7 – Water Supply Reliability.** This chapter assesses the reliability of the City’s water supply under normal conditions, single year dry conditions, and five-year dry conditions. The reliability assessment includes a comparison of projected water use versus expected water supply for the next 25 years. This chapter also includes the newly required Drought Risk Assessment, which is a review of the capability of the City’s water supplies to meet the demand for the next five years assuming a five-year drought occurs.

**Chapter 8 – Water Shortage Contingency Plan.** This chapter summarizes the City’s Water Shortage Contingency Plan (WSCP). The WSCP is a separately adopted planning document that most notably outlines levels of water shortage conditions, demand reduction methods to be implemented in the event of a water shortage and the process the City will implement to perform an annual Supply and Demand assessment. The WSCP also includes discussion of the City’s communication protocols during a water shortage, methods of determining compliance and enforcing water use prohibitions, estimating the financial consequences of a water shortage, and the methods the City has in place to monitor and report the effectiveness of any water demand reduction methods implemented.

**Chapter 9 – Demand Management Measures.** This chapter summarizes the demand management measures, which are additional measures the supplier plans on implementing to achieve its water use targets and maintain ongoing water conservation.

**Chapter 10 – Plan Adoption, Submittal and Implementation.** This chapter summarizes the process for adopting and submitting the UWMP as well as the ways the public can access the adopted UWMP.

## 1.4 PUBLIC PARTICIPATION AND PLAN ADOPTION

### Law

*10642. Each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan. Prior to adopting a plan, the urban water supplier shall make the plan available for public inspection and shall hold a public hearing thereon. Prior to the hearing, notice of the time and place of hearing shall be published ... After the hearing, the plan shall be adopted as prepared or as modified after the hearing.*

In accordance with the stated law, the City will hold a public hearing for members of the community to provide comments, learn about existing and future water supplies of the city, and raise concerns towards the plan being adopted. A notice of the public hearing was published in

the local newspaper on April 7<sup>th</sup> and April 14<sup>th</sup>, notifying interested parties that the draft of the 2020 UWMP was available at various City facilities and on the City’s web page (<https://www.cityofcorcoran.com>) for review two successive weeks prior to adoption. After public review, the plan was adopted on Tuesday, May 10<sup>th</sup>, 2022 and subsequently submitted to DWR for approval on Friday, August 26<sup>th</sup>, 2022.

## 1.5 UWMP AND GRANT OR LOAN ELIGIBILITY

### Law

10608.56	<p><i>(a) On and after July 1, 2016, an urban retail water supplier is not eligible for a water grant or loan awarded or administered by the state unless the supplier complies with this part.</i></p> <p><i>(c) Notwithstanding subdivision (a), the department shall determine that an urban retail water supplier ...applicable to the water funds.</i></p> <p><i>(e) Notwithstanding subdivision (a), the department shall determine that an urban retail water supplier ... as a disadvantaged community.</i></p> <p><i>(f) The department shall not deny eligibility to an urban retail water supplier or agricultural water supplier ... is not implementing all of the requirements of this part or Part 2.8 (commencing with Section 10800).</i></p>
10656	<p><i>An urban water supplier is not eligible for a water grant or loan awarded or administered by the state unless the urban water supplier complies with this part.</i></p>

Beginning in 2016, changes to California law require that urban retail water suppliers must comply with water conservation requirements established by the Water Conservation Act of 2009 in order to be eligible for State water grants or loans. For 2020 UWMPs, compliance with the Water Conservation Act of 2009 means that a water agency must have met its 2020 Urban Water Use Target, discussed further in Chapter 5; this compliance must be reported in the 2020 UWMP.

## 1.6 PREVIOUS URBAN WATER MANAGEMENT PLANS

The City of Corcoran prepared a 2015 UWMP, which was adopted on April 25<sup>th</sup>, 2017. This UWMP documented the SBX7-7 baseline per capita was use, as well as the interim and 2020 water use targets. This UWMP documented the groundwater conditions, future water supply projects, the water shortage contingency plan, and demand management measures implemented to reduce water demands. The 2015 UWMP serves as a benchmark for the 2020 UWMP, as the 2020 UWMP will update the target projections consistent with the final Guidebook release from the Department of Water Resources.

## CHAPTER 2 – PLAN PREPARATION

This chapter describes the process that was used for the development of the UWMP. This chapter also summarizes the coordination and outreach that was conducted during the preparation of the UWMP.

### 2.1 BASIS FOR PREPARING A PLAN

The California Water Code (CWC) defines an “Urban water supplier” as a publicly or privately owned supplier of 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. At the time of preparation of the 2020 UWMP, the City supplied water to over 3,415 active service connections, as summarized in [Table 2-1](#), thereby qualifying as an urban water supplier and required to prepare an Urban Water Management Plan every five years.

**Table 2-1 Public Water Systems**

Public Water System Number	Public Water System Name	Number of Municipal Connections 2020	Volume of Water Supplied 2020 (AF)
1610004	City of Corcoran	3,415	5,708

### 2.2 REGIONAL PLANNING

The City’s 2020 UWMP is prepared as an individual UWMP and the City is not part of any regional alliance for planning purposes, as summarized in [Table 2-2](#).

**Table 2-2 Plan Identification**

Select Only One	Type of Plan	Name of RUWMP or Regional Alliance
<input checked="" type="checkbox"/>	<b>Individual UWMP</b>	
	<input type="checkbox"/>	Water Supplier is a member of a RUWMP.
	<input type="checkbox"/>	Water Supplier is also a member of a Regional Alliance.
<input type="checkbox"/>	<b>Regional Urban Water Management Plan (RUWMP)</b>	



## 2.3 INDIVIDUAL OR REGIONAL PLANNING AND COMPLIANCE

Consistent with the 2015 UWMP, the 2020 UWMP reports solely on the City’s service area and is not a part of a regional alliance or regional urban water management plan (RUWMP).

## 2.4 FISCAL OR CALENDAR YEAR AND UNITS OF MEASURE

This UWMP has been prepared using calendar year data and includes complete 2020 data, as required by the DWR guidelines. The units of measure reported in all tables are acre-feet (AF), as shown in [Table 2-3](#).

**Table 2-3 Supplier Identification**

Type of Supplier	
<input type="checkbox"/>	Supplier is a wholesaler
<input checked="" type="checkbox"/>	Supplier is a retailer
Fiscal or Calendar Year	
<input checked="" type="checkbox"/>	UWMP Tables Are in Calendar Years
<input type="checkbox"/>	UWMP Tables Are in Fiscal Years
Units of Measure Used in UWMP <sup>1</sup>	
AF	

Notes:

1. Units of DWR required tables are consistent in SBX7-7 verification tables

## 2.5 COORDINATION AND OUTREACH

The City’s 2020 UWMP is an update to the 2015 UWMP and is intended to address those aspects of the UWMPA which are under the control of the City, specifically water supply and water use. The City submitted its draft plan to regional stakeholders, and made the draft plan available to the public in hard copy form and electronic form. The City did notify wholesale water suppliers, as shown in [Table 2-4](#).

**Table 2-4 Water Supplier Information Exchange**

Wholesale Water Supplier Informed of Projected Water Use
Kings County Water District
Kings County Water Commission

## CHAPTER 3 – SYSTEM DESCRIPTION

This chapter describes the City’s water service area. This description includes discussion of the City’s location, the boundaries of the water service area, existing and future land use types, and climate. This chapter also summarizes the historical and projected population as well as a review of the City’s demographics and socioeconomic conditions.

### 3.1 GENERAL DESCRIPTION

This section documents the City’s location, service area, land use, and socioeconomic conditions.

#### 3.1.1 Location

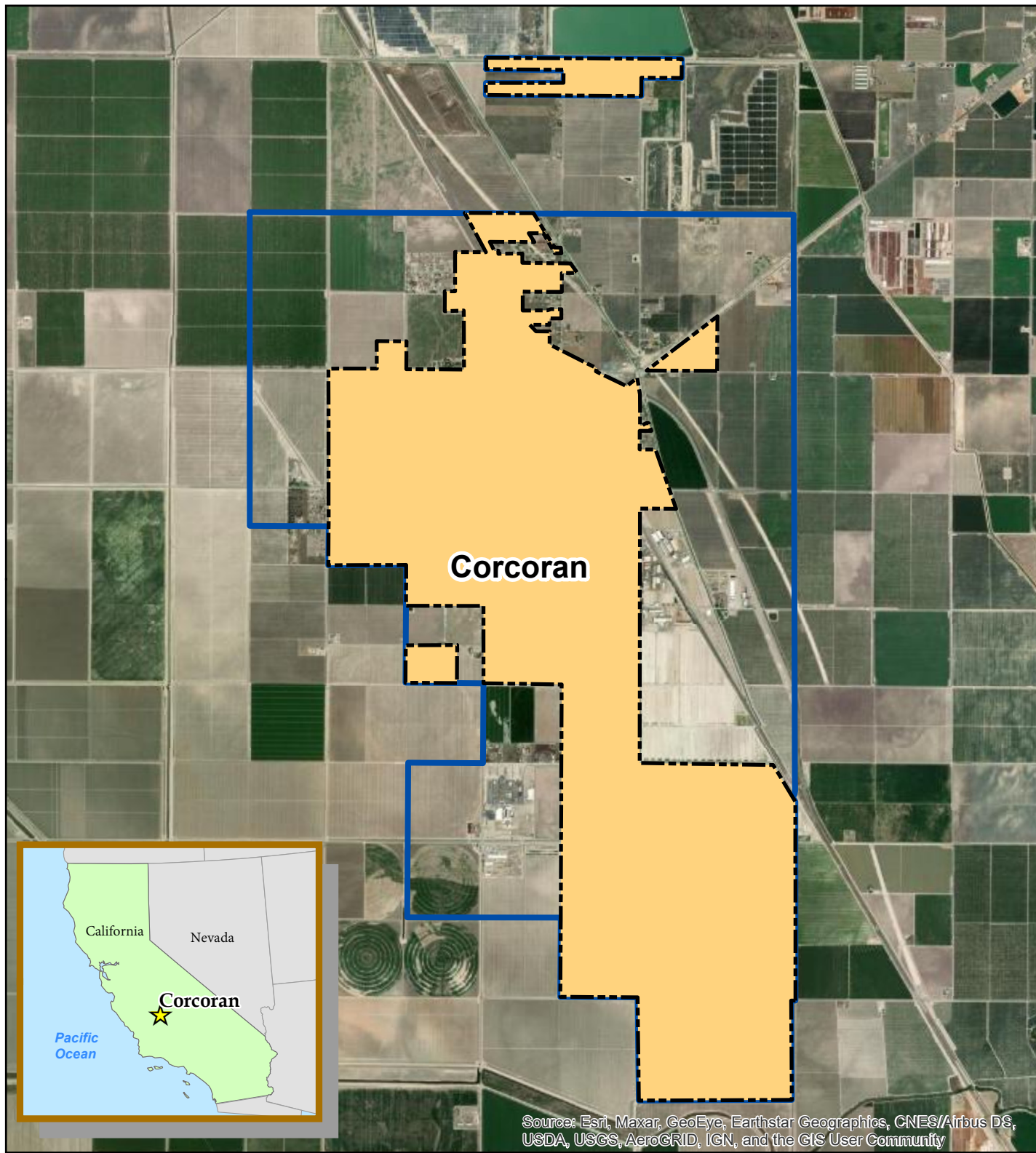
Corcoran is located in Kings County California, approximately 17 miles southeast of Hanford and 14 miles southwest of Tulare. (Figure 3-1). Highway 43 runs along the northeastern side of the City and intersects Highway 137 just east of the city limits, connecting Corcoran to nearby cities in the Central Valley.

#### 3.1.2 Water Service Area




The City’s most recent General Plan, adopted in November 2014, outlines the boundary for future growth for the City. The planned area boundary outlined in the 2025 General Plan encompasses a gross planning area of approximately 26.5 square miles, which includes unincorporated King’s County, an element of the City’s sphere of influence. For the purposes of this UWMP, the total planning area was consistent with the General Plan’s Sphere of Influence (14.7 square miles). The City limits currently describe the existing water service area, as shown in the city zoning map in Appendix C.

#### 3.1.3 Land Use

The planning area boundary of the City’s 2025 General Plan includes an approximate net area of 26.5 square miles. The City’s land use map, according to the most recent general plan, is shown in Figure 3-2.



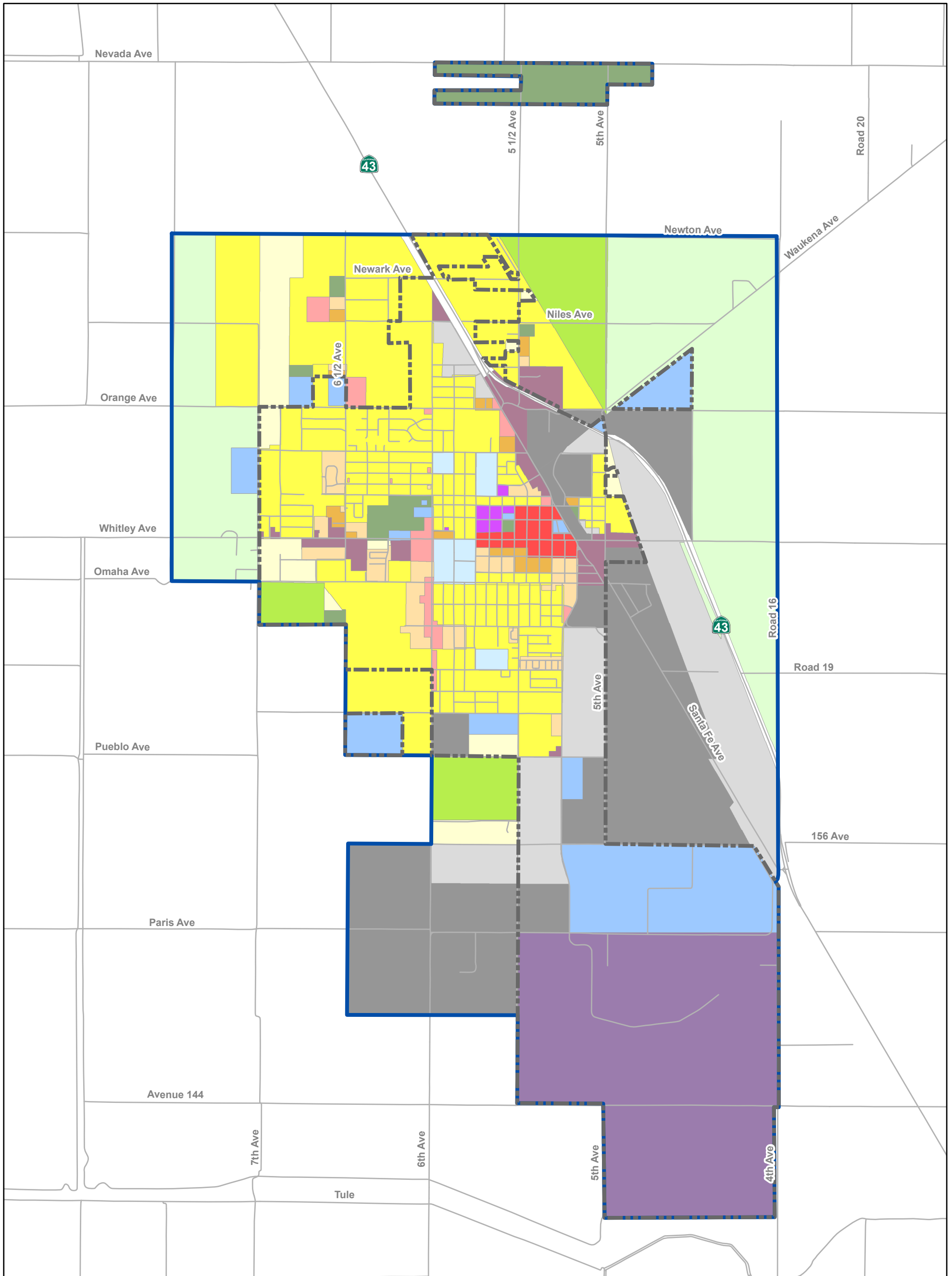
**Legend**

-  City Limits
-  Sphere of Influence
-  Highways

**PRELIMINARY**

**Figure 3-1**  
**Regional Location Map**  
 2020 Urban Water Management Plan  
 City of Corcoran





**Legend**

**General Plan Land Use**

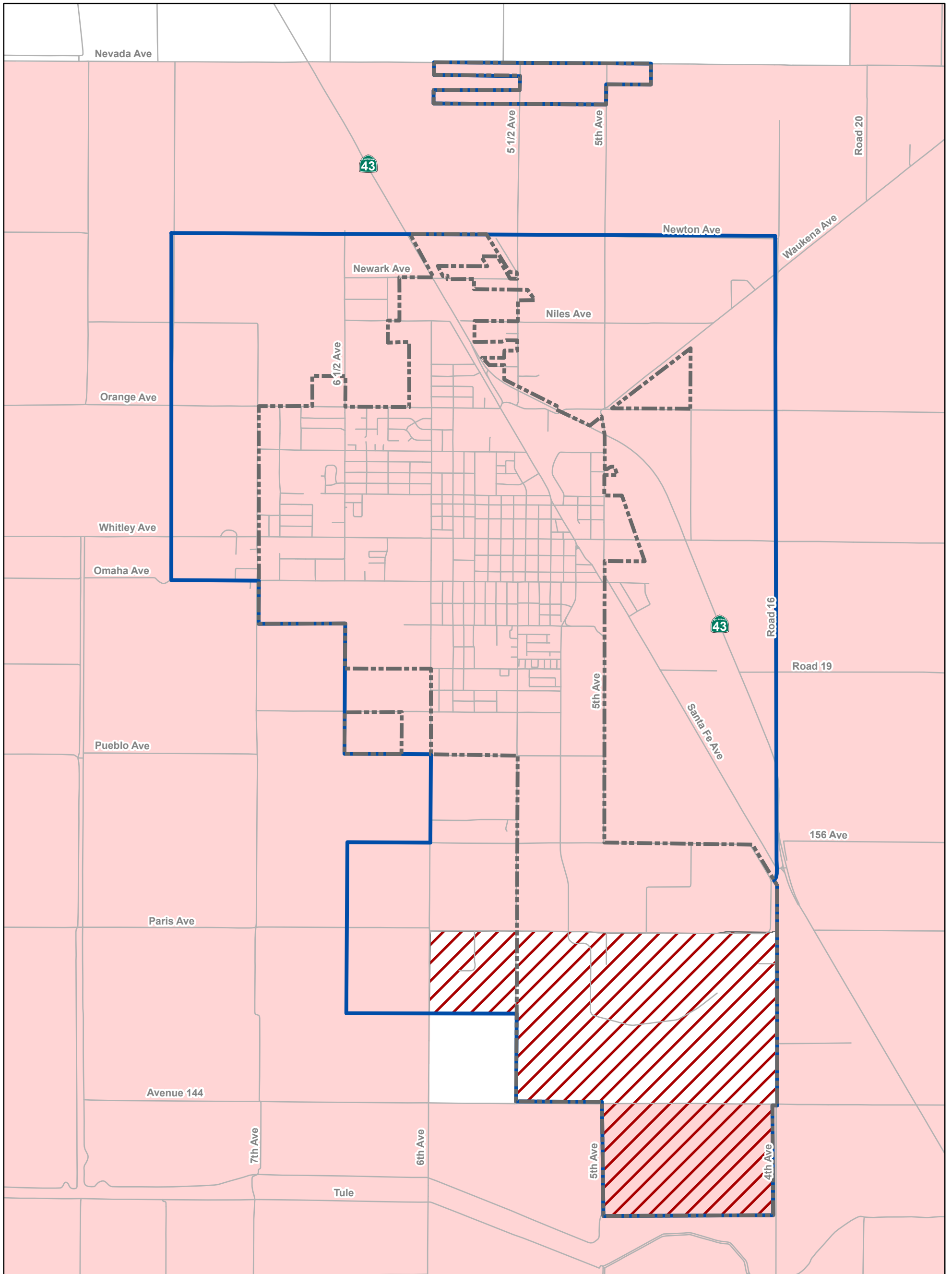
- |  |                              |  |                     |  |                     |
|--|------------------------------|--|---------------------|--|---------------------|
|  | Very Low Density Residential |  | Downtown Commercial |  | Heavy Industrial    |
|  | Low Density Residential      |  | Service Commercial  |  | Professional Office |
|  | Medium Density Residential   |  | General Agriculture |  | Prison              |
|  | High Density Residential     |  | Limited Agriculture |  | School              |
|  | Neighborhood Commercial      |  | Open Space / Park   |  | Public Facility     |
|  |                              |  | Light Industrial    |  |                     |

**PRELIMINARY**

- Sphere of Influence
- City Limits
- Roads

**Figure 3-2  
General Plan  
Land Use**  
2020 Urban Water Management Plan  
City of Corcoran



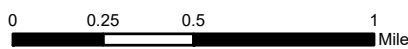


**Legend**

- Disadvantaged Communities
- Corcoran State Prison
- Sphere of Influence
- City Limits
- Roads

**PRELIMINARY**

**Note:**  
The California State disadvantaged communities shapefile does not contain information for Corcoran State Prison.



Update: December 8, 2021

File Path: P:\GIS\GIS\_P\Projects\Corcoran\CN\_Fig3-3\_DAC\_120821.mxd

**Figure 3-3  
Disadvantaged  
Communities**

2020 Urban Water Management Plan  
City of Corcoran





### 3.1.4 Socioeconomic Conditions

Based on data from the U.S. Census American Community Survey, the City of Corcoran has a median household income of approximately \$40,159 per year and a per capita income of approximately \$9,910 per year as of 2019. Approximately 3.6% of the population has a bachelor's degree or higher, and 57.7% have a high school diploma or higher. Approximately 30.7% of the population lives below the poverty line.

Corcoran is classified as a disadvantaged community (DAC) by the State of California (see [Figure 3-3](#)), since the median household income in Corcoran is less than 80% of the state average (\$75,235 as of 2020). Thus, the City may still receive water-related grants and state funding, even if the City is unable to reach its 2020 per-capita water usage target. Also, since the city classifies as a DAC, low-income water demands and projections are included for this analysis.

According to the most recent population and housing statistics prepared by the California Department of Finance, the City of Corcoran has an average household occupancy of 3.42 people per household. Approximately 82% of the current residential units are single family residences, with the other 18% reflecting multiple family dwelling units. The 2020 residential vacancy rate is approximately 6.9%.

According to U.S. Census American Community Survey, the primary job sectors within the City are educational and health services, public administration, and agricultural/mining production. The most recent unemployment rate was listed as 7.9%.

## 3.2 CLIMATE DATA

The following sections includes a description of the City's historical climate data as well as a summary of the potential impacts of climate change.

### 3.2.1 Historic Climate Data

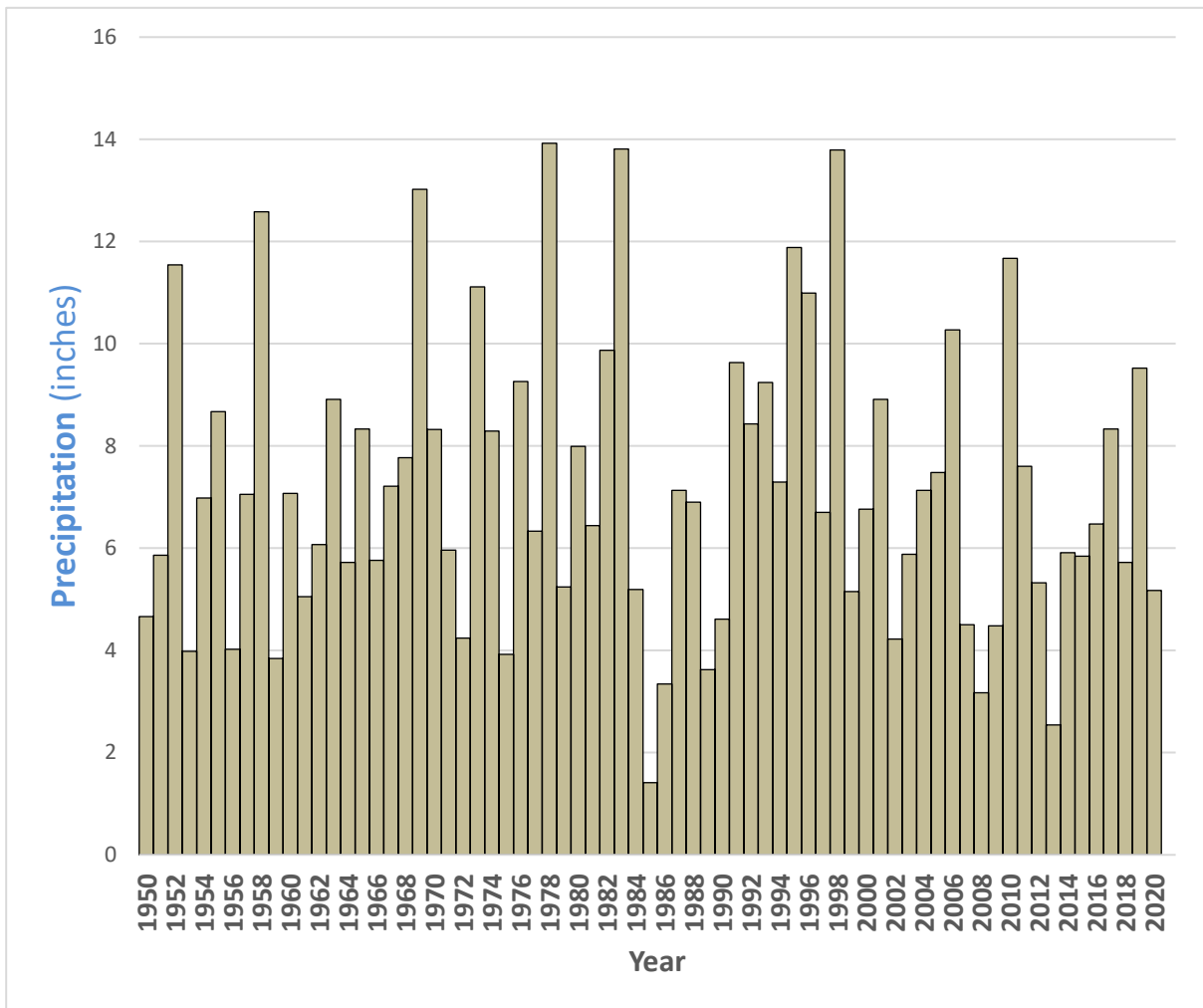
Yearly extremes in temperature vary, with peak temperatures rising to nearly 100 °F during summers and winter lows during December and January falling to roughly 35 °F. The City has a historical average annual rainfall of approximately 7.1 inches, with the majority of the rainfall occurring from November to April. According to the California Irrigation Management Information System (CIMIS), the approximate average annual evapotranspiration (ET) for the City is 61.6 inches. Average climate data is included in [Table 3-1](#).



**Table 3-1 Average Climate Data**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Rainfall (inches)	1.5	1.3	1.2	0.7	0.2	0.1	0.0	0.0	0.2	0.3	0.7	1.0	<b>7.1</b>
Max. Daily Temp. (°F)	54.6	61.8	68.2	76.0	85.3	93.1	98.9	97.1	91.5	80.9	66.0	55.9	<b>77.4</b>
Min. Daily Temp. (°F)	36.5	39.7	42.7	46.5	52.8	58.7	63.4	61.9	57.5	49.3	40.6	35.8	<b>48.8</b>
Average ETo (inches)	1.3	2.2	4.2	6.1	8.1	9.0	9.0	8.1	6.1	4.2	2.2	1.2	<b>61.6</b>

Historical rainfall in the city is shown in [Figure 3-4](#) and has ranged from 1.41 inches in 1985 to 13.92 inches in 1978.



**Figure 3-4 Historical Annual Rainfall**

### 3.2.2 Climate Change

As part of the 2020 UWMP update, the California Water Code requires urban water suppliers to provide a general description of the potential effect of climate change within the service area. Based on the City’s location and current climate, the most likely changes are related to increasing average temperature, intensifying storm events, and periods of extended drought. Other effects, such as decreasing snowpack or rising sea levels, do not have a direct impact on the City’s water demand or supply. Changes in annual precipitation and temperature could have an impact on the City’s overall water use as well as available supply volumes.

## 3.3 SERVICE AREA POPULATION AND DEMOGRAPHICS

According to the California Department of Finance (DOF) Corcoran’s population as of 2020 is approximately 21,535. The City has an average historical growth rate of approximately 0.9% per year, which is used to project populations through the year 2045. The current and projected service area populations are summarized in [Table 3-2](#).

According to 2019 United States Census Bureau’s data, the City is comprised of predominantly Hispanic (49.9%) and white (38.9%) ethnicities, with the remaining population comprised of, Black or African American (4.0%), American Indian and Alaska Native (0.4%), and Asian, Native Hawaiian and Pacific Islander (0.2%), Hispanic or Latino (50.4%), with the rest more than one race or other race.

**Table 3-2 Population - Current and Projected**

	2020	2025	2030	2035	2040	2045
City Population	13,084	13,349	13,619	13,895	14,177	14,464
Prison Population	8,451	9,157	9,863	9,863	9,863	9,863
Total Population	21,535	22,506	23,482	23,758	24,040	24,327

Notes:

1. Projected population assumes annual city growth of 0.4% (the average rate of city growth from 2010 to 2020) plus the projected Corcoran California State Prison.
2. Based on Department of Finance E-5 Table, City of Corcoran’s 2020 population was 21,535.

## CHAPTER 4 – SYSTEM WATER USE

This chapter provides a description of the current and projected water uses within the City’s service area. Additionally, a description of non-potable water use is provided. Water demands are projected through the year 2045.

### 4.1 NON-POTABLE VERSUS POTABLE WATER USE

The California State Water Code requires documentation of water use within the City’s service area for potable, recycled, and raw water demands, as applicable. While the City does not provide any deliveries of raw water, treated wastewater effluent is used as groundwater recharge on privately owned land and is discussed in more detail in Chapter 6. The remaining sections within this chapter summarize the historical and projected water use. The water use projection also includes preliminary estimation for recycled water demands, based on potable water demand and return-to-sewer ratio.

### 4.2 WATER USES BY SECTOR

This section documents the historical and projected water use as well as the maximum day demand.

#### **Law**

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.

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

#### 4.2.1 Historical Water Use

The City currently provides domestic water to residential, commercial, industrial and institutional customers within the City limits. The total amount of metered water delivered in 2020 was 3,575 AF, which does not account for an additional 1,423 AF of unmetered use and 710 AF of water losses. The City's gross water use, 5,708 AF, is summarized in [Table 4-1](#).

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

Use Type	Actual 2020 Water Use (AF)
Small Commercial	75
Churches	4
Single-Family Residences	822
Prisons	2,036
Hydrants	18
Large Commercial	324
Schools	4
Multi-Family Residences	292
Losses (Non-revenue)	710
Other (Billed, unmetered)	1,423
<b>Total</b>	<b>5,708</b>

Figure 4-1 displays water use compared to population, which shows trends in water use and total city population since 2000.

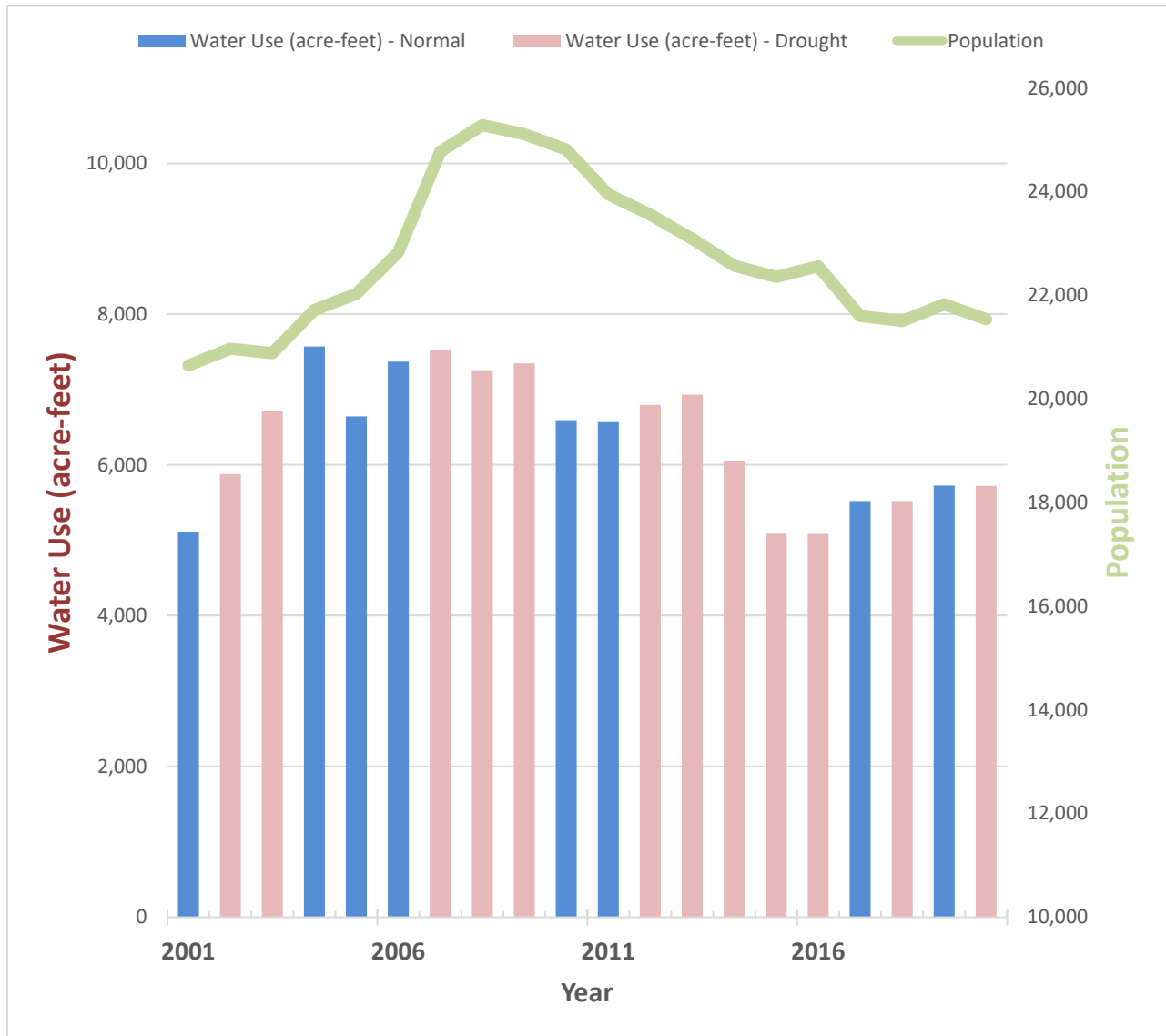


Figure 4-1 Historical Water Use and Population

#### 4.2.2 Projected Water Use

Table 4-2 and Table 4-3, found on the following page, summarize the potable water demand projection through the year 2045. To calculate the projected potable water demand through the UWMP planning horizon of 2045, the City’s 2020 urban water use target of 212 gallons per capita per day (gpcd) was applied to the projected population set forth in this report (Table 3.2). The projected demands were then reduced by five percent to account for future water use reductions of up to five percent due to active water savings, as described in more detail in Section 4.4. For

conservative planning purposes, the projected water loss amount was estimated as a percentage of other potable water uses based on historical water loss audit information. Table descriptions are as follows:

- **Table 4-2** summarizes the projected City-wide water demand by water use type.
- **Table 4-3** summarizes the total projected water demand.

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

Use Type	Projected Water Use				
	2025 (AF)	2030 (AF)	2035 (AF)	2040 (AF)	2045 (AF)
Small Commercial	66	69	70	71	72
Churches	4	4	4	4	4
Single-Family Residences	731	763	772	781	790
Prisons	1,811	1,889	1,912	1,934	1,957
Hydrants	16	17	17	17	18
Large Commercial	288	301	304	308	312
Schools	4	4	4	4	4
Multi-Family Residences	260	271	274	277	281
Losses (Non-revenue)	632	659	667	675	683
Other (Billed, unmetered)	1,266	1,321	1,336	1,352	1,368
<b>Total</b>	<b>5,077</b>	<b>5,297</b>	<b>5,360</b>	<b>5,423</b>	<b>5,488</b>



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

Demand Type	Demand					
	2020 (AF)	2025 (AF)	2030 (AF)	2035 (AF)	2040 (AF)	2045 (AF)
Potable and Raw Water	5,708	5,077	5,297	5,360	5,423	5,488
Recycled Water	1,073	955	996	1,008	1,020	1,032
<b>Total</b>	<b>6,781</b>	<b>6,032</b>	<b>6,293</b>	<b>6,367</b>	<b>6,443</b>	<b>6,520</b>

**4.2.3 Maximum Monthly Demand**

Maximum Monthly Demand, calculated annually, is the month in which water use is highest. Peaking factors are commonly used as a way of simulating the maximum demand conditions for future demand. The Maximum Monthly Demand for Corcoran in 2020 occurred during September, when the total metered consumption totaled 484 AF. The average monthly metered consumption during 2020 was 298 AF, resulting in a Maximum Month peaking factor of approximately 1.62.

**4.3 DISTRIBUTION SYSTEM WATER LOSSES**

**Law**

<p>10631 (d)(1)</p> <p>(3)(A)</p> <p>(B)</p> <p>(C)</p>	<p><i>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...</i></p> <p><i>(J) Distribution system water loss</i></p> <p><i>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</i></p> <p><i>The distribution system water loss quantification shall be reported in accordance with a worksheet approved or developed by the department through a public process.</i></p> <p><i>The water loss quantification worksheet shall be based on the water system balance methodology developed by the American Water Works Association.</i></p> <p><i>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.</i></p>
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As part of the 2020 UWMP update, urban water suppliers are required to quantify the previous five years’ distribution system water losses in a manner consistent with the American Water Works Association (AWWA) water system balance methodology. The City has completed the required water loss audit worksheet in accordance with the DWR guidelines for the years 2016-2020. **Table 4-4** documents water loss volumes from 2016 to 2020 based on submitted City Water

Loss Audits. The highest losses occurred in 2019 and 2020, where billed unmetered water made up a significantly smaller proportion of delivered water than from 2016 to 2019. This led to lower “authorized consumption” totals produced by the auditor, which increases the volume of water lost in the system. Additionally, in 2019 and 2020, the water audit was performed by a different contractor than in 2018, which calculated billed unmetered water using the ratio of system-wide unmetered accounts for each account type multiplied by the total annual usage for that account type.

**Table 4-4 Last Five Years of Water Loss Audit Reporting**

Reporting Period Start Date	Volume of Water Loss (AF)
January 2016	645
January 2017	579
January 2018	344
January 2019	218
January 2020	200

## 4.4 ESTIMATING FUTURE WATER SAVINGS

### Law

10631 (d)(4) (A)	<i>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.</i>
(B)	<i>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.</i>

The City’s projected water demands include estimated future water savings from active conservation activities (**Table 4-5**). These estimated water savings reflect future ongoing water use reductions and do not include short-term demand reductions achieved through the implementation of the City’s Water Shortage Contingency Plan.

#### 4.4.1 Active Conservation Program Savings

Active conservation is achieved through activities and programs the City implements as part of its water conservation program. The City’s water conservation programs and demand management measures are discussed in detail in Chapter 9 – Demand Management Measures. For planning purposes, it is assumed that the City will achieve up to an additional five percent reduction in water use as a result of active water savings. This reduction is incorporated in the demand projections shown in [Table 4-2](#) and [Table 4-3](#).

#### 4.4.2 Passive Water Savings

Passive water savings include water use reduction that results from codes, standards, ordinances, and other plans. These various sources of water savings typically result from state or regional requirements or guidelines, which are then implemented by the City. Examples of these codes and ordinances are as follows:

- **Model Water Efficient Landscape Ordinance (MWELO):** In 2015 DWR was tasked with updating the MWELO to increase water efficiency standards for new and retrofitted landscapes. This includes the encouragement the use of more efficient irrigation systems, graywater usage, and onsite storm water capture.
- **California Energy Commission Title 20:** This includes appliance standards for toilets, urinals, faucets, and showerheads. This standard impacts both new construction and replacement fixtures in existing homes.
- **CALGreen Building Code:** The code requires residential and non-residential water efficiency and conservation measures for new buildings and structures.

Passive water savings typically contribute less to water use reductions than active water conservation programs. Therefore, at this time, reductions from passive water savings are not included in the City’s demand projections.

**Table 4-5 Inclusion in Water Use Projections**

Are Future Water Savings Included in Projections?	Yes
Section Containing citation of the codes or ordinances utilized in demand projections	4.3
Are Lower Income Residential Demands Included in Projections?	Yes

## 4.5 WATER USE FOR LOWER INCOME HOUSEHOLDS

### Law

*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.*

SB 1087 (Florez, 2005) amended the UWMPA to require urban water suppliers to include single family and multi-family residential units for lower income households as identified by the City, County, or combination of both within the service area of the provider. As indicated by [Table 4-5](#), the low-income water demands are included in the total water demand projection that is summarized in [Table 4-2](#).

## 4.6 CLIMATE CHANGE

Based on the City's location and current climate, the most likely changes in climate are related to increasing average temperature, intensifying storm events, and periods of extended drought. While the precise effects of climate change on water demand remain uncertain, it is expected that water demands will be affected by increased temperatures and periods of extended drought. Increases in outdoor water use may be expected as temperatures increase.

## CHAPTER 5 – BASELINES AND TARGETS

Senate Bill X7-7 (SBX7-7) was approved by the Governor of California on November 10, 2009, This Senate Bill required urban water suppliers to set target goals for water conservation, which were to be achieved by the year 2020. These goals were referred to as the “20X2020” goals and included reducing per capita consumption by 20 percent by the year 2020. This chapter summarizes the methods used to estimate the target water use. As part of the 2020 UWMP update, this chapter evaluates if the City achieved the required water use reduction target.

As of 2020, Corcoran has not yet met its water usage goal of 212 GPCD.

### 5.1 2010 UWMP BASELINE AND TARGETS

The evaluation of a supply source or storage needs for future growth is commonly achieved by evaluating past water consumption on a per person basis. The future needs of the supply source can then be evaluated by applying the per capita consumption rate, expressed as gallons per capita per day (gpcd), to the projected population. **Table 5-1** summarizes the baseline periods and per capita water use targets determined as part of the SBX7-7 calculations. The City had an average gpcd of 263 from 2006 to 2010, while the average from 2001 to 2010 was only slightly higher at 265 gpcd. City conservation were successful in lowering the water consumption up until 2016. However, from 2017 to 2020, per capita water consumption rate has grown each year, rising to 237 gpcd as of 2020.

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

Baseline Period	Start Year	End Year	Per Capita Water Use	
			Average Baseline (gpcd)	Confirmed 2020 Target (gpcd)
<b>10-15 year</b>	2001	2010	265	212
<b>5 Year</b>	2006	2010	263	

## 5.3 BASELINE PERIODS

This section discusses the baseline periods used in the UWMP. The baseline periods discussed in this section are consistent with the 2015 UWMP.

### 5.3.1 Determination of the 10-15 Year Baseline Period (Baseline GPCD)

#### Law

10608.12 (b) "Base daily per capita water use" means any of the following:

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

To adequately project future water use, SBX7-7 must be considered with the appropriate reductions. As part of the new requirements for reductions in water use, a range in years needs to be selected for calculating the base daily (historical) per capita water use.

SBX7-7 allows the selection of either 10 or 15 years as a base period for calculating the average consumption per capita. If the recycled water use exceeds 10 percent of potable water production, a 15-year base period is allowed. Otherwise, a 10-year base period should be used. Additionally, a 5-year base period is to be identified for interim target projections.

The 10- to 15-year base period must end between December 31, 2004 and December 31, 2010; and the 5-year base period must end between December 31, 2007 and December 31, 2010.

The City's calculations for the base periods are documented on the following page in [SBX7-7 Table 1](#). Since the recycled water usage in 2008 did not account for more than 10 percent of the total potable water production, the City must use the 10-year baseline period. The 10-year base period is selected based on the highest average per capita water use in any 10-year period within the DWR guidelines. The 2020 UWMP 10-year baseline period is defined as 2001 to 2010.



**SBX7-7 Table 1 Baseline Period Ranges**

Baseline	Parameter	Value	Units
10- to 15-year baseline period	2008 total water deliveries	7,259	AF
	2008 total volume of delivered recycled water	0	AF
	2008 recycled water as a percent of total deliveries	0.00%	%
	Number of years in baseline period	10	Years
	Year beginning baseline period range	2001	
	Year ending baseline period range	2010	
5-year baseline period	Number of years in baseline period	5	Years
	Year beginning baseline period range	2006	
	Year ending baseline period range	2010	

**5.3.2 Determination of the 5-year Baseline Period (Target Confirmation)**

**Law**

10608.12 (b).  
 (3) For the purposes of Section 10608.22, the urban retail water supplier's estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous five-year period ending no earlier than December 31, 2007, and no later than December 31, 2010.

In order to confirm that the calculated 2020 Urban Water Use target meets the minimum water use reduction requirements, water use must also be calculated over a 5-year baseline period. The 2010 and 2015 UWMP selected a 5-year range of 2006-2010, and this range is not updated as part of the 2020 UWMP.

## 5.4 SERVICE AREA POPULATION

### Law

10608.20 (e) *An urban retail water supplier shall include in its urban water management plan due in 2010...the baseline 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.*

10644 (a)(2) *The plan...shall include any standardized forms, tables, or displays specified by the department*

California DOF population estimates were used to determine historical populations as part of the 10-year average per capita water use, as indicated on [SBX7-7 Table 2](#). The baseline service area population is summarized on the following page in [SBX7-7 Table 3](#). This population over the baseline period is used in the calculation of the baseline period average per capita water use. The City has an estimated 2020 population of 21,535, according to the California Department of Finance (DOF).

**SBX7-7 Table 2 Method for Population Estimates**

Method Used to Determine Population	
<input checked="" type="checkbox"/>	<b>1. Department of Finance (DOF)</b> DOF Table E-8 (1990 - 2000) and (2000-2010) and DOF Table E-5 (2011 - 2020)
<input type="checkbox"/>	<b>2. Persons-per-Connection Method</b>
<input type="checkbox"/>	<b>3. DWR Population Tool</b>
<input type="checkbox"/>	<b>4. Other</b>

**SBX7-7 Table 3 Service Area Population**

Year		Population
<b>10 to 15 Year Baseline Population</b>		
Year 1	2001	20,646
Year 2	2002	20,970
Year 3	2003	20,881
Year 4	2004	21,716
Year 5	2005	22,029
Year 6	2006	22,829
Year 7	2007	24,774
Year 8	2008	25,283
Year 9	2009	25,108
Year 10	2010	24,813
<b>5 Year Baseline Population</b>		
Year 1	2006	22,829
Year 2	2007	24,774
Year 3	2008	25,283
Year 4	2009	25,108
Year 5	2010	24,813
<b>2015 Compliance Year Population</b>		
	2015	22,355
<b>2020 Compliance Year Population</b>		
	2020	21,535

## 5.5 GROSS WATER USE

### Law

10608.12 (g) *“Gross Water Use” means the total volume of water, whether treated or untreated, entering the distribution system of an urban retail water supplier, excluding all of the following:*

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

*California Code of Regulations Title 23 Division 2 Chapter 5.1 Article Section 596 (a) An urban retail water supplier that has a substantial percentage of industrial water use in its service area is eligible to exclude the process water use of existing industrial water customers from the calculation of its gross water use to avoid the disproportionate burden on another customer section.*

In order to determine the baseline per capita water use, gross water use entering the distribution system of the supplier must be determined for each year within the baseline period. There are a number of exclusions taken into consideration when determining the annual gross water use, including recycled water delivered in the service area; water volume placed into long term storage; water conveyed for use by another urban water supplier; water delivered; with certain exceptions, for agricultural use, and industrial water use if the total industrial use is greater than or equal to 12% of gross water use.

Based on historical production reports, and consistent with the 2015 UWMP, there are no exceptions to be taken into consideration when calculating the City’s gross water use. The City’s historical gross water use is summarized on the following page in [SBX7-7 Table 4](#), with the gross water use in the 2020 compliance year equal to 5,708 AF. The volume of water entering the distribution system from the City’s groundwater source is summarized, following [SBX7-7 Table 4](#), in [SBX7-7 Table 4-A](#).

**SBX7-7 Table 4 Annual Gross Water Use**

Baseline Year	Volume Into Distribution System (AF)	Deductions					Annual Gross Water Use (AF)
		Exported Water (AF)	Change in Dist. System Storage (+/-) (AF)	Indirect Recycled Water (AF)	Water Delivered for Agricultural Use (AF)	Process Water (AF)	
<b>10 to 15 Year Baseline - Gross Water Use</b>							
Year 1	2001	5,119					5,119
Year 2	2002	5,880					5,880
Year 3	2003	6,702					6,702
Year 4	2004	7,562					7,562
Year 5	2005	6,635					6,635
Year 6	2006	7,365					7,365
Year 7	2007	7,516					7,516
Year 8	2008	7,236					7,236
Year 9	2009	7,335					7,335
Year 10	2010	6,586					6,586
<b>10 - 15 year baseline average gross water use</b>						<b>6,794</b>	
<b>5 Year Baseline - Gross Water Use</b>							
Year 1	2006	7,365					7,365
Year 2	2007	7,516					7,516
Year 3	2008	7,236					7,236
Year 4	2009	7,335					7,335
Year 5	2010	6,586					6,586
<b>5 year baseline average gross water use</b>						<b>7,208</b>	
<b>2015 Compliance Year - Gross Water Use</b>							
2015	5,083					<b>2015 gross water use</b>	<b>5,083</b>
<b>2020 Compliance Year - Gross Water Use</b>							
2020	5,708					<b>2020 gross water use</b>	<b>5,708</b>

**SBX7-7 Table 4-A Volume Entering Distribution System**

<b>Name of Water Source:</b> Tulare Lake Groundwater Subbasin		
<input checked="" type="checkbox"/> The supplier's own water source <input type="checkbox"/> A purchased or imported water source		
<b>Baseline Year</b>	<b>Volume Entering Distribution System (AF)</b>	
<b>10 to 15 Year Baseline - Water into Distribution System</b>		
Year 1	2001	5,119
Year 2	2002	5,880
Year 3	2003	6,702
Year 4	2004	7,562
Year 5	2005	6,635
Year 6	2006	7,365
Year 7	2007	7,516
Year 8	2008	7,236
Year 9	2009	7,335
Year 10	2010	6,586
<b>5 Year Baseline - Water into Distribution System</b>		
Year 1	2006	7,365
Year 2	2007	7,516
Year 3	2008	7,236
Year 4	2009	7,335
Year 5	2010	6,586
<b>2015 Compliance Year - Water into Distribution System</b>		
	2015	5,045
<b>2020 Compliance Year - Water into Distribution System</b>		
	2020	5,708



## 5.6 BASELINE DAILY PER CAPITA WATER USE

The final baseline calculation is to determine the per capita water use in each baseline year and the average per capita water use over the entire baseline period. Using the baseline period and service area population as described in previous sections, the per capita water use for each year has been calculated as documented on the following page in [SBX7-7 Table 5](#). The maximum and minimum per capita water use over the baseline period respectively are 311 gpcd in 2004 and 221 gpcd in 2001. The average per capita water use over the 10-year baseline period is 265 gpcd. In the following pages, [SBX7-7 Table 6](#) summarizes the 10-year baseline per capita water use, the 5-year baseline per capita water use, and the 2020 compliance year per capita water use.

## 5.7 2020 FINAL TARGETS

Consistent with the 2015 UWMP, the 2020 Urban Water Use Target was calculated using Method 1, which is indicated on the following pages in [SBX7-7 Table 7](#). Method 1, as defined by DWR, assigns a 2020 target by reducing the 10-15 year baseline GPCD by 20%. Using Method 1, the City's 2020 urban water use target is documented as 212 GPCD, further summarized in [SBX7-7 Table 7-A](#) on the following pages. The 212 gpcd target is intended to be maintained through the UWMP horizon of 2045.

**SBX7-7 Table 5 Gallons Per Capita Per Day (GPCD)**

Baseline Year	Service Area Population	Annual Gross Water Use (AF)	Daily Per Capita Water Use (gpcd)
<b>10 to 15 Year Baseline Per Capita Water Use</b>			
Year 1	2001	20,646	221
Year 2	2002	20,970	250
Year 3	2003	20,881	287
Year 4	2004	21,716	311
Year 5	2005	22,029	269
Year 6	2006	22,829	288
Year 7	2007	24,774	271
Year 8	2008	25,283	256
Year 9	2009	25,108	261
Year 10	2010	24,813	237
10-15 Year Average Baseline GPCD			265
<b>5 Year Baseline Per Capita Water Use</b>			
Year 1	2006	22,829	288
Year 2	2007	24,774	271
Year 3	2008	25,283	256
Year 4	2009	25,108	261
Year 5	2010	24,813	237
5 Year Average Baseline GPCD			263
<b>2015 Compliance Year Per Capita Water Use</b>			
2015		22,355	203
<b>2020 Compliance Year Population</b>			
2020		21,535	237

**SBX7-7 Table 6 Gallons per Capita per Day Summary**

	Per Capita Water Use (gpcd)
10-15 Year Baseline	265
5 Year Baseline	263
2020 Compliance Year	237

**SBX7-7 Table 7 2020 Target Method**

Target Method	Supporting Documentation
<input checked="" type="checkbox"/> Method 1	SB X7-7 Table 7A
<input type="checkbox"/> Method 2	SB X7-7 Tables 7B, 7C, and 7D
<input type="checkbox"/> Method 3	SB X7-7 Table 7-E
<input type="checkbox"/> Method 4	Method 4 Calculator

**5.7.1 5-Year Baseline – 2020 Target Confirmation**

**Law**

*10608.22 Notwithstanding the method adopted by an urban retail water supplier pursuant to Section 10608.20, an urban retail water supplier’s per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use as defined in paragraph (3) of subdivision (b) of Section 10608.12. This section does not apply to an urban retail water supplier with a base daily per capita water use at or below 100 gallons per capita per day.*

The 2020 Urban Water Use Target is required to reduce the City’s 2020 water use by a minimum of 5 percent from the 5-year baseline period (2006-2010). As calculated in [SB X7-7 Table 5](#), the average per capita water use for the 5-year baseline period is 262 gpcd. The 2020 urban water use target of 212 gpcd is an approximate 19% reduction from the 5-year average per capita water use, thereby confirming the 2020 Urban Water Use Target as documented in [SBX7-7 Table 7-F](#).

**SBX7-7 Table 7-A Target Method 1**

SB X7-7 Table 7-A: Target Method 1 20% Reduction	
10-15 Year Baseline GPCD	2020 Target GPCD
265	<b>212</b>

**SBX7-7 Table 7-F Confirm Minimum Reduction for 2020 Target**

5 Year Baseline GPCD (gpcd)	Maximum 2020 Target <sup>1</sup> (gpcd)	Calculated 2020 Target (gpcd)	Confirmed 2020 Target (gpcd)
263	250	212	212

Notes:

1. Maximum 2020 Target is 95% of the 5-year Baseline per capita water use

## 5.8 2020 COMPLIANCE DAILY PER CAPITA WATER USE

### Law

10608.12 (f) *"Compliance daily per-capita water use" means the gross water use during the final year of the reporting period...*

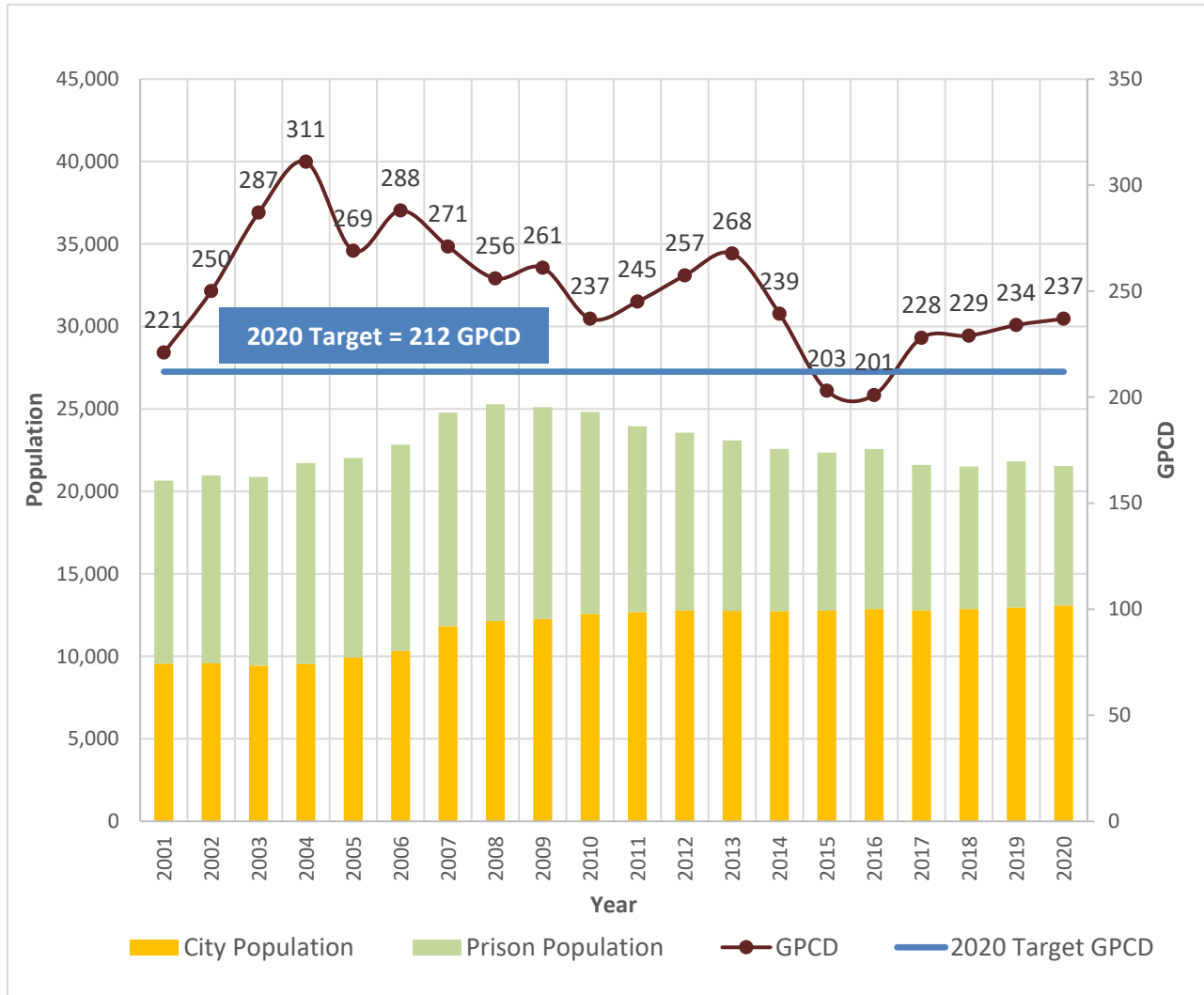
10608.20 (e) *An urban retail water supplier shall include in its urban water management plan ...compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.*

Using the City population and gross water use for the 2020 compliance year, the per capita water use was calculated as 237 gpcd, meaning the City has not met the 2020 target per capita water use of 212 gpcd. [Table 5-2 \(SBX7-7 Table 9\)](#) and [Figure 5.1](#) summarizes the City's current standing with the 2020 per capita water use targeted reduction.

**Table 5-2 / SBX7-7 Table 9 2020 Compliance**

2020 GPCD			2020 Confirmed Target GPCD	Did Supplier Achieve Targeted Reduction for 2020?
Actual 2020 GPCD	2020 Total Adjustments	Adjusted 2020 GPCD		
237	-	237	212	No*

\*Corcoran, a disadvantaged community, remains eligible for water grants despite not achieving 2020 target.



**Figure 5.1 Population and Per Capita Water Use Trends**

## 5.9 REGIONAL ALLIANCE

The DWR allows water supply agencies to comply with SBX7-7 through a Regional Alliance, and the corresponding SBX7-7 compliance information must be reported in a Regional Alliance Report. The City is not part of a regional alliance and is not reporting any compliance information in a Regional Alliance Report.

## CHAPTER 6 – SYSTEM SUPPLIES

The purpose of this chapter is to summarize the City’s current and planned water supply sources and volumes. This includes a description of the groundwater basin used by the City as a source of supply. Ongoing planning efforts for the potential use of recycled water within the City’s service area are also summarized.

### 6.1 PURCHASED OR IMPORTED WATER

The City currently uses local groundwater as its source of potable water supply and does not purchase or import water from any other water suppliers or entities.

### 6.2 GROUNDWATER

For planning purposes, the State of California has been divided into ten separate hydrologic regions by the DWR, based on the State’s major drainage basins. According to the California Water Plan 2018 Update, the City is located in the Tulare Lake Hydrologic Region. Each hydrologic region is divided into distinct groundwater basins, each of which is typically divided further into smaller interconnected groundwater subbasins. The following section summarizes the groundwater basin and subbasin underlying the City.

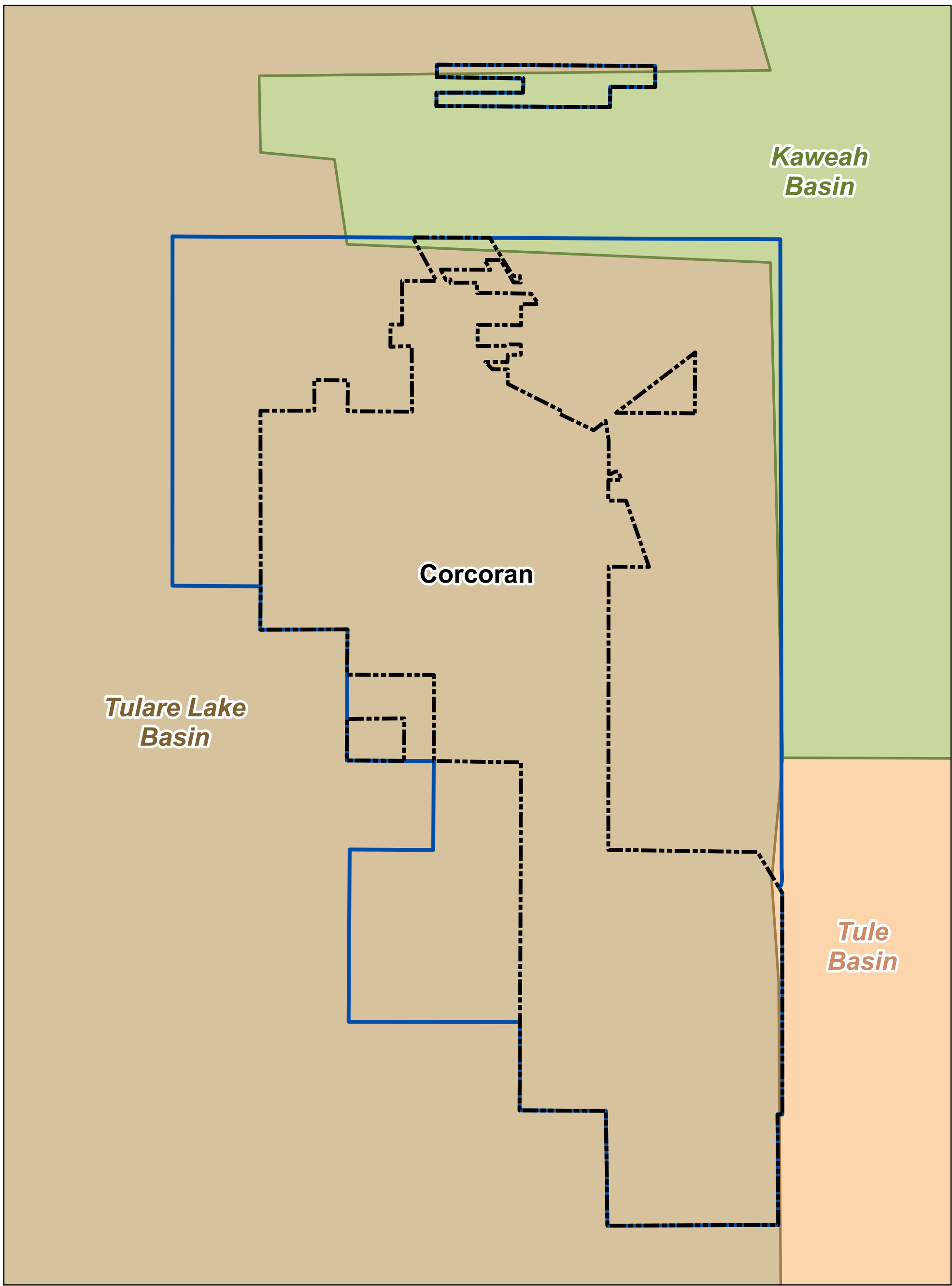
#### 6.2.1 Basin Description

##### *Law*

10631. (b)(4) *If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information shall be included in the plan:*

(B) *A description of any groundwater basin or basins from which the urban water supplier pumps groundwater.*

The City is located above the San Joaquin Valley Groundwater Basin, for which the Kings County Water District (KCWD) is the principal groundwater management agency. This basin can further be divided into subbasins that help better define the aquifer below the city. These subbasins are interconnected and help filter, transmit, and store water. The subbasins that subdivide the San Joaquin Valley Groundwater Basin are the Kings, Kern County, Kaweah, Tulare Lake, Tule, Pleasant Valley, and Westside groundwater basin. The Tulare Lake subbasin is the specific groundwater subbasin in which the City resides and has a surface area of approximately 524,000 acres (**Figure 6-1**). It is bounded to the north by the Kings Groundwater Basin, to the south by the Kings-Kern County line, to the east by the Westside groundwater basin, and to the west by the California Aqueduct; the subbasin has a surface area of approximately 818 square miles.



*Kaweah  
Basin*

**Corcoran**

*Tulare Lake  
Basin*

*Tule  
Basin*

**Legend**

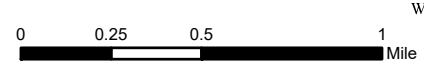
- Groundwater Subbasins**
- Kaweah (5-22.11)
  - Tulare Lake (5-22.12)
  - Tule (5-22.13)
- Sphere of Influence
- City Limits

**PRELIMINARY**

**Figure 6-1  
Groundwater Subbasins**  
2020 Urban Water Management Plan  
City of Corcoran



Update: December 15, 2021



File Path: P:\GIS\GIS\_Projects\Corcoran\CN\_Fig6-1\_GroundwaterBasins\_121521.mxd



The Tulare Lake Groundwater Subbasin is not an adjudicated groundwater basin. In characterizing the groundwater budget, the DWR has classified the subbasin as Type B, which means that enough data is available to estimate groundwater extraction to meet local needs, but not enough data is available to characterize the groundwater budget. Well yields in the Tulare Lake subbasin average between 300 and 1,000 gallons per minute (gpm), with a maximum of 3,000 gpm.

As of 1995, the DWR estimated the total water storage of the subbasin using an estimated specific yield of 8.5 percent and water levels collected by the DWR as well as other cooperators. Based on these calculations, the DWR estimates the total storage capacity of the subbasin to be 17,100,000 AF to a depth of 300 ft and 82,500,000 AF to the base of fresh groundwater.

The 2003 DWR Bulletin 118 describes the subbasin water level as declining from 1970 to 2000, with fluctuation in the intervening years. Fluctuations can range from a general increase of 24 feet to decrease of up to 23 feet, with an average decline of 17 feet. According to the DWR, fluctuations are most significant in the lakebed area of the subbasin, with the area experiencing some of the steepest decreases and increases in water levels.

According to 2020 Tulare Lake Groundwater Sustainability Plan, GSAs estimate the total annual change in storage in the Subbasin ranged from -392,280 AF (2015) to 361,230 AF (2011) and averaged approximately -85,690 AF per year during the 1990-2016 period. Municipal pumping was assumed to increase slowly from about 25,060 AF (2017) to about 30,160 AF (2070).

## 6.2.2 Groundwater Management

### Law

10631. (b)(4) *...if groundwater is identified as an existing or planned source of water available to the supplier, all of the following information shall be included in the plan:*
- (A) *The current version of any groundwater sustainability plan or ... any groundwater management plan adopted by the urban water supplier...or any other specific authorization for groundwater management.*
  - (B) *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.*

The Tulare Lake Groundwater Sustainability Plan, adopted in January 2020, was developed for the Tulare Lake Subbasin pursuant to the Sustainable Groundwater Management Act. The Tulare Lake Subbasin is classified as a high-priority subbasin by DWR and is subdivided into five local GSAs. The El Rico GSA covers the portion of the Tulare Lake Subbasin from which the City extracts its groundwater supplies.

According to the Tulare Lake Subbasin GSP, the intent of the plan is to manage groundwater resources such that adequate water supplies are maintained for existing users and established management objectives maintain a sustainable groundwater yield. The sustainability goals for the Subbasin will be achieved by implementing the measures below, as extracted from the GSP.

- Understanding the interaction between existing and future conditions
- Analyzing and identifying the effects of exiting management actions on the Subbasin
- Implementing the GSP and its associated measures, including projects and management actions to halt and avoid future undesirable results
- Collaborating between agencies to achieve goals and protect beneficial uses
- Assessing at interim milestones the successes and challenges of the implemented projects

### 6.2.3 Overdraft Conditions

The Tulare Lake subbasin has been identified by DWR as a high-priority groundwater basin and is one of multiple subbasins within the state listed as being in a condition of critical overdraft. The Tulare Lake Subbasin GSP indicates that the El Rico GSA intends to coordinate with KCWD to implement ongoing basin management objectives and overdraft mitigation measures. Several efforts to mitigate overdraft were documented in the KCWD 2001 Groundwater Management Plan Update, which are briefly summarized below.

- **Water Conservation Efforts:** KCWD and the City of Corcoran participate in several water conservation and education programs, contributing both funds and staff time. Additionally, water deliveries are metered and billed based on volume used and customers therefore have an incentive to minimize water usage.
- **Increasing Surface Water Imports:** KCWD currently delivers surface water to several water and canal companies. Utilization of surface water supplies decreases the demand on groundwater, serving as a form of in-lieu recharge. KCWD strives to provide surface water at a rate low enough to customers to encourage utilizing as much surface water as possible before resorting to groundwater pumping.
- **Increasing Groundwater Recharge:** KCWD operates 25 direct groundwater recharge basins and also leaves many earthen canals unlined for the purpose of recharge through seepage. The total recharge surface area, including both basins and unlined canals, is approximately 1,300 acres; the amount of recharge varies from year to year, and the most significant recharge effects occur during wet years.

## 6.2.4 Historical Groundwater Pumping

### Law

10631. (b)(4) ...if groundwater is identified as an existing or planned source of water available to the supplier, all of the following information shall be included in the plan:

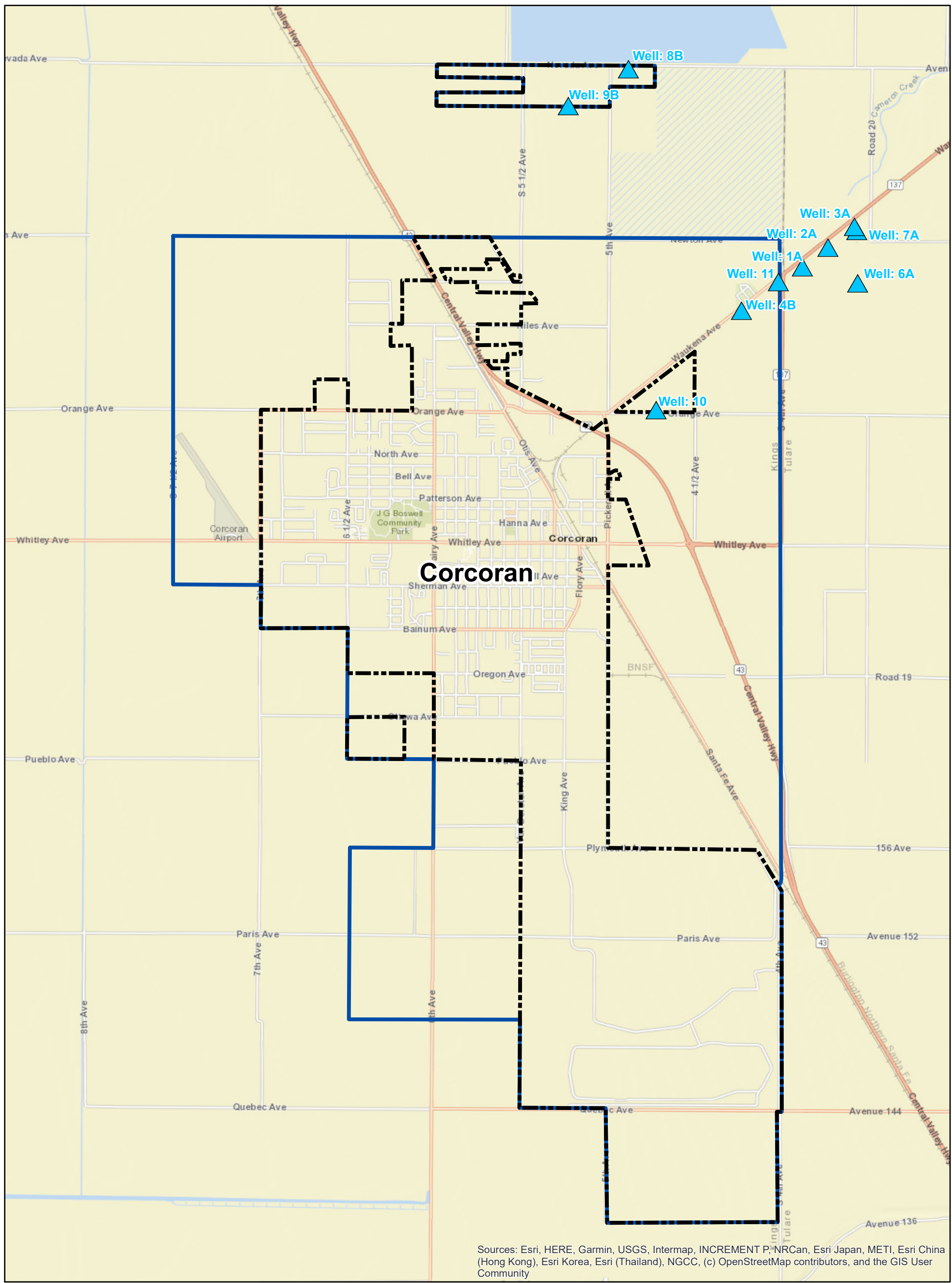
(C) A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonable available, including, but not limited to, historic use records.

The City currently has nine groundwater wells: two of which are active, four are on standby, and three have their usage limited by water quality concerns. The two active wells (3A and 4B) combine their individual flowrates to hold nitrate levels below MCL standards. Standby wells (1A, 2A, 6A, and 7A) are operational but remain dormant unless other standby wells are available for blending. For example, high levels of nitrate in Well 1A must be diluted by groundwater pumped by Well 6A or 7A. The three wells limited by quality concerns (8B, 9B, and 11) produce groundwater typically hindered by high levels of arsenic, manganese, total organic carbon, and other constituents. Along with chemical pollutants, groundwater pumped by these wells contribute odor, color, and other aesthetic problems to the City's water supply.

The volume of groundwater pumped by the City over the past five years is summarized in [Table 6-1](#). Historically, the Tulare Lake subbasin has adequately met the City's water demands, and it is anticipated that the subbasin will adequately meet the City's water demands in the future.




**Table 6-1 Groundwater Volume Pumped**

Groundwater Type	Location or Basin Name	Volume				
		2016 (AF)	2017 (AF)	2018 (AF)	2019 (AF)	2020 (AF)
Alluvial Basin	San Joaquin Valley Groundwater Basin, Tulare Lake Subbasin	5,248	5,512	5,954	5,727	5,708
	<b>Total</b>	<b>5,248</b>	<b>5,512</b>	<b>5,954</b>	<b>5,727</b>	<b>5,708</b>



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

**Legend**

-  Groundwater Wells
-  Sphere of Influence
-  City Limits

**PRELIMINARY**

**Figure 6-2  
Existing Groundwater  
Well Locations**  
2020 Urban Water Management Plan  
City of Corcoran



## 6.3 SURFACE WATER

At the time of preparation of the 2020 UWMP, the City does not use surface water as part of its water supply.

## 6.4 STORMWATER

At the time of preparation of the 2020 UWMP, the City does not use stormwater as part of its water supply.

## 6.5 WASTEWATER AND RECYCLED WATER

This section discusses the use of recycled water, and the characteristics of the wastewater treated at the City owned and operated treatment plant.

### 6.5.1 Recycled Water Coordination

#### Law

*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 of Corcoran is responsible for the collection, treatment, and disposal of wastewater within the City limits. The subsequent sections document information regarding the wastewater treatment facility, the use of reclaimed wastewater, and the coordination between agencies regarding the treated wastewater.

### 6.5.2 Wastewater Collection, Treatment, and Disposal

This section describes wastewater collection and disposal.

#### Law

*10633 (a) A description 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 the quantity of treated wastewater that meets recycled water standards, is being discharge, and is otherwise available for use in a recycled water project.*

#### 6.5.2.1 Wastewater Collected Within Service Area

The City collects wastewater from residential, commercial, and industrial customers within the City limits. The collected flows are conveyed through a trunk system to a 2.0 MGD Wastewater Treatment Facility (WWTF) located on the corner of Pueblo and King Avenue Based on available data received from City staff, the WWTF treated an average annual wastewater flow of approximately 1,073 AF in 2020 ([Table 6-2](#)).



**Table 6-2 Wastewater Collected Within Service Area in 2020**

Wastewater Collection			Recipient of Collected Wastewater			
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated?	Volume of Wastewater Collected from UWMP Service Area 2020 (AF)	Name of Wastewater Treatment Agency Receiving Collected Wastewater	Treatment Plant Name	Is WWTP Located Within UWMP Area?	Is WWTP Operation Contracted to a Third Party?
City of Corcoran	Metered	1,073	City of Corcoran	City of Corcoran WWTF	Yes	No

**6.5.2.2 Wastewater Treatment and Discharge Within Service Area**

A 2.0 MGD WWTP collects flows from the City’s wastewater system. This system is comprised of roughly 17.7 miles of pipeline and 18 sewer lift stations. Wastewater undergoes a secondary treatment process at the WWTP before being disposed on 338 acres of land south of Plymouth Avenue and King Avenue. The City’s treatment and discharge of wastewater are summarized in **Table 6-3** In 2020, 100% of the treated waste water was used by Corcoran State Prison for agricultural irrigation use.

**Table 6-3 Wastewater Treatment and Discharge Within Service Area in 2020**

Wastewater Treatment Plant Name	Discharge Location Name and Description	Method of Disposal	Does This Plant Treat Wastewater Generated Outside the Service Area?	Treatment Level	2020 Volume			
					Wastewater Treated (AF)	Discharged Treated Wastewater (AF)	Recycled Within Service Area (AF)	Recycled Outside of Service Area (AF)
City of Corcoran WWTF	City of Corcoran, Disposal ponds	Land disposal	No	Secondary Undisinfected	1,073	0	1,073	0

**6.5.3 Recycled Water System**

**Law**

*10633 (c) A description 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 of Corcoran WWTF is responsible for the discharge of treated effluent into percolation ponds for groundwater recharge. These ponds, located south the facility, see the vast majority of Corcoran’s recycled water.

#### 6.5.4 Recycled Water Beneficial Uses

This section documents the current uses of WWTF treated effluent.

##### Law

10633	<p><i>(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.</i></p> <p><i>(e) A description the projected use of recycled water within the supplier’s service area at the end of 5, 10, 15, 20 years and a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.</i></p>
-------	--

##### 6.5.4.1 Current and Planned Uses of Recycled Water

Besides groundwater recharge via disposal ponds, the City holds a contract with CSP-COR under treated wastewater may be sold to the Prison for irrigation of seed, fiber, and fodder crops. Although the prison’s primary option for irrigation continues to be surface water via the Corcoran Irrigation District, recycled water from Corcoran’s WWTP provides a secondary, on-demand option for the Prison’s farmland. In order to project recycled water volumes, a 2020 return-to-sewer ratio was calculated using total annual wastewater flows (1,073 AF) and dividing it by total 2020 production (5,708 AF). This ratio of 18.8% was applied to projected production values up to 2045. Current and projected volumes of recycled water are documented in [Table 6-4](#).

**Table 6-4 Current and Projected Recycled Water Direct Beneficial Uses Within Service Area**

Beneficial Use Type	Volume					
	2020	2025	2030	2035	2040	2045
	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)
<b>Agricultural Irrigation</b>	<b>1,073</b>	<b>955</b>	<b>996</b>	<b>1,008</b>	<b>1,020</b>	<b>1,032</b>

The City may decide in the future to reevaluate the need or desirability of expanding its recycled water use to serve municipal customers. This would involve constructing a recycled water distribution system throughout the City and would require an upgrade to the WWTF to provide tertiary treatment.

#### 6.5.4.2 Planned Versus Actual Use of Recycled Water

##### Law

10633 (e) .... (Provide) a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.

Groundwater recharge constitutes the planned and actual use of recycled water in 2020, as summarized in [Table 6-5](#). The 2015 UWMP categorized recycled water use only for irrigation of seed, fiber, and fodder crops (0 MG/year).

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

Use Type	2015 Projection for 2020 (AF)	2020 Actual Use (AF)
Agricultural Irrigation	0	1,073
<b>Total</b>	<b>0</b>	<b>1,073</b>

#### 6.5.5 Actions to Encourage and Optimize Future Recycled Water Use

##### Law

10633 (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.*

As previously discussed, the City's current method of recycling its WWTF effluent is via groundwater recharge and percolation. In the event that CSP-COR recycled water demands are present, some treated wastewater flow is directed to the prison's farm for irrigation. Additional measures taken by the City to encourage recycled water use, such as financial incentives or informational programs, are not expected to result in additional recycled water use at this time, as summarized in [Table 6-6](#).



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

Name of Action	Description	Planned Implementation Year	Expected Increase in Recycled Water Use
TBD	The City currently does not have a plan to expand recycled water use.		

## 6.6 DESALINATED WATER OPPORTUNITIES

### Law

*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*

The groundwater under the City is not brackish in nature and does not require desalination. However, the City could provide financial assistance to other water purveyors in exchange for water supplies; the City could consider this option should the need arise.

## 6.7 EXCHANGES OR TRANSFERS

### Law

*10631 (c) Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.*

There are currently no known exchanges, transfers, or interties that exist between the City and any other water system.

## 6.8 FUTURE WATER PROJECTS

### Law

*10631 (f) ...The urban water supplier shall include a detailed description of expected future water 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 currently has plans to introduce two new groundwater wells into the system. Well 8C will replace well 8, which is severely hindered by water quality issues, as discussed in section 6.2.4.

Additionally, another new well, Well 5F, will bolster the City’s water supply to meet future demands (Table 6-7).

Along with new groundwater wells, Corcoran Irrigation District (CID) has recently begun a project to build a more efficient conveyance system. Alongside this new change, CID has already enclosed 2 miles of open channels relating to its well field conveyance system. Plans are in place to enclose roughly 20 miles of conveyance channels over the next decade.

Corcoran also has recently, starting in 2017, began expanding its groundwater recharge capabilities by excavating 2,900,000 cubic yards of material for 2 separate recharge ponds. CID also plans to provide an additional 10,000 to 15,000 AF of storage in the future to further support percolation and recharge to the Tulare Lake Subbasin.

**Table 6-7 Expected Future Water Supply Projects or Programs**

Name of Future Projects or Programs	Joint Project with other agencies?	Description	Planned Implementation Year	Expected Increase in Water Supply to Supplier (AF)
Well 5F	No	New well	N/A	N/A
Well 8C	No	Replacing Well 8	N/A	N/A

## 6.9 SUMMARY OF EXISTING AND PLANNED SOURCES OF WATER

### Law

*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 10631(a).*

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

An estimate of projected potable water supply was calculated using sustainable yield per acre (0.63 AFY/acre) for the Tulare Lake Groundwater Subbasin. This ratio was multiplied by the area of the City’s sphere of influence, in acres, to yield 5,888 AFY of sustainable supply (Table 6-8). This information is also included in Appendix D. The City’s groundwater supply has been adequate to meet the City’s historical demands and Table 6-9 summarizes the total amount of groundwater pumped in 2020. In order to meet the growing demand, new groundwater wells will have to be constructed. The City intends to continue to use groundwater as the only source of potable water supply. All treated wastewater effluent is expected to be used either for

groundwater recharge or irrigation of agricultural lands. **Table 6-10** summarizes the total projected water supply, including groundwater and recycled water sources, available through 2045.

**Table 6-8 Estimate of Sustainable Yield**

Estimate of Sustainable Yield	
Tulare Lake Groundwater Subbasin	
Basin Area	5,708 acres
Average Groundwater Pumping	348,700 AFY
Average Net Recharge	335,360 AFY
Groundwater Overdraft	-13,340 AFY
Estimated Sustainable Yield	335,360 AFY
Sustainable Yield per Unit Area	0.63 AFY/acre
City of Corcoran	
Planning Area	9,408 acres
Estimated Sustainable Yield	5,888 AFY

Source: Tulare Lake Subbasin Groundwater Sustainability Plan, January 2020

**Table 6-9 Water Supplies – Actual**

Water Supply Source	2020	
	Actual Volume (AF)	Water Quality
Groundwater	5,708	Potable Water
Recycled Water	1,073	Recycled Water
<b>Total</b>	<b>6,781</b>	

**Table 6-10 Water Supplies – Projected**

Water Supply Source	Projected Water Supply				
	2025 (AF)	2030 (AF)	2035 (AF)	2040 (AF)	2045 (AF)
Groundwater	5,888	5,888	5,888	5,888	5,888
Recycled Water	955	996	1,008	1,020	1,032
<b>Total</b>	<b>6,842</b>	<b>6,884</b>	<b>6,895</b>	<b>6,907</b>	<b>6,920</b>

## 6.10 CLIMATE CHANGE CONSIDERATIONS

Potential impacts of climate change may not only influence demand throughout the City’s service area, but could alter the water supply availability. Based on the City’s location and current climate, the most notable changes in climate would be related to increasing average temperature, intensifying storm events, and periods of extended drought. Other potential effects, such as decreasing snowpack or rising sea levels, would not have a direct impact on the City’s water demand or supply. Changes in annual precipitation and temperature could have an impact on the City’s overall water use as well as available supply volumes. The City, as well as other local water supply agencies, will continue to monitor available water supply volumes and year-on-year changes to determine actions necessary to mitigate potential supply shortages.

## 6.11 ENERGY INTENSITY

### Law

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.*

An urban water supplier’s energy intensity (EI) is the amount of energy (kWh) consumed for the purpose of supplying water from the point that it enters the City’s service area to the point at which it exits the system at the point of delivery. The 2020 Urban Water Management Plan Guidebook

provides guidance for estimating energy intensity associated with the source of water used by an urban water supplier. The purpose of calculating the City's energy intensity is to:

- Develop a baseline energy use per acre-foot of treated water delivered by the water system.
- Aid in Identifying energy saving opportunities in the future.
- Allow for comparing energy use among similar agencies.

The estimate of energy intensity includes requirements for the purpose of water conveyance, extraction, treatment, placing water into and taking it from storage, and distribution. The City's water energy intensity only accounts for the water management processes occurring within its operational control. The following water management processes are accounted for in the City's energy intensity estimate, which is based on existing processes and available records.:

- Extraction of groundwater from Tulare Lake Subbasin.
- Delivery of treated water to end users.

Energy use data relating to the extraction, diversion, conveyance, treatment, distribution and placing into and taking from storage in the City's water supply system was acquired from Pacific Gas and Electric (PG&E) meter data for year 2020. The City, therefore, utilized Table O-1B ([Appendix A](#)) for its EI calculations instead of Table O-1A or O1-C, since it is not possible to distinguish between energy used for treatment and conveyance at this time.

Total energy use and volume of water entering the City's water system for year 2020 were 5,486,446 kWh and 5,708 AF, respectively, resulting in an Energy Intensity of 961 kWh/AF (2,950 kWh/MG).

## CHAPTER 7 – WATER SUPPLY RELIABILITY ASSESSMENT

This chapter assesses the reliability of the City’s water supply under normal conditions, single year dry conditions, and five-year dry conditions. The reliability assessment includes a comparison of projected water use versus expected water supply for the next 25 years. This chapter also includes the newly required Drought Risk Assessment, which is a review of the capability of the City’s water supplies to meet demands for the next five years, assuming a five-year drought occurs.

### 7.1 CONSTRAINTS ON WATER SOURCES

#### Law

*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.*

As discussed in previous sections, the City’s current source of potable supply is groundwater, as well as additional non-potable supply from recycled wastewater. The potential constraints on the City’s water supply are summarized as follows.

#### 7.1.1 Legal Factors

Examples of legal factors that could impact the supply reliability of a water distribution system include pumping limitations in adjudicated groundwater basins and surface water contracts. As noted in Chapter 6, the Tulare Lake Groundwater Subbasin, the sole basin from which the City extracts groundwater, is not an adjudicated groundwater basin and there are no legal limitations on the amount of groundwater the City can extract under the El Rico Groundwater Sustainability Plan.

#### 7.1.2 Environmental Factors

Environmental concerns can arise during the water planning process when a project’s impact on the ecosystem is taken into consideration. These concerns can subsequently cause a lack of supply due to the enforcement of environmental legislation. The City’s groundwater source is not expected to be limited by environmental concerns.

#### 7.1.3 Water Quality Factors

If a surface water or groundwater source has water quality constituents that exceed allowable levels, the amount of water a supplier can obtain from that source can be limited. The City’s

groundwater supply has several water quality constituents that have historically required mitigation measures in order to ensure the supply is not limited, which are: arsenic, nitrate, and hydrogen sulfide. Arsenic is concentrated in the clay strata beneath the City, and hydrogen sulfide, which may cause discoloration, adverse taste, and a smell typically compared to rotten eggs. The City has implemented a chlorination program for the water supply, which has helped mitigate the sulfur-related color and odor present in the supply water. Steps taken by the City to ensure the water supply is unaffected by arsenic are summarized in the following section.

#### **7.1.3.1 Arsenic, Nitrate, and Hydrogen Sulfide**

Congress passed the Safe Drinking Water Act (SDWA) in 1975 to protect public health. In accordance with the SDWA, the Environmental Protection Agency (EPA) established a maximum contaminant level (MCL) of 0.050 mg/L for arsenic. Amendments to the SDWA in 1996 required the EPA to establish a new MCL of arsenic, which is the current MCL of 0.010 mg/L.

The City currently maintains a total of 9 production wells with varying degrees of contaminants which require mixing with clean water to improve the water quality to meet the SDWA standards. Of these 9 wells, 3 were determined to be clean enough for direct usage, and 3 require mixing with clean water due to high nitrate levels. The remaining 3 were too contaminated with nitrate, arsenic, turbidity, odor, and color to be utilized without additional treatment or excessive mixing.

The alternative methods considered by the City to reduce arsenic concentrations below the MCL are summarized as follows:

- Abandon high arsenic wells and drill replacement wells with lower concentrations
- Blend water from wells with higher concentrations with wells of lower concentrations
- Install well head treatment
- Rehabilitate wells that produce water with high arsenic concentrations to a block of strata with low concentrations, producing water low in arsenic.

The City has determined that utilizing a mixture of contaminated and non-contaminated wells to meet SDWA water quality standards is currently the most cost-effective method to manage nitrate and arsenic concentrations which exceed the SDWA and EPA maximum levels.

#### **7.1.4 Climatic Factors**

The primary climatic factors that affect the reliability of water supply system are precipitation and runoff characteristics, specifically the seasonal trend. Systems that rely heavily on surface water are most vulnerable to changes in water supply when a shift in precipitation and runoff amounts reduce the amount of surface water available. The City does not rely on surface water as a source of supply and is not vulnerable to these supply reductions.

## 7.2 RELIABILITY BY TYPE OF YEAR

This section discusses the yearly supply conditions, and the sources of data for supply evaluation.

### 7.2.1 Types of Years

This section discusses the type of years considered when evaluating water supply reliability. The conditions are as follows:

- **Average Water Year** – The average water year is a year that represents the median runoff levels from precipitation. The supply quantities would be similar to historical average supplies.
- **Single Dry Year** – The single dry year is defined as the individual year with the lowest usable water supply. This condition can be derived as the year with the lowest annual supply and is represented by the year 2013 ([Table 7-1](#)).
- **Five-Consecutive-Year Drought** – The five-consecutive year drought is defined as the five consecutive years with the lowest usable water supply. The multiple dry years are detrimental to the water supply system because of their adverse effect on the levels of local and state-wide reservoirs, as well as groundwater levels. Available supply percentage for these conditions is based on an analysis of historical per capita water use described in a later section. The period between 2012 and 2016 was selected to represent the five-consecutive-year drought ([Table 7-1](#)). Ninety-four percent of the average supply was derived by taking the average of the quotients of total annual water production and the average water production from 2001 to 2020 during the years 2012 to 2016. For recycled water, it is assumed that the City-wide return-to-sewer ratio (18.8%) is consistent in normal and dry conditions.

**Table 7-1 Basis of Water Data**

Year Type	Base Year(s)	Percent of Average Supply (%)
Average Year	2001-2020	100%
Single-Dry Year	2013	94%
Consecutive Dry Years 1st Year	2012	94%
Consecutive Dry Years 2nd Year	2013	94%
Consecutive Dry Years 3rd Year	2014	94%
Consecutive Dry Years 4th Year	2015	94%
Consecutive Dry Years 5th Year	2016	94%



### 7.2.2 Sources for Water Data

To establish a basis of normal year, single dry year, and five-consecutive-year drought's historical rainfall data available for the City of Corcoran from the National Climatic Data Center (NCDC) archive available through NOAA.

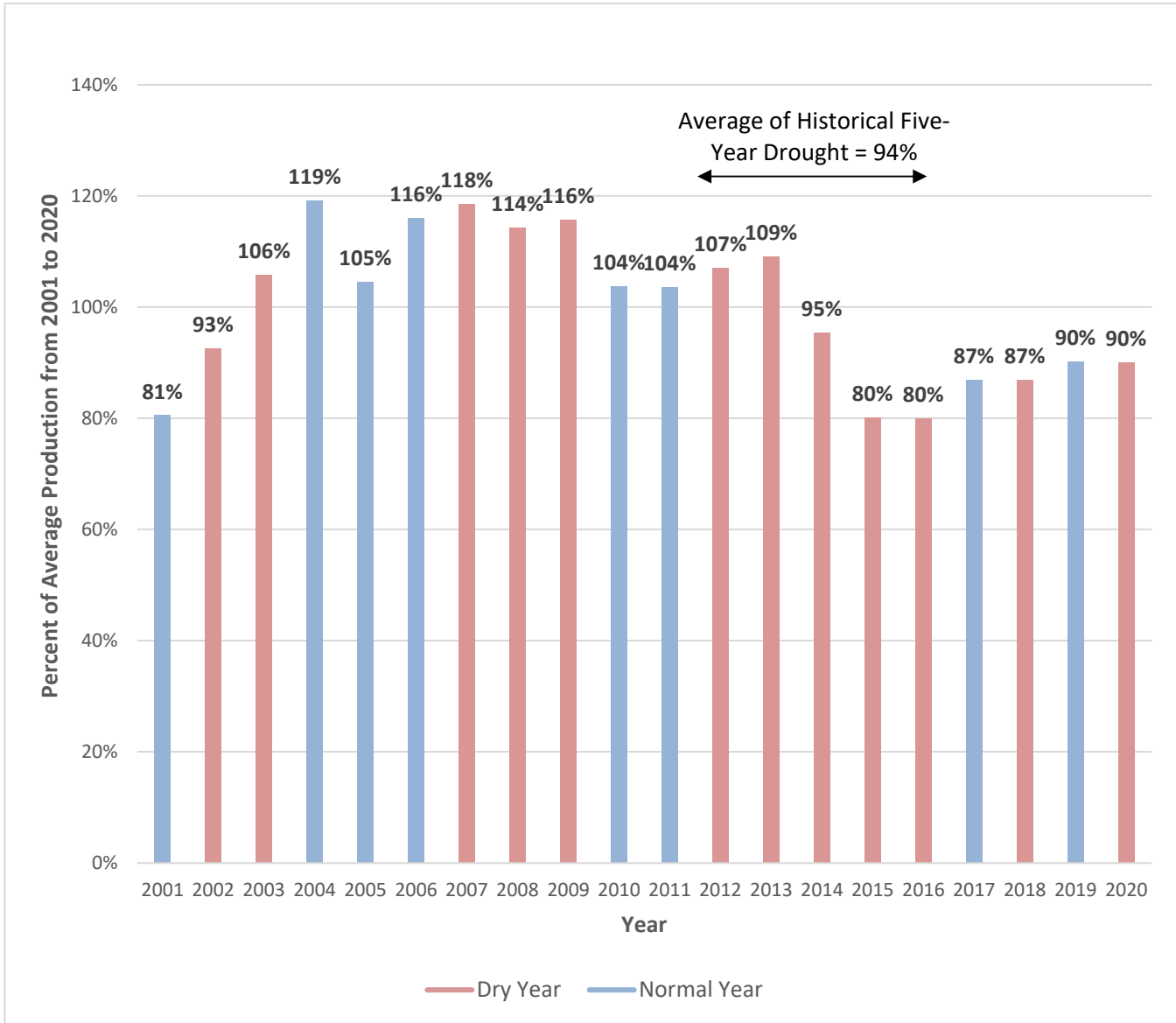
## 7.3 SUPPLY AND DEMAND ASSESSMENT

### *Law*

*10635 (a) Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional or local agency population projections within the service area of the urban water supplier.*

During prolonged years of drought, City-wide water use patterns have the potential to change. Typically, outdoor water use will initially increase as irrigation is used to offset decreased rainfall. These potential usage increases can be offset, in part, by increasing water conservation measures. Annual production since 2001 was analyzed. The 2020 UWMP analyzes water production from the last two decades and compares it to the historical average across those years, as shown in [Figure 7-1](#). The demand projections for the various hydrologic water years are summarized in [Table 7-2](#), [Table 7-3](#), and [Table 7-4](#).

**Figure 7-1 Yearly Water Production vs 2001 to 2020 Average Production**



**Table 7-2 Normal Year Supply and Demand Comparison**

	2025 (AF)	2030 (AF)	2035 (AF)	2040 (AF)	2045 (AF)
Supply	6,842	6,884	6,895	6,907	6,920
Demand	6,032	6,293	6,367	6,443	6,520
Difference	810	590	528	464	400

**Table 7-3 Single Dry Year Supply and Demand Comparison**

	2025 (AF)	2030 (AF)	2035 (AF)	2040 (AF)	2045 (AF)
Supply	6,432	6,471	6,482	6,493	6,504
Demand	6,032	6,293	6,367	6,443	6,520
Difference	400	177	114	50	-16

**Table 7-4 Multiple Dry Years Supply and Demand Comparison**

		2025 (AF)	2030 (AF)	2035 (AF)	2040 (AF)	2045 (AF)
First year (2012)	Supply	6,432	6,471	6,482	6,493	6,504
	Demand	6,032	6,293	6,367	6,443	6,520
	Difference	400	177	114	50	-16
Second year (2013)	Supply	6,432	6,471	6,482	6,493	6,504
	Demand	6,032	6,293	6,367	6,443	6,520
	Difference	400	177	114	50	-16
Third year (2014)	Supply	6,432	6,471	6,482	6,493	6,504
	Demand	6,032	6,293	6,367	6,443	6,520
	Difference	400	177	114	50	-16
Fourth year (2015)	Supply	6,432	6,471	6,482	6,493	6,504
	Demand	6,032	6,293	6,367	6,443	6,520
	Difference	400	177	114	50	-16
Fifth year (2016)	Supply	6,432	6,471	6,482	6,493	6,504
	Demand	6,032	6,293	6,367	6,443	6,520
	Difference	400	177	114	50	-16

Historical production records indicate that during drought water years, water demands during the single dry and multiple dry periods did not vary drastically from the normal year baseline. **Figure 7-1** documents historical water production between 2001 and 2020 and summarizes the City’s historical response to periods of dry weather. From the years 2001 to 2020, Corcoran’s average water production via groundwater wells was 6,346 AF. Some dry years, such as the drought period of 2007 to 2009, saw a rising trend in annual water usage. However, the year with the highest total water production, 2004, occurred during a “normal” year in which drought conditions were not present. Additionally, the drought from 2012 to 2016 saw water production plummet from 6,791 AF in 2012 to 5,073 AF in 2016. On average, these 5 years of drought saw production levels 6 percent lower than the average from 2001 to 2020. Thus, the supply totals for a 5-year drought were held constant at 94%.

## 7.4 REGIONAL SUPPLY RELIABILITY

**Law**

*10620 (f) An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions.*

As discussed previously, the City uses groundwater as its sole source of potable water supply and no known opportunities currently exist for diversifying sources of supply. In order to reduce the burden on groundwater resources during periods of prolonged drought, the City has water conservation ordinances in place to prevent and prohibit the wasting of water, while also encouraging the community to conserve.

## 7.5 DROUGHT RISK ASSESSMENT

### Law

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.*

As part of the 2020 UWMP, the California Water Code now requires urban water suppliers to develop a drought risk assessment (DRA). The DRA is a planning exercise that considers the effects on available water supply sources should a five-year drought occur immediately following the preparation of the DRA. It is similar in nature to the supply and demand assessment described in a previous section, but only evaluates the effects of a five-year drought. The DRA also considers the effect of the City's Water Shortage Contingency Plan on available supply and total demand. Ultimately, the DRA is a proactive planning review that readies the City for the worst-case water supply condition should it occur in the immediate future.

### 7.5.1 DRA Data, Methods, and Basis for Water Shortage Conditions

The DRA evaluates the effect on available water supply during the course of a five-year drought. Currently, the City's potable water supply source is groundwater. As such, the same data and methodology used for preparing the supply and demand assessment through 2045, described in a previous section, can be used for the purposes of the DRA.

For conservative planning purposes, the DRA considers an unconstrained demand condition within the City's service area, which means no additional demand management measures or water use reduction methods are in place outside of the City's year-round prohibitions. This conservative planning condition allows the DRA to identify if additional water use reductions, documented in the Water Shortage Contingency Plan, should be implemented.

### 7.5.2 DRA Individual Water Source Reliability

The DRA water demand and supply comparisons are documented in [Table 7-5](#), which assumes a linear trend in demand from 2020 (5,708 AF) to 2025 (5,077 AF). Meanwhile, annual supply is set equal to the potable annual supply of groundwater (5,888 AF) plus recycled water, calculated by multiplying demand by a return-to-sewer ratio of 18.8%.

### 7.5.3 DRA Total Water Supply and Use Comparison

The City's DRA is summarized at the beginning of the following page in [Table 7-5](#). Using assumptions for available supplies consistent with previous planning efforts, and accounting for an unconstrained demand condition, the DRA shows that the City will be able to meet projected water demands under a 5-consecutive-year drought starting in 2021. At this point in time no water shortage declarations or shortage response actions are required to be implemented.

### 7.5.4 Management Tools and Options

#### Law

*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.*

In order to reduce the burden on groundwater resources during periods of prolonged drought, the City has developed a Water Shortage Contingency Plan that can be implemented to prevent and prohibit the wasting of water while also encouraging the community to conserve.

The City's supply reliability is dependent on the rate of available recharge for the groundwater subbasins beneath the City. KCWD imports raw water for the purpose of recharging the groundwater subbasins they manage, which includes the Tulare Lake subbasin. During periods of drought, the imported water supplies available to KCWD can be reduced or not provided at all, which would reduce the amount of recharge available to the groundwater basins. In periods of water shortage, KCWD works closely with the water suppliers extracting water from groundwater subbasins they manage in order to minimize overdraft and subsidence. Typically, when KCWD identifies a risk to regional supply reliability, they call for urban water suppliers to reduce their water use through voluntary and mandatory water conservation measures.

Additionally, during a drought, KCWD anticipates the City to use groundwater reserves. Historical groundwater monitoring by KCWD in the Tulare Lake subbasin also indicates stable groundwater conditions during multiple-year droughts. Through KCWD's implementation of conjunctive use programs, the Tulare Lake groundwater subbasin has historically experienced well managed levels. As a result of this management, the Tulare Lake subbasin is considered a reliable source of supply during water shortages. While pumping may exceed recharge during a drought, basin management practices have prevented long-term adverse conditions.

**Table 7-5 Five-Year Drought Risk Assessment**

Totals	2021	2022	2023	2024	2025
<b>Demands</b>					
Total Water Use	6,631	6,481	6,331	6,181	6,032
<b>Supplies</b>					
Total Supplies	6,937	6,913	6,890	6,866	6,842
Surplus/Shortfall without WSCP Action	306	432	558	685	810
<b>Planned WSCP Actions</b> (use reduction and supply augmentation)					
WSCP - supply augmentation benefit	0	0	0	0	0
WSCP - use reduction savings benefit	0	0	0	0	0
<b>Revised Surplus/(shortfall)</b>	<b>306</b>	<b>432</b>	<b>558</b>	<b>685</b>	<b>810</b>
<b>Resulting % Use Reduction from WSCP action</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>

## CHAPTER 8 – WATER SHORTAGE CONTINGENCY PLANNING

This chapter summarizes the City’s Water Shortage Contingency Plan (WSCP). The WSCP is a separately adopted planning document that most notably outlines levels of water shortage conditions, demand reduction methods to be implemented in the event of a water shortage and the process the City will implement to perform an annual Supply and Demand assessment. The WSCP also includes discussion of the City’s communication protocols during a water shortage, methods of determining compliance and enforcing water use prohibitions, estimating the financial consequences of a water shortage, and the methods the City has in place to monitor and report the effectiveness of any water demand reduction methods implemented.

### 8.1 WATER SUPPLY RELIABILITY ANALYSIS

The City currently uses groundwater as the sole source of potable water supply, with wells extracting water from the Tulare Lake Subbasin of the San Joaquin Valley Groundwater Basin. These groundwater basins are managed by the El Rico Groundwater Sustainability Agency and the 2020 Tulare Lake Subbasin Groundwater Sustainability Plan lists the rates of natural recharge for these groundwater supply sources. Consistent with previous planning efforts, the City’s Water Supply Reliability Analysis and the available supply drawn from the aquifer in any year is equal to the system-wide water demand for that particular year.

### 8.2 ANNUAL WATER SUPPLY AND DEMAND ASSESSMENT

Updates to the California Water Code now require that urban water suppliers prepare an annual water supply and demand assessment (Annual Assessment) on an annual basis. The findings of this Annual Assessment will be summarized in a report submitted to the Department of Water Resources by July 1 of each calendar year, with the first report required for submission on July 1<sup>st</sup>, 2022. The purpose of this annual assessment is to ensure water suppliers are proactively considering the available water supplies and demand requirements, as well as identifying the potential need for implementing the Water Shortage Contingency Plan.

It should be noted that DWR is in the process of preparing a stand-alone guidance document that will outline general procedures to aid urban water suppliers in preparing the Annual Assessment. The decision-making process and Annual Assessment completion steps are preliminary at this point in time and will be further refined as the DWR guidance document is completed.

The City’s Water Shortage Contingency Plan is provided in [Appendix B](#) and summarizes the decision-making process and methodology used to prepare the Annual Assessment. The reporting timeline is shown in [Figure 8-1](#).



**Figure 8-1 Annual Assessment Reporting Timeline**

Current Year				Following Year						
Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
ONGOING MONITORING AND REVIEW										
						INITIATE ANNUAL ASSESSMENT				
						EVALUATE SUPPLIES				
						CITY COUNCIL REVIEW OF ANNUAL ASSESSMENT				
						FINALIZE ANNUAL ASSESSMENT				
						SUBMIT ANNUAL ASSESSMENT				

### 8.3 WATER SHORTAGE LEVELS

**Law**

*10632 (a)(1) Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50 percent reduction in water supply and an outline of specific water supply conditions which are applicable to each stage.*

Water agencies that rely on groundwater as the main source of potable supply are unlikely to experience water shortages like those agencies that rely on surface water. As the City is currently utilizing groundwater as its primary source of supply, it is not expected that the City will experience the water supply shortages that surface water dependent suppliers will.

As part of the City’s efforts to conserve water, the City has permanent water use prohibitions in place. Additionally, the City’s conservation ordinance describes a multiple stage water conservation plan. Each water rationing stage includes a water demand reduction percentage, which is to be applied to normal water demands. The plan is dependent on the cause, severity, and anticipated duration of the water shortage, and a combination of voluntary and mandatory water conservation measures can be put in place to reduce City-wide water usage. A comparison between the City’s water shortage levels and the DWR recommended 6-level framework is documented in the WSCP. The water shortage levels are summarized in [Table 8-1](#).

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

Stage	Description	Percent Supply Reduction	Shortage Response Actions
<b>1</b>	Voluntary Compliance-Water Alert	<20%	A Level 1 water shortage condition exists when the city notifies its water users that due to drought, the supply reduction targets are up to 20%.
<b>2</b>	Mandatory Compliance-Water Warning	20%-40%	A Level 2 water shortage condition exists when the city notifies its water users that due to drought, supply reduction targets are 20% to 40%.
<b>3</b>	Mandatory Compliance Water-Emergency	40%+	A Level 3 water shortage condition exists when the city notifies its water users that due to drought, supply reduction targets are greater than 40%.

The water shortage stages become effective when the City Manager declares that the City is unable to provide sufficient water supply to meet ordinary demands, to the extent that insufficient supplies would be available for human consumption, sanitation, and fire protection. The declared stage will be based on the City Manager’s judgment and to the degree of the immediate or future supply deficiency.

## **8.4 SHORTAGE RESPONSE ACTIONS**

The City’s WSCP includes shortage response actions that may be implemented during a water shortage. Additionally, the City’s municipal code has multiple permanent water use restrictions in place year-round that minimize water waste. These shortage response actions and permanent water use restrictions are summarized in the WSCP, provided in [Appendix C](#).

## **8.5 PLAN ADOPTION, SUBMITTAL, AND AVAILABILITY**

The WSCP adoption, submittal and availability process are the same as those for the City’s UWMP. However, the WSCP may be periodically amended independently from the City’s UWMP. Should an amendment to the WSCP be implemented, stakeholder and public notification methods consistent with the UWMP will be performed prior to the adoption of the amended plan.

## CHAPTER 9 – DEMAND MANAGEMENT MEASURES

This chapter summarizes the demand management measures, which are additional measures the supplier plans on implementing to achieve its water use targets and maintain ongoing water conservation.

### 9.1 DEMAND MANAGEMENT MEASURES AND IMPLEMENTATION

The following section summarizes the Demand Management Measures planned and implemented by the City to promote water conservation. This section includes, as applicable, discussions on both the historical implementation and planned implementation of various measures.

#### **Law**

10631 (f)(A) ...*The narrative shall describe the water demand management measure 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.*

#### 9.1.1 Waste Water Prevention Ordinances

The Corcoran City code (Section 8.1.4) prohibits wasteful use of the City's water supplies. The City Manager reserves the right to require a property owner or water user to install a water meter and backflow prevention devices should a wasteful use of water arise.

There are two water waste categories outlined in the city code: irrigation and leaks. Water customers are required to ensure runoff from distribution lines, private facilities, and other sources is controlled under all circumstances. Additionally, leaks and malfunctions in a water user's plumbing or distribution lines are to be properly identified and reported within a reasonable time frame (48 hours).

The full summary of water use prohibitions and consumption reduction methods for each water supply shortage level is discussed in Chapter 8, as part of the City's Water Shortage Contingency Plan.

## 9.1.2 Metering

### Law

526

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

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

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, 2015.*

As of 2020, 1,670 of the City's 3,168 water accounts (52.7%) are metered. The City plans to add meters to its remaining unmetered connections by 2025 to comply with Section 325 of the Urban Water Management Planning Act.

## 9.1.3 Conservation Pricing

Conservation pricing encourages more efficient use of water in the City by signaling to customers who consume too much water. For example, if a water customer exceeds a predetermined water budget, penalties and higher prices are enacted. The City charges customers with metered connections a \$41.57 minimum monthly rate for water usage up to 600 cubic feet. Should customers exceed the 600 cubic feet per month, additional fees of \$1.11 for every 100 cubic feet are charged. As the City installs additional water meters, this conservation price structure will be applied to more customers.

The majority of residences (without meters) are charged a flat rate determined by lot size. Lots up to 4,000 square feet pay \$41.57 per month, while lots from 4,001 to 5,000 square feet pay \$47.00 per month. If a residence occupies a lot of over 5,000 square feet, \$47.00 per month plus \$0.97 per additional 100 square feet over 5,000 square feet is charged.

## 9.1.4 Public Outreach

The City has undertaken multiple public information programs to help reduce water consumption and raise public awareness of methods of water conservation. The City provides information relevant to water conservation via pamphlets in monthly billing statements and on the City website. These same monthly bills also serve as a way for the City to inform its residents of any demand management updates and of their water usage trends. Additionally, the City mails Consumer Confidence Reports and water use regulations annually to its customers.

In combination with these efforts, the City is a member of King's County Water Education Committee, or KCWEC. The KCWEC sends representatives to schools and educates the public in the areas of water safety and water conservation.

### **9.1.5 Programs to Assess and Manage Distribution System Real Loss**

The City budgets roughly \$50,000 each year to analyze and repair issues with its distribution water mains. Additionally, water audits are performed annually to track system performance and overall losses. Since the water table exists only four to six feet under the City, pipe leakage is easily recognizable via surface indications. Thus, the City had no need for a regimented leak protection program at this time.

The City is prepared to initiate a program tracking metered well production versus metered usage, hoping to better understand the need for specific repairs or replacements.

### **9.1.6 Water Conservation Program Coordination and Staffing Support**

Corcoran has appointed a conservation coordinator, responsible for reviewing and expanding the City's water conservation efforts, as well as informing water customers of recent conservation efforts. Thus, the coordinator must work alongside city departments and the Corcoran community to promote responsible water usage and promote education of water conservation in the City.

### **9.1.7 Other Demand Management Measures – Residential Plumbing Retrofit**

California State Law has required low-flow fixtures on all new constructions since 1978. Additionally, California requires all new buildings constructed after January 1<sup>st</sup>, 1992, to have ultra-low flush toilets. Corcoran is subject to compliance with these building requirements, as well as other state-level conservation legislation.

## CHAPTER 10 – PLAN ADOPTION, SUBMITTAL, AND IMPLEMENTATION

This section includes the process undertaken for adoption and submittal of the UWMP as well as the plan required to implement the UWMP. Ways in which the public can access the UWMP is also described in this section.

### 10.1 INCLUSION OF 2015 DATA

The City is preparing the 2020 UWMP on the basis of a calendar year, and preparation of the plan was completed following the end of the calendar year 2020. Relevant data has been updated through December of 2020.

### 10.2 NOTICE OF PUBLIC HEARING

This section documents the public notification process and when a notice was given.

#### 10.2.1 Notice to Cities and Counties

**Law**

*10621 (b) Every urban water supplier required to prepare a plan shall...at least 60 days prior to the public hearing on the plan...notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan.*

*10642 ...The urban water supplier shall provide notice of the time and place of hearing to any city or county within which the supplier provides water supplies. A privately owned water supplier shall provide an equivalent notice within its service area...*

The City provided notice to relevant stakeholders, summarized in [Table 10-1](#), on April 27<sup>th</sup>, 2021; this notification date was more than the required 60 days prior to the public hearing on the 2020 UWMP.

**Table 10-1 Notification to Cities and Counties**

City or County Name	60 Day Notice	Notice of Public Hearing
Kings County	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
KCWD	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## 10.2.2 Notice to the Public

### Law

*10642 ...Prior to adopting a plan, the urban water supplier shall make the plan available for public inspection...Prior to the hearing, notice of the time and place of hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code...*

#### *Government Code 6066*

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

A notice of the public hearing was published in the local newspaper in a manner pursuant to the stated Government Code 6066. Documentation of the notice provided to the public is included in [Appendix E](#), and the draft 2020 UWMP and WSCP were available for review at various City facilities and on the City's web page.

## 10.3 PUBLIC HEARING AND ADOPTION

Following the notification of relevant stakeholders, the City held a City Council meeting on April 26<sup>th</sup>, 2022 to address and review comments received from both stakeholders and members of the community. These comments were reviewed and addressed, and the final 2020 UWMP was adopted by City Council on Tuesday, May 10<sup>th</sup>, 2022. [Appendix E](#) includes a copy of the adopting resolution.

## 10.4 PLAN SUBMITTAL

The UWMPA requires water agencies to submit a copy of the adopted 2020 UWMP to the DWR within 30 days of adoption and before July 1<sup>st</sup>, 2021. Additionally, water agencies are required to submit a copy of the adopted 2020 UWMP to all relevant stakeholders within 30 days of adoption. The adopted 2020 UWMP was submitted to the DWR on August 26<sup>th</sup>, 2022. The adopted 2020 UWMP was submitted to relevant stakeholders and the California State Library within 30 days of adoption.

## 10.5 PUBLIC AVAILABILITY

Consistent with the UWMPA requirements, a copy of the 2020 UWMP was made available to the public in the Corcoran Branch Library, within 30 days of adoption.

## 10.6 AMENDING AND ADOPTED UWMP

Any amendments to the adopted 2020 UWMP will be adopted and filed in a manner consistent with the UWMPA requirements. Additionally, all adopted amendments will be submitted to DWR and any relevant stakeholders within 30 days of adoption.



## CHAPTER 11 – DWR CHECKLIST

This report is organized in accordance with the outline suggested by DWR for the 2020 Urban Water Management Plans. This additional chapter is included to guide the reviewers to the chapters or sections in this report that address the items listed in the DWR Checklist, as published in the Final Guidebook (March 2021)

**Table 11-1 DWR Checklist**

No.	UWMP Requirement	Subject	California Water Code Reference	UWMP Location
1	A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, reclamation and demand management activities.	Introduction and Overview	10615	Chapter 4, 6
2	Each plan shall include a simple description of the supplier’s plan including water availability, future requirements, a strategy for meeting needs, and other pertinent information. Additionally, a supplier may also choose to include a simple description at the beginning of each chapter.	Summary	10630.5	Chapter 1-10
3	Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.	Plan Preparation	10620(b)	-
4	Coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.	Plan Preparation	10620(d)(2)	Section 10.2

No.	UWMP Requirement	Subject	California Water Code Reference	UWMP Location
5	Provide supporting documentation that the water supplier has encouraged active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan and contingency plan.	Plan Preparation	10642	Section 10.2
6	Retail suppliers will include documentation that they have provided their wholesale supplier(s) - if any - with water use projections from that source.	System Supplies	10631(h)	Section 4.2.2, Section 6.1
7	Wholesale suppliers will include documentation that they have provided their urban water suppliers with identification and quantification of the existing and planned sources of water available from the wholesale to the urban supplier during various water year types.	System Supplies	10631(h)	-
8	Describe the water supplier service area.	System Description	10631(a)	Section 3.1
9	Describe the climate of the service area of the supplier.	System Description	10631(a)	Section 3.2
10	Provide population projections for 2025, 2030, 2035, 2040 and optionally 2045.	System Description	10631(a)	Section 3.3
11	Describe other social, economic, and demographic factors affecting the supplier's water management planning.	System Description	10631(a)	Section 3.1.4 Section 3.3
12	Indicate the current population of the service area.	System Description and Baselines and Targets	10631(a)	Sections 3.3
13	Describe the land uses within the service area.	System Description	10631(a)	Section 3.1.3

No.	UWMP Requirement	Subject	California Water Code Reference	UWMP Location
14	Quantify past, current, and projected water use, identifying the uses among water use sectors.	System Water Use	10631(d)(1)	Section 4.2
15	Retail suppliers shall provide data to show the distribution loss standards were met.	System Water Use	10631(d)(3)(C)	Section 4.3
16	In projected water use, include estimates of water savings from adopted codes, plans, and other policies or laws.	System Water Use	10631(d)(4)(A)	Section 4.4
17	Provide citations of codes, standards, ordinances, or plans used to make water use projections.	System Water Use	10631(d)(4)(B)	-
18	Report the distribution system water loss for each of the 5 years preceding the plan update.	System Water Use	10631(d)(3)(A)	Section 4.3
19	Include projected water use needed for lower income housing projected in the service area of the supplier.	System Water Use	10631.1(a)	Section 4.5
20	Demands under climate change considerations must be included as part of the drought risk assessment.	System Water Use	10635(b)	Section 7.5
21	Retail suppliers shall provide baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.	Baselines and Targets	10608.20(e)	Chapter 5
22	Retail suppliers shall meet their water use target by December 31, 2020.	Baselines and Targets	10608.24(a)	Chapter 5
23	Wholesale suppliers shall include an assessment of present and proposed future measures, programs, and policies to help their retail water suppliers achieve targeted water use reductions.	Baselines and Targets	10608.36	-

No.	UWMP Requirement	Subject	California Water Code Reference	UWMP Location
24	If the retail supplier adjusts its compliance GPCD using weather normalization, economic adjustment, or extraordinary events, it shall provide the basis for, and data supporting the adjustment.	Baselines and Targets	10608.24(d)(2)	-
25	Retail suppliers' per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use of the 5-year baseline. This does not apply if the suppliers base GPCD is at or below 100.	Baselines and Targets	10608.22	Section 5.6
26	Retail suppliers shall report on their compliance in meeting their water use targets. The data shall be reported using a standardized form in the SBX7-7 2020 Compliance Form.	Baselines and Targets	10608.4	Section 5.8
27	Provide a discussion of anticipated supply availability under a normal, single dry year, and a drought lasting five years, as well as more frequent and severe periods of drought.	System Supplies	10631(b)(1)	Sections 7.2
28	Provide a discussion of anticipated supply availability under a normal, single dry year, and a drought lasting five years, as well as more frequent and severe periods of drought, including changes in supply due to climate change.	System Supplies	10631(b)(1)	Sections 7.2
29	When multiple sources of water supply are identified, describe the management of each supply in relationship to other identified supplies.	System Supplies	10631(b)(2)	Section 6.2
30	Describe measures taken to acquire and develop planned sources of water.	System Supplies	10631(b)(3)	Section 6.1
31	Identify and quantify the existing and planned sources of water available for 2020, 2025, 2030, 2035, 2040 and optionally 2045.	System Supplies	10631(b)	Section 6.9

No.	UWMP Requirement	Subject	California Water Code Reference	UWMP Location
<b>32</b>	Indicate whether groundwater is an existing or planned source of water available to the supplier.	System Supplies	10631(b)	Section 6.2
<b>33</b>	Indicate whether a groundwater sustainability plan or groundwater management plan has been adopted by the water supplier or if there is any other specific authorization for groundwater management. Include a copy of the plan or authorization.	System Supplies	10631(b)(4)(A)	Section 6.2.2
<b>34</b>	Describe the groundwater basin.	System Supplies	10631(b)(4)(B)	Section 6.2.1
<b>35</b>	Indicate if the basin has been adjudicated and include a copy of the court order or decree and a description of the amount of water the supplier has the legal right to pump.	System Supplies	10631(b)(4)(B)	Section 6.2
<b>36</b>	For unadjudicated basins, indicate whether or not the department has identified the basin as a high or medium priority. Describe efforts by the supplier to coordinate with sustainability or groundwater agencies to achieve sustainable groundwater conditions.	System Supplies	10631(b)(4)(B)	Section 6.2
<b>37</b>	Provide a detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years.	System Supplies	10631(b)(4)(C)	Section 6.2.4
<b>38</b>	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	System Supplies	10631(b)(4)(D)	Section 6.9
<b>39</b>	Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.	System Supplies	10631(c)	Section 6.7

No.	UWMP Requirement	Subject	California Water Code Reference	UWMP Location
40	Describe the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.	System Supplies (Recycled Water)	10633(b)	Section 6.5
41	Describe the recycled water currently being used in the supplier's service area.	System Supplies (Recycled Water)	10633(c)	Section 6.5.2
42	Describe and quantify the potential uses of recycled water and provide a determination of the technical and economic feasibility of those uses.	System Supplies (Recycled Water)	10633(d)	Section 6.5.4
43	Describe the projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected.	System Supplies (Recycled Water)	10633(e)	Section 6.5.4
44	Describe the actions which may be taken to encourage the use of recycled water and the projected results of these actions in terms of acre-feet of recycled water used per year.	System Supplies (Recycled Water)	10633(f)	Section 6.5.4
45	Provide a plan for optimizing the use of recycled water in the supplier's service area.	System Supplies (Recycled Water)	10633(g)	Section 6.5.4
46	Describe desalinated water project opportunities for long-term supply.	System Supplies	10631(g)	Section 6.6
47	Describe the wastewater collection and treatment systems in the supplier's service area with quantified amount of collection and treatment and the disposal methods.	System Supplies	10633(a)	Section 6.5.2

No.	UWMP Requirement	Subject	California Water Code Reference	UWMP Location
48	Describe the expected future water supply projects and programs that may be undertaken by the water supplier to address water supply reliability in average, single-dry, and for a period of drought lasting 5 consecutive water years.	System Supplies	10631(f)	Section 6.9
49	The UWMP must include energy information, as stated in the code, that a supplier can readily obtain.	System Suppliers, Energy Intensity	10631.2(a)	Section 6.11
50	Provide information on the quality of existing sources of water available to the supplier and the manner in which water quality affects water management strategies and supply reliability	Water Supply Reliability Assessment	10634	Section 7.1
51	Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	Water Supply Reliability Assessment	10620(f)	Section 6.2.2 Section 7.5.1
52	Service Reliability Assessment: Assess the water supply reliability during normal, dry, and a drought lasting five consecutive water years by comparing the total water supply sources available to the water supplier with the total projected water use over the next 20 years.	Water Supply Reliability Assessment	10635(a)	Section 7.3
53	Provide a drought risk assessment as part of information considered in developing the demand management measures and water supply projects.	Water Supply Reliability Assessment	10635(b)	Section 7.5
54	Include a description of the data, methodology, and basis for one or more supply shortage conditions that are necessary to conduct a drought risk assessment for a drought period that lasts 5 consecutive years.	Water Supply Reliability Assessment	10635(b)(1)	Section 7.5
55	Include a determination of the reliability of each source of supply under a variety of water shortage conditions.	Water Supply Reliability Assessment	10635(b)(2)	Section 7.3

No.	UWMP Requirement	Subject	California Water Code Reference	UWMP Location
56	Include a comparison of the total water supply sources available to the water supplier with the total projected water use for the drought period.	Water Supply Reliability Assessment	10635(b)(3)	Section 7.3 Section 7.5
57	Include considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.	Water Supply Reliability Assessment	10635(b)(4)	Section 7.3 Section 7.5
58	Provide a water shortage contingency plan (WSCP) with specified elements below.	Water Shortage Contingency Planning	10632(a)	Chapter 8, Appendix C
59	Provide the analysis of water supply reliability (from Chapter 7 of Guidebook) in the WSCP	Water Shortage Contingency Planning	10632(a)(1)	Chapter 8, Appendix C
60	Describe reevaluation and improvement procedures for monitoring and evaluation the water shortage contingency plan to ensure risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented.	Water Shortage Contingency Planning	10632(a)(10)	Chapter 8, Appendix C
61	Provide the written decision- making process and other methods that the supplier will use each year to determine its water reliability.	Water Shortage Contingency Planning	10632(a)(2)(A)	Chapter 8, Appendix C
62	Provide data and methodology to evaluate the supplier's water reliability for the current year and one dry year pursuant to factors in the code.	Water Shortage Contingency Planning	10632(a)(2)(B)	Chapter 8, Appendix C



No.	UWMP Requirement	Subject	California Water Code Reference	UWMP Location
63	Define six standard water shortage levels of 10, 20, 30, 40, 50 percent shortage and greater than 50 percent shortage. These levels shall be based on supply conditions, including percent reductions in supply, changes in groundwater levels, changes in surface elevation, or other conditions. The shortage levels shall also apply to a catastrophic interruption of supply.	Water Shortage Contingency Planning	10632(a)(3)(A)	Chapter 8, Appendix C
64	Suppliers with an existing water shortage contingency plan that uses different water shortage levels must cross reference their categories with the six standard categories.	Water Shortage Contingency Planning	10632(a)(3)(B)	Chapter 8, Appendix C
65	Suppliers with water shortage contingency plans that align with the defined shortage levels must specify locally appropriate supply augmentation actions.	Water Shortage Contingency Planning	10632(a)(4)(A)	Chapter 8, Appendix C
66	Specify locally appropriate demand reduction actions to adequately respond to shortages.	Water Shortage Contingency Planning	10632(a)(4)(B)	Chapter 8, Appendix C
67	Specify locally appropriate operational changes.	Water Shortage Contingency Planning	10632(a)(4)(C)	Chapter 8, Appendix C
68	Specify additional mandatory prohibitions against specific water use practices that are in addition to state-mandated prohibitions are appropriate to local conditions.	Water Shortage Contingency Planning	10632(a)(4)(D)	Chapter 8, Appendix C
69	Estimate the extent to which the gap between supplies and demand will be reduced by implementation of the action.	Water Shortage Contingency Planning	10632(a)(4)(E)	Chapter 8, Appendix C
70	The plan shall include a seismic risk assessment and mitigation plan.	Water Shortage Contingency Plan	10632.5	Chapter 8, Appendix C

No.	UWMP Requirement	Subject	California Water Code Reference	UWMP Location
71	Suppliers must describe that they will inform customers, the public and others regarding any current or predicted water shortages.	Water Shortage Contingency Planning	10632(a)(5)(A)	Chapter 8, Appendix C
72	Suppliers must describe that they will inform customers, the public and others regarding any shortage response actions triggered or anticipated to be triggered and other relevant communications.	Water Shortage Contingency Planning	10632(a)(5)(B)10632(a)(5)(C)	Chapter 8, Appendix C
73	Retail supplier must describe how it will ensure compliance with and enforce provisions of the WSCP.	Water Shortage Contingency Planning	10632(a)(6)	Chapter 8, Appendix C
74	Describe the legal authority that empowers the supplier to enforce shortage response actions.	Water Shortage Contingency Planning	10632(a)(7)(A)	Chapter 8, Appendix C
75	Provide a statement that the supplier will declare a water shortage emergency Water Code Chapter 3.	Water Shortage Contingency Planning	10632(a)(7)(B)	Chapter 8, Appendix C
76	Provide a statement that the supplier will coordinate with any city or county within which it provides water for the possible proclamation of a local emergency.	Water Shortage Contingency Planning	10632(a)(7)(C)	Chapter 8, Appendix C
77	Describe the potential revenue reductions and expense increases associated with activated shortage response actions.	Water Shortage Contingency Planning	10632(a)(8)(A)	Chapter 8, Appendix C
78	Provide a description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions.	Water Shortage Contingency Planning	10632(a)(8)(B)	Chapter 8, Appendix C
79	Retail suppliers must describe the cost of compliance with Water Code Chapter 3.3: Excessive Residential Water Use During Drought	Water Shortage Contingency Planning	10632(a)(8)(C)	Chapter 8, Appendix C

No.	UWMP Requirement	Subject	California Water Code Reference	UWMP Location
80	Retail suppliers must describe the monitoring and reporting requirements and procedures that ensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance.	Water Shortage Contingency Planning	10632(a)(9)	Chapter 8, Appendix C
81	Analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas.	Water Shortage Contingency Planning	10632(b)	Chapter 8, Appendix C
82	Provide supporting documentation that Water Shortage Contingency Plan has been, or will be, provided to any city or county within which it provides water, no later than 30 days after the submission of the plan to DWR.	Plan Adoption, Submittal, and Implementation	10635(c)	Sections 8.12 and 10.4
83	Make available the Water Shortage Contingency Plan to customers and any city or county where it provides water within 30 days after adopted the plan.	Water Shortage Contingency Planning	10632(c)	Section 8.14
84	Wholesale suppliers shall describe specific demand management measures listed in code, their distribution system asset management program, and supplier assistance program.	Demand Management Measures	10631(e)(2)	Sections 9.1 and 9.3
85	Retail suppliers shall provide a description of the nature and extent of each demand management measure implemented over the past five years. The description will address specific measures listed in code.	Demand Management Measures	10631(e)(1)	Sections 9.2 and 9.3
86	Retail suppliers shall conduct a public hearing to discuss adoption, implementation, and economic impact of water use targets (recommended to discuss compliance).	Plan Adoption, Submittal, and Implementation	10608.26(a)	Chapter 10.3

No.	UWMP Requirement	Subject	California Water Code Reference	UWMP Location
87	Notify, at least 60 days prior to the public hearing, any city or county within which the supplier provides water that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. Reported in Table 10-1.	Plan Adoption, Submittal, and Implementation	10621(b)	Section 10.2.1
88	Each urban water supplier shall update and submit its 2020 plan to the department by July 1, 2021.	Plan Adoption, Submittal, and Implementation	10621(f)	Section 10.4
89	Provide supporting documentation that the urban water supplier made the plan and contingency plan available for public inspection, published notice of the public hearing, and held a public hearing about the plan and contingency plan.	Plan Adoption, Submittal, and Implementation	10642	Sections 10.2
90	The water supplier is to provide the time and place of the hearing to any city or county within which the supplier provides water.	Plan Adoption, Submittal, and Implementation	10642	Section 10.2
91	Provide supporting documentation that the plan and contingency plan has been adopted as prepared or modified.	Plan Adoption, Submittal, and Implementation	10642	Section 10.4
92	Provide supporting documentation that the urban water supplier has submitted this UWMP to the California State Library.	Plan Adoption, Submittal, and Implementation	10644(a)	Section 10.4
93	Provide supporting documentation that the urban water supplier has submitted this UWMP to any city or county within which the supplier provides water no later than 30 days after adoption.	Plan Adoption, Submittal, and Implementation	10644(a)(1)	Section 10.4
94	The plan, or amendments to the plan, submitted to the department shall be submitted electronically.	Plan Adoption, Submittal, and Implementation	10644(a)(2)	Sections 10.4

No.	UWMP Requirement	Subject	California Water Code Reference	UWMP Location
95	Provide supporting documentation that, not later than 30 days after filing a copy of its plan with the department, the supplier has or will make the plan available for public review during normal business hours.	Plan Adoption, Submittal, and Implementation	10645(a)	Section 10.5
96	Provide supporting documentation that, not later than 30 days after filing a copy of its water shortage contingency plan with the department, the supplier has or will make the plan available for public review during normal business hours.	Plan Adoption, Submittal, and Implementation	10645(b)	Section 10.5
97	If supplier is regulated by the Public Utilities Commission, include its plan and contingency plan as part of its general rate case filings.	Plan Adoption, Submittal, and Implementation	10621(c)	-
98	If revised, submit a copy of the water shortage contingency plan to DWR within 30 days of adoption.	Plan Adoption, Submittal, and Implementation	10644(b)	-

# APPENDICES

# APPENDIX A

## DWR Recommended Tables

Submittal Table 2-1 Retail Only: Public Water Systems			
Public Water System Number	Public Water System Name	Number of Municipal Connections 2020	Volume of Water Supplied 2020 *
<i>Add additional rows as needed</i>			
1610004	City of Corcoran	3,415	5,708
<b>TOTAL</b>		<b>0</b>	<b>5,708</b>
* <b>Units of measure (AF, CCF, MG)</b> must remain consistent throughout the UWMP as reported in Table 2-3.			
NOTES:			



Submittal Table 2-2: Plan Identification		
Select Only One	Type of Plan	Name of RUWMP or Regional Alliance <i>if applicable</i> (select from drop down list)
<input checked="" type="checkbox"/>	<b>Individual UWMP</b>	
	<input type="checkbox"/> Water Supplier is also a member of a RUWMP	
	<input type="checkbox"/> Water Supplier is also a member of a Regional Alliance	
<input type="checkbox"/>	<b>Regional Urban Water Management Plan (RUWMP)</b>	
NOTES:		

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

**Submittal Table 2-4 Retail: Water Supplier Information Exchange**

The retail Supplier has informed the following wholesale supplier(s) of projected water use in accordance with Water Code Section 10631.

Wholesale Water Supplier Name

*Add additional rows as needed*

Kings County Water District

Kings County Water Commission

NOTES:

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

Population Served	2020	2025	2030	2035	2040	2045(opt)
	21,535	22,506	23,482	23,758	24,040	24,327

**NOTES:**

1. Projected population assumes historical average annual city growth of 0.4%, plus the projected Corcoran State prison population.
2. Based on Department of Finance E-5 Table, City of Corcoran's 2020 population was 21,535.

### Submittal Table 4-1 Retail: Demands for Potable and Non-Potable<sup>1</sup> Water - Actual

Use Type	2020 Actual		
<b>Drop down list</b> 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 <sup>2</sup>
Add additional rows as needed			
Commercial		Drinking Water	75
Institutional/Governmental	Churches	Drinking Water	4
Single Family		Drinking Water	822
Institutional/Governmental	Prisons	Drinking Water	2,036
Other	Hydrants	Drinking Water	18
Commercial	Large Commercial	Drinking Water	324
Institutional/Governmental	Schools	Drinking Water	4
Multi-Family		Drinking Water	292
Losses *	Non-Revenue Water	Drinking Water	710
Other	Billed unmetered	Drinking Water	1,423
<b>TOTAL</b>			<b>5,708</b>

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

NOTES: \*Non-revenue water includes both real and apparent losses.

**Submittal Table 4-2 Retail: Use for Potable and Non-Potable<sup>1</sup> Water - Projected**

Use Type	Additional Description (as needed)	Projected Water Use <sup>2</sup> <i>Report To the Extent that Records are Available</i>				
<u>Drop down list</u> 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						
Commercial		66	69	70	71	72
Institutional/Governmental	Churches	4	4	4	4	4
Single Family		731	763	772	781	790
Institutional/Governmental	Prisons	1,811	1,889	1,912	1,934	1,957
Other	Hydrants	16	17	17	17	18
Commercial	Large Commercial	288	301	304	308	312
Institutional/Governmental	Schools	4	4	4	4	4
Multi-Family		260	271	274	277	281
Losses	Non-revenue water	632	659	667	675	683
Other	Billed unmetered	1,266	1,321	1,336	1,352	1,368
<b>TOTAL</b>		5,077	5,297	5,360	5,423	5,488
<sup>1</sup> Recycled water demands are NOT reported in this table. Recycled water demands are reported in Table 6-4. measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.						
NOTES:						

<sup>2</sup> Units of

**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 <i>From Tables 4-1R and 4-2 R</i>	5,218	5,077	5,297	5,360	5,423	5,488
Recycled Water Demand <sup>1</sup> <i>From Table 6-4</i>	1,073	955	996	1,008	1,020	1,032
Optional Deduction of Recycled Water Put Into Long-Term Storage <sup>2</sup>						
<b>TOTAL WATER USE</b>	6,291	6,032	6,293	6,367	6,443	6,520

<sup>1</sup> Recycled water demand fields will be blank until Table 6-4 is complete <sup>2</sup>  
 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:

**Submittal Table 4-4 Retail: Last Five Years of Water Loss Audit Reporting**

Reporting Period Start Date (mm/yyyy)	Volume of Water Loss <sup>1,2</sup>
01/2016	645
01/2017	579
01/2018	344
01/2019	218
01/2020	200

<sup>1</sup> Taken from the field "Water Losses" (a combination of apparent losses and real losses) from the AWWA worksheet. <sup>2</sup>

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

--



<b>Submittal Table 4-5 Retail Only: Inclusion in Water Use Projections</b>	
<p align="center"><b>Are Future Water Savings Included in Projections?</b>            (Refer to Appendix K of UWMP Guidebook)  <i>Drop down list (y/n)</i></p>	Yes
<p>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.</p>	4.3
<p align="center"><b>Are Lower Income Residential Demands Included In Projections?</b>  <i>Drop down list (y/n)</i></p>	Yes
NOTES:	

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

Baseline Period	Start Year *	End Year *	Average Baseline GPCD*	Confirmed 2020 Target*
10-15 year	2001	2010	265	212
5 Year	2006	2010	263	

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

NOTES:

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

2020 GPCD			2020 Confirmed Target GPCD*	Did Supplier Achieve Targeted Reduction for 2020? Y/N
Actual 2020 GPCD*	2020 TOTAL Adjustments*	Adjusted 2020 GPCD* <i>(Adjusted if applicable)</i>		
237	-	237	212	NO

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

NOTES:

**Submittal Table 6-1 Retail: Groundwater Volume Pumped**

Supplier does not pump groundwater.  
The supplier will not complete the table below.

All or part of the groundwater described below is desalinated.

Groundwater Type <i>Drop Down List</i> May use each category multiple times	Location or Basin Name	2016*	2017*	2018*	2019*	2020*
---	------------------------	-------	-------	-------	-------	-------

*Add additional rows as needed*

Alluvial Basin	Tulare Lake Subbasin	5248	5512	5954	5727	5708
<b>TOTAL</b>		5,248	5,512	5,954	5,727	5,708

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

NOTES:

**Submittal Table 6-2 Retail: Wastewater Collected Within Service Area in 2020**

<input type="checkbox"/>	There is no wastewater collection system. The supplier will not complete the table below.
	Percentage of 2020 service area covered by wastewater collection system <i>(optional)</i>
	Percentage of 2020 service area population covered by wastewater collection system <i>(optional)</i>

Wastewater Collection			Recipient of Collected Wastewater			
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated? <i>Drop Down List</i>	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? <i>Drop Down List</i>	Is WWTP Operation Contracted to a Third Party? <i>(optional)</i> <i>Drop Down List</i>
City of Corcoran	Metered	1,073	City of Corcoran	City of Corcoran WWTP	Yes	No
<b>Total Wastewater Collected from Service Area in 2020:</b>		1,073				

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

NOTES:



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



Recycled water is not used and is not planned for use within the service area of the supplier.  
The supplier will not complete the table below.

Name of Supplier Producing (Treating) the Recycled Water:		City of Corcoran WWTP									
Name of Supplier Operating the Recycled Water Distribution System:		City of Corcoran WWTP									
Supplemental Water Added in 2020 (volume) <i>Include units</i>											
Source of 2020 Supplemental Water											
Beneficial Use Type <i>additional rows if needed.</i>	<i>Insert</i>	Potential Beneficial Uses of Recycled Water (Describe)	Amount of Potential Uses of Recycled Water (Quantity) <i>Include volume units<sup>1</sup></i>	General Description of 2020 Uses	Level of Treatment <i>Drop down list</i>	2020 <sup>1</sup>	2025 <sup>1</sup>	2030 <sup>1</sup>	2035 <sup>1</sup>	2040 <sup>1</sup>	2045 <sup>1</sup> (opt)
Agricultural irrigation				Agricultural Irrigation in State Prison	Secondary, Disinfected - 23	1,073	955	996	1,008	1,020	1,032
Landscape irrigation (exc golf courses)											
Golf course irrigation											
Commercial use											
Industrial use											
Geothermal and other energy production											
Seawater intrusion barrier											
Recreational impoundment											
Wetlands or wildlife habitat											
Groundwater recharge (IPR)											
Reservoir water augmentation (IPR)											
Direct potable reuse											
Other (Description Required)											
<b>Total:</b>						1,073	955	996	1,008	1,020	1,032
<b>2020 Internal Reuse</b>											

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

NOTES:

**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 <sup>1</sup>	2020 Actual Use <sup>1</sup>
<i>Insert additional rows as needed.</i>		
Agricultural irrigation	0	1,073
Landscape irrigation (exc golf courses)		
Golf course irrigation		
Commercial use		
Industrial use		
Geothermal and other energy production		
Seawater intrusion barrier		
Recreational impoundment		
Wetlands or wildlife habitat		
Groundwater recharge (IPR)		
Reservoir water augmentation (IPR)		
Direct potable reuse		
Other (Description Required)		
<b>Total</b>	<b>0</b>	<b>1,073</b>

<sup>1</sup> Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.

NOTE: use similar note from 2015 plan 4-3



Submittal Table 6-6 Retail: Methods to Expand Future Recycled Water Use			
<input checked="" type="checkbox"/>	Supplier does not plan to expand recycled water use in the future. Supplier will not complete the table below but will provide narrative explanation.		
	Provide page location of narrative in UWMP		
Name of Action	Description	Planned Implementation Year	Expected Increase in Recycled Water Use *
<i>Add additional rows as needed</i>			
TBD	The City currently does not have a plan to expand recycled water use.		
<b>Total</b>			<b>0</b>
<b>*Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.</b>			
NOTES:			

**Submittal Table 6-7 Retail: Expected Future Water Supply Projects or Programs**

<input checked="" type="checkbox"/>	No expected future water supply projects or programs that provide a quantifiable increase to the agency's water supply. Supplier will not complete the table below.
<input type="checkbox"/>	Some or all of the supplier's future water supply projects or programs are not compatible with this table and are described in a narrative format.

Provide page location of narrative in the UWMP

Name of Future Projects or Programs	Joint Project with other suppliers?		Description (if needed)	Planned Implementation Year	Planned for Use in Year Type <i>Drop Down List</i>	Expected Increase in Water Supply to Supplier* <i>This may be a range</i>
	<i>Drop Down List (y/n)</i>	<i>If Yes, Supplier Name</i>				

*Add additional rows as needed*

Well 8C			Replacing Well 8	TBD		TBD
Well 5F			New Well	TBD		TBD

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



Submittal Table 6-9 Retail: Water Supplies — Projected											
Water Supply  <b>Drop down list</b> May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool	Additional Detail on Water Supply	Projected Water Supply * Report To the Extent Practicable									
		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)		5,888		5,888		5,888		5,888		5,888	
Recycled Water		955		996		1,008		1,020		1,032	
	<b>Total</b>	6,842	0	6,884	0	6,895	0	6,907	0	6,920	0
<b>*Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.</b>											
NOTES											

**Urban Water Supplier:**

City of Corcoran

**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			
<input type="checkbox"/> 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)		5,708		
Energy Consumed (kWh)		5,486,446		
Energy Intensity (kWh/vol. converted to MG)		2,949.78		
<b>Quantity of Self-Generated Renewable Energy</b>				
<input type="text"/> kWh				
<b>Data Quality</b> (Estimate, Metered Data, Combination of Estimates and Metered Data)				
<input type="text"/> Metered Data				
<b>Data Quality Narrative:</b>				
<input type="text"/>				
<b>Narrative:</b>				
<input type="text"/>				

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	
		<input type="checkbox"/>	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. <span style="float: right;">Location _____</span>
		<input checked="" type="checkbox"/>	Quantification of available supplies is provided in this table as either volume only, percent only, or both.
		Volume Available *	% of Average Supply
Average Year	2001-2020		100%
Single-Dry Year	2013		94%
Consecutive Dry Years 1st Year	2012		94%
Consecutive Dry Years 2nd Year	2013		94%
Consecutive Dry Years 3rd Year	2014		94%
Consecutive Dry Years 4th Year	2015		94%
Consecutive Dry Years 5th Year	2016		94%
<p><i>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.</i></p>			
<p><b>*Units of measure (AF, CCF, MG ) must remain consistent throughout the UWMP as reported in Table 2-3.</b></p>			
<p>NOTES:</p>			

**Submittal Table 7-2 Retail: Normal Year Supply and Demand Comparison**

	2025	2030	2035	2040	2045 (Opt)
Supply totals ( <i>autofill from Table 6-9</i> )	6,842	6,884	6,895	6,907	6,920
Demand totals ( <i>autofill from Table 4-3</i> )	6,032	6,293	6,367	6,443	6,520
Difference	810	590	528	464	400

NOTES:

Submittal Table 7-3 Retail: Single Dry Year Supply and Demand Comparison					
	2025	2030	2035	2040	2045 (Opt)
Supply totals*	6,432	6,471	6,482	6,493	6,504
Demand totals*	6,032	6,293	6,367	6,443	6,520
Difference	400	177	114	50	(16)
<i>*Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.</i>					
NOTES:					



**Submittal Table 7-4 Retail: Multiple Dry Years Supply and Demand Comparison**

		2025*	2030*	2035*	2040*	2045* (Opt)
First year	Supply totals	6,432	6,471	6,482	6,493	6,504
	Demand totals	6,032	6,293	6,367	6,443	6,520
	Difference	400	177	114	50	(16)
Second year	Supply totals	6,432	6,471	6,482	6,493	6,504
	Demand totals	6,032	6,293	6,367	6,443	6,520
	Difference	400	177	114	50	(16)
Third year	Supply totals	6,432	6,471	6,482	6,493	6,504
	Demand totals	6,032	6,293	6,367	6,443	6,520
	Difference	400	177	114	50	(16)
Fourth year	Supply totals	6,432	6,471	6,482	6,493	6,504
	Demand totals	6,032	6,293	6,367	6,443	6,520
	Difference	400	177	114	50	(16)
Fifth year	Supply totals	6,432	6,471	6,482	6,493	6,504
	Demand totals	6,032	6,293	6,367	6,443	6,520
	Difference	400	177	114	50	(16)
Sixth year <i>(optional)</i>	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:

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

<b>2021</b>	<b>Total</b>
Total Water Use	6,631
Total Supplies	6,937
Surplus/Shortfall w/o WSCP Action	306
<b>Planned WSCP Actions</b> (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	306
Resulting % Use Reduction from WSCP action	0%

<b>2022</b>	<b>Total</b>
Total Water Use	6,481
Total Supplies	6,913
Surplus/Shortfall w/o WSCP Action	432
<b>Planned WSCP Actions</b> (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	432
Resulting % Use Reduction from WSCP action	0%

<b>2023</b>	<b>Total</b>
Total Water Use	6,331
Total Supplies	6,890
Surplus/Shortfall w/o WSCP Action	558
<b>Planned WSCP Actions</b> (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	558
Resulting % Use Reduction from WSCP action	0%

<b>2024</b>	<b>Total</b>
Total Water Use	6,181
Total Supplies	6,866
Surplus/Shortfall w/o WSCP Action	685
<b>Planned WSCP Actions</b> (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	685
Resulting % Use Reduction from WSCP action	0%

<b>2025</b>	<b>Total</b>
Total Water Use	6,032
Total Supplies	6,842
Surplus/Shortfall w/o WSCP Action	810
<b>Planned WSCP Actions</b> (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	810
Resulting % Use Reduction from WSCP action	0%

**Submittal Table 8-1  
Water Shortage Contingency Plan Levels**

Stage	Description	Percent Shortage Range	Shortage Response Actions <i>(Narrative description)</i>
1	Voluntary Compliance-Water Alert	Up to 20%	A Level 1 Water shortage condition exists when the city notifies its water users that due to drought, the supply reduction targets are up to 20%.
2	Mandatory Compliance-Water Warning	20%-40%	A Level 2 Water shortage condition exists when the city notifies its water users that due to drought, the supply reduction targets are 20% to 40%.
3	Mandatory Compliance-Water Emergency	>40%	A Level 3 Water shortage condition exists when the city notifies its water users that due to drought, the supply reduction targets are greater than 40%.

NOTES:

2020 Corcoran WSCP			Corresponding Relationship ("crosswalk")	DWR 6 Standard Water Shortage Levels	
Stage	Percent Supply Reduction	Description		Stage	
1	0-20%	Voluntary Compliance- Water Alert		1	Up to 10%
				2	10 to 20%
2	20%-40%	Mandatory Compliance- Water Warning		3	20 to 30%
				4	30 to 40%
3	>40%	Mandatory Compliance- Water Emergency		5	40 to 50%
				6	Greater than 50%

Submittal Table 8-2: Demand Reduction Actions			
Shortage Level	Demand Reduction Actions <b>Drop down list</b> <i>These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.</i>	Additional Explanation or Reference <i>(optional)</i>	Penalty, Charge, or Other Enforcement? <i>For Retail Suppliers Only</i> <i>Drop Down List</i>
<i>Add additional rows as needed</i>			
1	Landscape - Limit landscape irrigation to specific times	Prohibit sprinkling, irrigating, or otherwise applying water to any yard, ground, premises or vegetation on any day of the week except between the hours of 10 a.m. and 6 p.m. from April 1 to September 30 and then from 10 a.m. to 2 p.m. from October 1 to March 31. Irrigation is permitted at any time if either a hand held hose with a shut-off nozzle is used, or if a drip irrigation system is used.	Yes
0	Other - Prohibit use of potable water for washing hard surfaces	Washing vehicles (of any type), building exteriors, sidewalks, driveways, parking areas, courts, and other paved areas is permitted only when using a hand help hose equipped with a shut-off nozzle for quick rinses.	Yes
1	CII - Restaurants may only serve water upon request	All restaurants shall serve water only when requested to by the customer.	Yes
1	Water Features - Restrict water use for decorative water features, such as fountains	Ornamental fountains, or any structures which use water in a similar manner, are prohibited unless the system uses a water recycling system.	Yes

Submittal Table 8-2: Demand Reduction Actions			
Shortage Level	Demand Reduction Actions <b>Drop down list</b> <i>These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.</i>	Additional Explanation or Reference <i>(optional)</i>	Penalty, Charge, or Other Enforcement? <i>For Retail Suppliers Only</i> <i>Drop Down List</i>
<i>Add additional rows as needed</i>			
2	Landscape - Limit landscape irrigation to specific times	Prohibit sprinkling, irrigating, or otherwise applying water to any yard, ground, premises or vegetation on any day of the week between the hours of 12 a.m. (midnight) and 9 a.m. and 7 p.m. to 12 a.m. (midnight) on designated days.	Yes
2	Landscape - Restrict or prohibit runoff from landscape irrigation	All runoff water from irrigation systems which flows to areas not requiring irrigation will be deemed as water waste, and is prohibited.	Yes
2	Landscape - Limit landscape irrigation to specific days	Churches may only irrigate on Mondays, Wednesdays, and Fridays. Multi-family complexes may only irrigate on Tuesdays, Thursdays, and Saturdays.	Yes
2	Landscape - Other landscape restriction or prohibition	Irrigation is prohibited during and up to 48 hours after measurable rainfall.	Yes

Submittal Table 8-2: Demand Reduction Actions			
Shortage Level	Demand Reduction Actions <b>Drop down list</b> <i>These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.</i>	Additional Explanation or Reference <i>(optional)</i>	Penalty, Charge, or Other Enforcement? <i>For Retail Suppliers Only</i> <i>Drop Down List</i>
<i>Add additional rows as needed</i>			
2	Landscape - Limit landscape irrigation to specific days	Prohibit sprinkling, irrigating, or otherwise applying water to any yard, ground, premises or vegetation except on the following designated days: - Properties ending with even-numbered addresses: Monday, Wednesday, Friday - Properties ending with odd-numbered addresses: Tuesday, Thursday, Saturday Anyone may water on Sundays within the applicable time restrictions.	Yes
3	Landscape - Limit landscape irrigation to specific times	Prohibit sprinkling, irrigating, or otherwise applying water to any yard, ground, premises or vegetation on any day of the week except between the hours of 12 a.m. (midnight) and 7 a.m. and 8 p.m. to 12 a.m. (midnight) on designated days City parks may water between 8 a.m. and 6 p.m. to protect public parks.	Yes
3	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	Washing vehicles (of any type) not within the immediate premises of a car washing or commercial service station and not for the immediate interest of public health or safety is prohibited.	Yes

Submittal Table 8-2: Demand Reduction Actions			
Shortage Level	Demand Reduction Actions <b>Drop down list</b> <i>These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.</i>	Additional Explanation or Reference <i>(optional)</i>	Penalty, Charge, or Other Enforcement? <i>For Retail Suppliers Only</i> <i>Drop Down List</i>
<i>Add additional rows as needed</i>			
3	Water Features - Restrict water use for decorative water features, such as fountains	Ornamental fountains, or any structures which use water in a similar manner, are prohibited.	Yes
3	Other	The use of water from fire hydrants shall be limited to fire fighting and to maintain public safety. Additionally, commercial nurseries (and similar establishments) shall water only on designated days, using hand-held hoses, drip irrigation, and hand-held buckets.	Yes
NOTES:			



**Submittal Table 8-3: Supply Augmentation and Other Actions**

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

**Submittal Table 10-1 Retail: Notification to Cities and Counties**

City Name	60 Day Notice	Notice of Public Hearing
<i>Add additional rows as needed</i>		
Corcoran	Yes	Yes
County Name <i>Drop Down List</i>	60 Day Notice	Notice of Public Hearing
<i>Add additional rows as needed</i>		
Kings County	Yes	Yes
NOTES:		

**SB X7-7 Table 0: Units of Measure Used in 2020 UWMP\***

*(select one from the drop down list)*

Acre Feet

*\*The unit of measure must be consistent throughout the UWMP, as reported in Submittal Table 2-3.*

NOTES:

**SB X7-7 Table 2: Method for 2020 Population Estimate**

<b>Method Used to Determine 2020 Population</b> (may check more than one)	
<input checked="" type="checkbox"/>	<b>1. Department of Finance (DOF) or American Community Survey (ACS)</b>
<input type="checkbox"/>	<b>2. Persons-per-Connection Method</b>
<input type="checkbox"/>	<b>3. DWR Population Tool</b>
<input type="checkbox"/>	<b>4. Other</b> DWR recommends pre-review
NOTES:	

**SB X7-7 Table 3: 2020 Service Area Population**

**2020 Compliance Year Population**

**2020**

21,535

NOTES:

**SB X7-7 Table 4: 2020 Gross Water Use**

Compliance Year 2020	2020 Volume Into Distribution System <i>This column will remain blank until SB X7-7 Table 4-A is completed.</i>  (AF)	2020 Deductions					2020 Gross Water Use  (AF)
		Exported Water *	Change in Dist. System Storage* (+/-)	Indirect Recycled Water <i>This column will remain blank until SB X7-7 Table 4-B is completed.</i>	Water Delivered for Agricultural Use*	Process Water <i>This column will remain blank until SB X7-7 Table 4-D is completed.</i>	
	5,708			-		-	5,708

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

NOTES:

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

Complete one table for each source.

**Name of Source** Groundwater, Tulare Lake Subbasin

**This water source is (check one) :**

- The supplier's own water source  
 A purchased or imported source

Compliance Year 2020	Volume Entering Distribution System <sup>1</sup>	Meter Error Adjustment <sup>2</sup> <i>Optional</i> (+/-)	Corrected Volume Entering Distribution System
	5,708	-	5,708

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

<sup>2</sup> **Meter**

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

NOTES

**SB X7-7 Table 4-C: 2020 Process Water Deduction Eligibility**  
**(For use only by agencies that are deducting process water) Choose Only One**

<input type="checkbox"/>	<b>Criteria 1</b> - Industrial water use is equal to or greater than 12% of gross water use. Complete SB X7-7 Table 4-C.1
<input type="checkbox"/>	<b>Criteria 2</b> - Industrial water use is equal to or greater than 15 GPCD. Complete SB X7-7 Table 4-C.2
<input type="checkbox"/>	<b>Criteria 3</b> - Non-industrial use is equal to or less than 120 GPCD. Complete SB X7-7 Table 4-C.3
<input checked="" type="checkbox"/>	<b>Criteria 4</b> - Disadvantaged Community. Complete SB x7-7 Table 4-C.4

NOTES:



**SB X7-7 Table 4-C.4: 2020 Process Water Deduction Eligibility** *(For use only by agencies that are deducting process water using Criteria 4)*

**Criteria 4**  
 Disadvantaged Community. A “Disadvantaged Community” (DAC) is a community with a median household income less than 80 percent of the statewide average.

**SELECT ONE**  
 "Disadvantaged Community" status was determined using one of the methods listed below:

**1. IRWM DAC Mapping tool <https://gis.water.ca.gov/app/dacs/>**

If using the IRWM DAC Mapping Tool, include a screen shot from the tool showing that the service area is considered a DAC.

**2. 2020 Median Income**

	California Median Household Income*		Service Area Median Household Income	Percentage of Statewide Average	Eligible for Exclusion? Y/N
	2020	\$75,235			
<input checked="" type="checkbox"/>	2020	\$75,235	\$40,159	53%	YES
*California median household income 2015 -2019 as reported in US Census Bureau QuickFacts.					

NOTES

**SB X7-7 Table 5: 2020 Gallons Per Capita Per Day (GPCD)**

<b>2020 Gross Water <i>Fm SB X7-7 Table 4</i></b>	<b>2020 Population <i>Fm</i> <i>SB X7-7 Table 3</i></b>	<b>2020 GPCD</b>
5,708	21,535	<b>237</b>

NOTES:

**SB X7-7 Table 9: 2020 Compliance**

Actual 2020 GPCD <sup>1</sup>	Optional Adjustments to 2020 GPCD					2020 Confirmed Target GPCD <sup>1,2</sup>	Did Supplier Achieve Targeted Reduction for 2020?
	Enter "0" if Adjustment Not Used			TOTAL Adjustments <sup>1</sup>	Adjusted 2020 GPCD <sup>1</sup> <i>(Adjusted if applicable)</i>		
	Extraordinary Events <sup>1</sup>	Weather Normalization <sup>1</sup>	Economic Adjustment <sup>1</sup>				
237	-	-	-	-	237	212	NO

<sup>1</sup> All values are reported in GPCD

<sup>2</sup> **2020 Confirmed Target GPCD** is taken from the Supplier's SB X7-7 Verification Form Table SB X7-7, 7-F.

NOTES:

# APPENDIX B

## Water Shortage Contingency Plan



**FINAL**



City of Corcoran

MAY 2022

# 2020 Water Shortage Contingency Plan



CITY OF CORCORAN

# 2020 WATER SHORTAGE CONTINGENCY PLAN

Final

May 2022

**AKEL**  
ENGINEERING GROUP, INC.





May 23<sup>rd</sup>, 2022

City of Corcoran  
832 Whitley Avenue  
Corcoran, CA 93212

Attention: Joe Faulkner, Deputy Public Works Director

Subject: **Water Shortage Contingency Plan**

Dear Joe,

We are pleased to submit the City of Corcoran 2020 Water Shortage Contingency Plan (2020 WSCP) which is intended to address the Urban Water Management Planning Act (UWMPA) of 1983 and amendments thereof.

The City's Water Shortage Contingency Plan (WSCP) was originally included in the 2015 UWMP, which received letters of review and completeness from the Department of Water Resources. As part of amendments to the UWMPA the WSCP is now required to be prepared and adopted separately from the UWMP. The 2020 WSCP builds upon previous water shortage contingency planning efforts completed by the City and reflects updates to the City's water shortage levels and water conservation measures for consistency with state-wide requirements provided by the Department of Water Resources.

We extend our thanks to you and other City staff whose courtesy and cooperation were valuable in reviewing and completing this study.

Sincerely,

AKEL ENGINEERING GROUP, INC.



Tony Akel, P.E.  
Principal

Enclosure: 2020 Water Shortage Contingency Plan



## Acknowledgements

### City Council

**Patricia Nolen**, Mayor

**Jeanette Zamora-Bragg**, Vice Mayor

**Greg Ojeda**

**Sid Palmerin**

**Jerry Robertson**

### Management Personnel

**Joseph Faulkner**, Director of Public Works

**Dylan Zable**, Corcoran Water Division



# City of Corcoran 2020 Water Shortage Contingency Plan

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**City of Corcoran  
2020 Water Shortage Contingency Plan**

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## Section 1 INTRODUCTION

This report documents the City of Corcoran's Water Shortage Contingency Plan (WSCP). This 2020 WSCP document builds upon previous water shortage contingency planning efforts completed by the City and documented in the 2010 and 2015 Urban Water Management Plans (UWMP). This WSCP reflects updates to the City's water shortage levels and water conservation measures for consistency with state-wide requirements provided by the Department of Water Resources. As part of the 2020 UWMP update, the Department of Water Resources requires urban water suppliers to prepare a stand-alone 2020 WSCP, that is separate from the 2020 UWMP, and intended to manage a water shortage. As the City continues to monitor the effectiveness of the WSCP, this document can be updated and adopted separately from the UWMP.

Though it is a stand-alone document, the 2020 WSCP is still considered one of the elements of the 2020 UWMP, as required by the State Law.

Based on Department of Water Resources (DWR) requirements, and consistent with previous planning efforts, this WSCP includes the following sections:

- Water Supply Reliability Analysis
- Annual Water Supply and Demand Assessment
- Shortage Response Actions
- Communication Protocols
- Compliance and Enforcement
- Legal Authorities
- Financial Consequences of WSCP Activation
- Monitoring and Reporting
- Special Water Feature Distinction
- Plan Adoption, Submittal, and Availability

## Section 2 WATER SUPPLY RELIABILITY ANALYSIS

### *Law*

10632 (a)(1) *The analysis of water supply reliability conducted pursuant to Section 10635.*

The City currently uses groundwater as the sole source of water supply, with wells extracting water from the Tulare Lake Subbasin of the San Joaquin Valley Groundwater Basin. These groundwater basins are managed by the El Rico Groundwater Sustainability Agency, and the 2020 Tulare Lake Subbasin Groundwater Sustainability Plan lists the rates of natural recharge for these groundwater supply sources. Consistent with previous planning efforts, the City's Water

Supply Reliability Analysis, the available supply drawn from the aquifer in any year is equal to the system-wide water demand for that particular year.

As part of the 2020 UWMP the City has also prepared a Drought Risk Assessment (DRA), which is a proactive planning review that readies the City for worst-case water supply conditions should they occur in the immediate future. The DRA compares the City's projected demands over the next five years to estimated available supplies should a five-year dry period occur. The results of the DRA prepared as part of the 2020 UWMP indicate that the City has sufficient supplies to meet projected demands over the next five years.

### **Section 3 ANNUAL WATER SUPPLY AND DEMAND ASSESSMENT PROCEDURES**

#### **Law**

10632 (a)(2)	<p><i>The procedures used in conducting an annual water supply and demand assessment that include, at a minimum, both of the following:</i></p> <p><i>(A) The written decision-making process that an urban water supplier will use each year to determine its water supply reliability.</i></p> <p><i>(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></p> <p><i>(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.</i></p> <p><i>(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.</i></p> <p><i>(iii) Existing infrastructure capabilities and plausible constraints.</i></p> <p><i>(iv) A defined set of locally applicable evaluation criteria that are consistently relied upon for each annual water supply and demand assessment.</i></p> <p><i>(v) A description and quantification of each source of water supply.</i></p>
10632.1	<p><i>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.</i></p>

Updates to the California Water Code now require that urban water suppliers prepare a water supply and demand assessment on an annual basis (Annual Assessment). The findings of this Annual Assessment will be summarized in a report submitted to the DWR by July 1<sup>st</sup> of each calendar year, with the first report required for submission on July 1<sup>st</sup>, 2022. The purpose of this annual assessment is to ensure water suppliers are proactively considering the available water

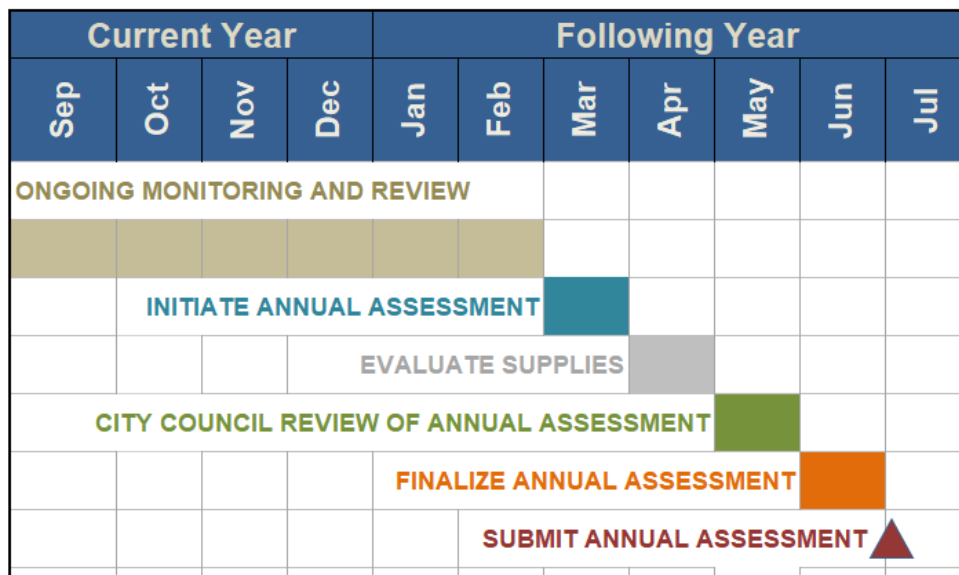
supplies and service area demand requirements, as well as identifying the potential need for implementing the Water Shortage Contingency Plan.

It should be noted that DWR is in the process of preparing a stand-alone guidance document that will outline general procedures to aid urban water suppliers in preparing the Annual Assessment. The decision-making process and Annual Assessment completion steps are preliminary at this point in time and will be further refined as the guidance document by DWR is completed.

### 3.1 Decision Making Process

This section describes the decision-making process to prepare and approve the Annual Assessment each year. It should be noted that the Annual Assessment and decision-making process will rely on the findings of the Tulare Lake Subbasin Annual Report, which will include documentation of available water supply information and any subbasin-wide required water shortage actions to be implemented.

**Figure 3-1 Annual Assessment Report Timeline**



#### September to February – Ongoing Monitoring and Review

For the majority of the year, City staff will continue to monitor and report monthly water consumption and production. This information will be used when the Annual Assessment is initiated to prepare a year-to-year comparison of system-wide water demands for the purpose of projecting demands for the following year.

#### March – Initiate WSCP Annual Assessment

City staff will initiate the Annual Assessment process by gathering the collected demand and production data. Other relevant information includes but is not limited to the following:

- [Land Use/Planning](#): Changes in land use or number of building permits will be used in estimating the next year's demands.
- [Hydrologic Year Review](#): The City's wet year typically ends in April and rainfall information over the past year can be gathered and reviewed.
- [Climate Forecast](#): Any available climate projection information

The purpose of gathering this information will be to compare the various factors that affect water demand throughout the City's service area. This comparison will guide the City's projection for water demand in the upcoming year.

#### **April – Review Available Supply Information**

According to the Tulare Lake Groundwater Sustainability Plan, a Groundwater Annual Report will be completed by the month of April. City staff will review this document once available and use it as a basis for estimating the available supply in the upcoming year. If required, City staff will also prepare to initiate any water shortage response actions noted by El Rico Groundwater Sustainability Agency.

#### **May – City Council Review of Annual Assessment**

The draft of Annual Assessment will be presented to City Council for their information and discussion. If water shortage actions are recommended by the Annual Assessment, the City Council will be asked to begin the implementation of the recommended actions.

#### **June – Finalize Annual Assessment**

The Annual Assessment is finalized based on any feedback received during the City Council review process.

#### **July – Submit Annual Assessment**

The Annual Assessment will be submitted to DWR on or before July 1<sup>st</sup>.

### **3.2 Data and Methodologies**

This section describes the key data and methodologies used in the preparation of the Annual Assessment. This includes historical water supply information, historical and projected water demand, demand and projected water supply demand, which city uses to evaluate their water supply reliability for a normal and a dry subsequent year.

#### **3.2.1 Evaluation Criteria**

The primary criteria used in preparing the City's Annual Assessment are the projected water demand and available supply. The supply information will be based on any available subarea-

wide review of available water supplies prepared by the El Rico Groundwater Sustainability Agency, Kings County Water District, or other local groundwater planning agencies. The demand projections will be prepared using a combination of factors, including a comparison to historical demand, land use changes, building permits, and historical rainfall. The City will continue to review its Annual Assessment preparation process, and additional criteria may be added if considered appropriate.

### **3.2.2 Water Supply**

The City currently relies on groundwater as the sole source of supply. There are nine groundwater wells used by the City, each of which is monitored and has production reported on a monthly basis. These monthly production records will be used to characterize the City's current water production requirement and compared to previous years to estimate production requirements for the upcoming year.

The El Rico Groundwater Sustainability Agency manages water supplies for Corcoran, which exists within a portion of the Tulare Lake Subbasin. The water supply analysis prepared by each GSAs within the Tulare Lake Subbasin in preparation of their Annual Report will provide a critical basis for water supply assumptions, regarding available water supply volumes and any pumping restrictions required to be implemented if any.

### **3.2.3 Current Year Unconstrained Customer Demand**

Billed water consumption is reported on a monthly basis and will be used to characterize the current water consumption requirements for the City. The monthly records will be compared to corresponding months of the previous year to identify any significant changes in water use behavior throughout the City's service area. In addition to consumption records, known recent developments or current building permits will enable City staff to estimate changes to water demand in the upcoming year.

### **3.2.4 Current Year Available Supply**

The Annual Assessment estimates the current year available supply for current hydrological conditions as well as a possible subsequent dry year. The supply estimate will be based on the Drought Risk Assessment supply estimation methodology documented in the 2020 UWMP and it will also incorporate information from the Tulare Lake Groundwater Annual Report and the El Rico Groundwater Sustainability Agency.

### **3.2.5 Infrastructure Considerations**

The annual assessment will include a review of any ongoing capital projects that are expected to affect the demands and supply projections. Examples of such capital projects include water loss reductions, distribution expansion to serve the growth, or new groundwater wells.

## Section 4 WATER SHORTAGE LEVELS

### Law

10632 (a)(1) *Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50 percent reduction in water supply and an outline of specific water supply conditions which are applicable to each stage.*

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 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.*

(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*

The City's current water shortage contingency plan includes three water shortage levels. These water shortage stages reflect potential supply reductions due to reductions in average rainfall, groundwater well issues, or extended periods of summer weather. The City's water shortage levels are documented in [Table 4-1](#). The comparison between the City's water shortage levels and the DWR recommended 6-level framework is provided in [Appendix A](#).

Identifying the appropriate shortage level will be in accordance with the procedures outlined in *Section 3 – Annual Water Supply and Demand Assessment Procedures*. With recommendations from City staff, the City Council has the authority to declare the appropriate conservation level considered necessary to manage the system demands and mitigate the water shortage. The City Council can also downgrade, upgrade, or terminate a shortage response level based on City staff recommendations.

The City's groundwater supply is dependent on recharge from surface water sources as well as deep percolation of applied irrigation water. In periods of drought when the natural recharge sources are less than in typical years, the basin is at risk of overdraft. In order to reduce water consumption city-wide, the City's water conservation ordinance will be amended as necessary to respond to severe, prolonged drought.

As part of the City's efforts to conserve water, the City has permanent water use prohibitions in place. Additionally, the City's conservation ordinance describes a multiple-stage water conservation plan. Each water rationing stage includes a water demand reduction percentage, which is to be applied to normal water demands. The plan is dependent on the cause, severity, and anticipated duration of the water shortage, and a combination of voluntary and mandatory water conservation measures, which can be put in place to reduce City-wide water usage. City manager and Council have the authority to implement additional conservation measures as needed.



**Table 4-1 Water Shortage Contingency Plan Levels**

Stage	Description	Percent Supply Reduction	Water Supply Condition
<b>1</b>	Voluntary Compliance-Water Alert	0%-20%	A Level 1 Water Shortage condition exists when the city notifies its water users that due to drought, the supply reduction targets are up to 20%.
<b>2</b>	Mandatory Compliance-Water Warning	20%-40%	A Level 2 Water Shortage condition exists when the city notifies its water users that due to drought, the supply reduction targets are 20% to 40%.
<b>3</b>	Mandatory Compliance Water-Emergency	>40%	A Level 3 Water Shortage condition exists when the city notifies its water users that due to drought, the supply reduction targets are greater than 40%.

**Section 5 SHORTAGE RESPONSE ACTIONS**

**Law**

10632 (a)(4) Shortage response actions that align with the defined shortage levels and include, at a minimum, all of the following:

- (F) Locally appropriate supply augmentation actions.
- (G) Locally appropriate demand reduction actions to adequately respond to shortages.
- (H) Locally appropriate operational changes
- (I) Additional, mandatory prohibitions against specific water use practices that are in addition to state-mandated prohibitions and appropriate to the local conditions.
- (J) For each action, an estimate of the extent to which the gap between supplies and demand will be reduced by implementation of the action.

Pursuant to the CWC 10632 (a) (4), this section documented the detailed shortage response actions which align with the shortage levels into different categories.

**5.1 Demand Reduction**

There are a number of demand reduction measures an urban water supplier can implement as response actions to corresponded water shortage levels. Some of these may include watering and outdoor water usage prohibitions, water rate structure changes, public educations or water supply service adjustments. Other demand reduction such as infrastructure improvement or replacing, water-efficient assets installation are considered as long-term water demand reductions will not be listed in this water shortage contingency plan.

Consumption reduction actions are methods taken by a water supplier to reduce demand within the service area, whereas prohibitions are specific limitations on water use; the City's consumption reduction actions are summarized in [Table 5-1](#). The permanent water use restrictions enforced year-round are also documented in the table.

## **5.2 Supply Augmentation**

As noted in previous sections, groundwater is the City's sole source of potable water supply, and there are no known opportunities for water supply augmentation through actions such as exchanges, transfers, or purchase programs. Therefore, supply augmentation actions are excluded from the City's Water Shortage Contingency Plan at this time.

## **5.3 Operation Changes**

During a water shortage, changes to water system operations may be considered. These operational changes may include improving water usage consumption and tracking, changes to fire hydrant testing frequencies, alteration in maintenance cycles, and expedited water leak repairs.

## **5.4 Additional Mandatory Restrictions**

Additional mandatory restrictions have been reported in a previous section.

## **5.5 Emergency Response Plan**

In the event of flooding, loss of water supply, or other extreme circumstances, the City of Corcoran relies on the Kings County Emergency Operations Plan (EOP) from the Kings County Department of Public Safety. The most recent of these plans was published in 2015 and is available via the Kings County website. These emergency response plans outline the probable impact of natural disasters and the appropriate actions required to mitigate these impacts.

The primary types of flood events that may occur within Kings County are riverine and urban floods, though dam failure may also result in flash flooding depending on the dam and city locations. Significant flooding occurs in Kings County approximately every five years due primarily to overflowing of the Tulare Lake Basin, which is likely to continue occurring. The City currently resides within a 100-year flood zone, and the City maintains a flood management program based on 2009 Federal Emergency Management Agency (FEMA) flood maps to ensure all new structures built within these area can withstand and mitigate flood hazards. Additionally, the City plans to increase water storage to help mitigate flood events.

Historically, droughts have occurred in California roughly once every ten years, with a 10% chance of occurring each year. However, in recent years, drought has become increasingly common throughout Central California, with some of the driest years on record occurring within the last decade. Potential shifts in temperature and precipitation patterns are likely to bring about (and also escalate) drought conditions in the future. The City currently encourages water

**Table 5-1 Demand Reduction Actions**

Level	Restrictions and Prohibitions on End Users Category	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement?
1	Landscape - Limit landscape irrigation to specific hours	Prohibit sprinkling, irrigating, or otherwise applying water to any yard, ground, premises or vegetation on any day of the week except between the hours of 10 a.m. and 6 p.m. from April 1 to September 30 and then from 10 a.m. to 2 p.m. from October 1 to March 31. Irrigation is permitted at any time if either a hand held hose with a shut-off nozzle is used, or if a drip irrigation system is used.	Yes
0	Washing – Prohibit use of potable water for vehicles, structures, etc.	Washing vehicles (of any type), building exteriors, sidewalks, driveways, parking areas, courts, and other paved areas is permitted only when using a hand help hose equipped with a shut-off nozzle for quick rinses.	Yes
1	Commercial – Restaurants serving water for customers	All restaurants shall serve water only when requested to by the customer.	Yes
1	Other - Water fountain features	Ornamental fountains, or any structures which use water in a similar manner, are prohibited unless the system uses a water recycling system.	Yes
2	Landscape - Limit landscape irrigation to specific hours	Prohibit sprinkling, irrigating, or otherwise applying water to any yard, ground, premises or vegetation on any day of the week between the hours of 12 a.m. (midnight) and 9 a.m. and 7 p.m. to 12 a.m. (midnight) on designated days.	Yes

**Table 5-1 Demand Reduction Actions**

Level	Restrictions and Prohibitions on End Users Category	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement?
2	Landscape –Limit runoff water waste	All runoff water from irrigation systems which flows to areas not requiring irrigation will be deemed as water waste, and is prohibited.	Yes
2	Landscape - Limit landscape irrigation to specific days for specific facilities	<ul style="list-style-type: none"> <li>- Churches may only irrigate on Mondays, Wednesdays, and Fridays.</li> <li>- Multi-family complexes may only irrigate on Tuesdays, Thursdays, and Saturdays.</li> </ul>	Yes
2	Landscape - Limit landscape irrigation after rainfall events	Irrigation is prohibited during and up to 48 hours after measurable rainfall.	Yes
2	Landscape - Limit landscape irrigation to specific days	<p>Prohibit sprinkling, irrigating, or otherwise applying water to any yard, ground, premises or vegetation except on the following designated days:</p> <ul style="list-style-type: none"> <li>- Properties ending with even-numbered addresses: Monday, Wednesday, Friday</li> <li>- Properties ending with odd-numbered addresses: Tuesday, Thursday, Saturday</li> </ul> <p>Anyone may water on Sundays within the applicable time restrictions.</p>	Yes

**Table 5-1 Demand Reduction Actions**

Level	Restrictions and Prohibitions on End Users Category	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement?
3	Landscape - Limit landscape irrigation to specific hours	Prohibit sprinkling, irrigating, or otherwise applying water to any yard, ground, premises or vegetation on any day of the week except between the hours of 12 a.m. (midnight) and 7 a.m. and 8 p.m. to 12 a.m. (midnight) on designated days City parks may water between 8 a.m. and 6 p.m. to protect public parks.	Yes
3	Washing – Prohibit use of potable water for vehicles	Washing vehicles (of any type) not within the immediate premises of a car washing or commercial service station and not for the immediate interest of public health or safety is prohibited.	Yes
3	Other - Water fountain features	Ornamental fountains, or any structures which use water in a similar manner, are prohibited.	Yes
3	Other – Fire hydrants and commercial nurseries	The use of water from fire hydrants shall be limited to fire fighting and to maintain public safety. Additionally, commercial nurseries (and similar establishments) shall water only on designated days, using hand-held hoses, drip irrigation, and hand-held buckets.	Yes

Note: A Level of zero indicates the measure is in place at all times.

conservation measures for all users, and plans to bolster its groundwater recharge areas to help mitigate concerns over water supply and groundwater overdraft.

## 5.6 Seismic Risk Assessment and Mitigation Plan

### Law

- |  |   |
|--|---|
| <p>10632.5 (a)</p> <p>(b)</p> <p>(c)</p> | <p><i>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.</i></p> <p><i>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.</i></p> <p><i>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 multi-hazard mitigation plan under the federal Disaster Mitigation Act of 2000 (Public Law 106-390) if the local hazard mitigation plan or multi-hazard mitigation plan addresses seismic risk.</i></p> |
|--|---|

In addition to the emergency response plan described in section 5.5, the California Water Code now requires urban water suppliers to document a locally appropriate multi-hazard mitigation plan, as developed under the federal Disaster Mitigation Act of 2000, that includes documentation of seismic risk assessment. In December 2012, Kings County published its Local Hazard Mitigation Plan to address these requirements. The City's service area is included in the boundaries reviewed as part of this mitigation plan.

## 5.7 Shortage Response Action Effectiveness

In addition to documenting demand reduction actions, the 2020 UWMP also estimates the effectiveness of these actions on reducing system-wide demand. The City records water consumption and production on a monthly basis, and this data can be used to estimate the effect of any demand reduction actions implemented.

## Section 6 COMMUNICATION PROTOCOLS

### Law

- |                     |   |
|---------------------|---|
| <p>10632 (a)(5)</p> | <p><i>Communication protocols and procedures to inform customers, the public, interested parties, and local, regional, and state governments, regarding, at a minimum, and of the following:</i></p> <p><i>(A) Any current or predicted shortages as determined by the annual water supply and demand assessment described pursuant to Section 10632.1.</i></p> <p><i>(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.</i></p> <p><i>(C) Any other relevant communications.</i></p> |
|---------------------|---|

When the City identifies the need for short-term water use reductions as directed by the Water Shortage Contingency Plan or Annual Assessment, clear and effective communication will be critical to achieve the necessary demand reductions. Methods of public notification include newspaper publications, bill inserts, City website announcements, social media posts, and press releases or informational campaigns. These public notification methods would be implemented in the event of a Level 2 Water Shortage and would increase in frequency in the event of a Level 3 Water Shortage.

## **Section 7 COMPLIANCE AND ENFORCEMENT**

### **Law**

*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.*

In accordance with the Corcoran Municipal Code Section 8-1-7, the City Manager, Finance Director, and Public Works Director, are authorized to make arrests without warrants and issue citations for any violation of the City's water conservation plan. Additionally, all person who violates these provisions may be found guilty of a separate offense for each day in which the provision was violated.

## **Section 8 LEGAL AUTHORITIES**

### **Law**

*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. [see below]  
(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.*

*Water Code Section Division 1, Section 350*

*Declaration of water shortage emergency condition. 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.*

This City has the legal authority to implement and enforce its water shortage response actions and relative penalties, water charge adjustments, and water service alteration or prohibition. City

Urgency Ordinance 15-06, which amended the water supply shortage regulations for the City in June 2015, documents the demand reduction measures as well as enforcement protocols.

## Section 9 FINANCIAL CONSEQUENCES OF WSCP ACTIVATION

### Law

10632 (a) (8)	<p><i>A description of the financial consequences of, and responses for, drought conditions, including, but not limited to, all of the following:</i></p> <p>(A) <i>A description of potential revenue reductions and expense increases associated with activated shortage response actions described in paragraph (4).</i></p> <p>(B) <i>A description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions described in paragraph (4).</i></p> <p>(C) <i>A description of the cost of compliance with Chapter 3.3 (commencing with Section 365) of Division 1. [retail urban suppliers only]</i></p>
---------------	--

The activation of the Water Shortage Contingency Plan and related Water Shortage Levels have financial consequences for the City. Reduced water consumption will contribute to reduced revenue, while proactive operational practices will contribute to higher operational and maintenance (O&M) costs. Currently, the City maintains some funds as rate stabilization reserves as well as approximately 60 days of operating reserves. In addition, the City Council has the authority to increase water rates to offset reduced revenues. These reserve funds or rate modifications have the ability to mitigate financial consequences of the Water Shortage Contingency Plan. Additionally, potential mitigation actions are documented in [Table 9-1](#). These are preliminary actions and would be evaluated in more detail should a water shortage occur.

**Table 9-1 Financial Consequences of WSCP**

Stage	Supply Reduction	Financial Consequences	Anticipated Mitigation Actions
0	None	None	Funding provided for supplemental water supply reserve.
1	0%-20%	Potential increase in O&M expenses and mild reduction in revenue.	Reduce O&M costs and identify supplemental funding sources.
2	20%-40%	Moderate increase to O&M expenses and decrease in revenue.	Defer capital expenditures and consider use of reserves.
3	>40%	Significant increases to O&M and decreases in revenue.	Implement long-term O&M budget reductions.



## Section 10 MONITORING AND REPORTING

### Law

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.*

Monitoring and reporting as part of the Water Shortage Contingency Plan and Annual Assessment will be based on the metered production and consumption data. Ongoing review of this information, and comparisons to historical data for similar months, will enable the City to monitor the effectiveness of the WSCP measures. Additionally, due to implemented shortage response actions and water shortage levels, the City's Water Department may increase the frequency of reading meters in order to collect, track, and analyze the water use.

## Section 11 WSCP REFINEMENT PROCEDURES

### Law

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*

While the WSCP is a standalone document adopted separately from the 2020 UWMP it should be considered a dynamic planning tool and be subject to ongoing refinement efforts as necessary. Following the declaration of a water shortage and implementation of the WSCP, the monitoring and reporting steps described in a previous section will provide valuable insight into the effectiveness of the WSCP. City staff will evaluate the effectiveness of communication protocols, demand reduction actions, operational changes, or financial consequence mitigation. If this review reveals opportunities for procedural refinements or new WSCP actions, City staff may elect to incorporate these items into an amended version of the WSCP.

## Section 12 SPECIAL WATER FEATURE DISTINCTION

### Law

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 California Water Code requires urban water suppliers to distinguish between water features that are artificially supplied with water as opposed to swimming pools and spas. The City's current demand reduction actions include this distinction, as documented in a previous section.

**Section 13 PLAN ADOPTION, SUBMITTAL, AND AVAILABILITY**

**Law**

10632 (c)	<i>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.</i>
-----------	---

The WSCP adoption and submittal process, as well as the public availability, are the same as those for the City’s UWMP. However, the WSCP may be periodically amended independently from the City’s UWMP. Should an amendment to the WSCP be implemented, stakeholder and public notification methods consistent with the UWMP will be performed prior to the adoption of the amended plan.

# APPENDIX A

## Water Shortage Level Comparison

2020 Corcoran WSCP			Corresponding Relationship ("crosswalk")	DWR 6 Standard Water Shortage Levels	
Stage	Percent Supply Reduction	Description		Stage	
1	0-20%	Voluntary Compliance- Water Alert		1	Up to 10%
				2	10 to 20%
2	20%-40%	Mandatory Compliance- Water Warning		3	20 to 30%
				4	30 to 40%
3	>40%	Mandatory Compliance- Water Emergency		5	40 to 50%
				6	Greater than 50%

# APPENDIX B

## Water Shortage Contingency Plan Public Notice and Meeting Minutes

**MINUTES  
CORCORAN CITY COUNCIL,  
JOINT POWERS FINANCE AUTHORITY,  
SUCCESSOR AGENCY FOR CORCORAN RDA,  
& HOUSING AUTHORITY REGULAR MEETING**

**Tuesday, May 10, 2022**

The regular session of the Corcoran City Council was called to order by Mayor Nolen, in the City Council Chambers, 1015 Chittenden Avenue, Corcoran, CA at 5:31 P.M.

**ROLL CALL**

Councilmembers present: Patricia Nolen, Sidonio Palmerin, and Zamora-Bragg

Councilmembers absent: Jerry Robertson and Greg Ojeda

Staff present: Joseph Faulkner, Greg Gatzka, Jessica Gutierrez, Tina Gomez, Marlene Spain, Reuben Shortnacy and Kevin Tromborg

Press present: None

**INVOCATION** - Invocation was led by Councilmember Palmerin

**FLAG SALUTE** – Flag salute was led by Councilmember Zamora-Bragg

Councilmember Robertson arrived at 5:32 P.M.

**1. PUBLIC DISCUSSION**

Alicia Jacobo with Senator Hurtado’s office addressed the Council regarding some of the projects Hurtado’s office has been working on.

**2. CONSENT CALENDAR (VV)**

Following Council discussion, a **motion** was made by Robertson and seconded by Palmerin to approve the Consent Calendar. Motion carried by the following vote:

**AYES:** Nolen, Palmerin, and Roberston

**NOES:**

**ABSENT:** Ojeda

**ABSTAIN:** Zamora-Bragg abstained from the minutes.

**2-A.** Approval of minutes of the meeting of the City Council on April 26, 2022.

**2-B.** Authorization to read ordinances and resolutions by title only.

**2-C.** Approve the Final Acceptance of Work for City of Corcoran Pedestrian and Bicycle Facility Improvement Project and adopt Resolution 3132 Authorizing Final Acceptance and Notice of Completion.

- 2-D. Consider request from the Corcoran Chamber of Commerce to hold the annual SpringFest Saturday, May 14, 2022 in downtown Corcoran, utilizing Whitley Ave., Chittenden Ave and Christmas Tree Park.
- 2-E. Approve the Final Acceptance of Work for City of Corcoran Pedestrian and Bicycle Facility Improvement Project and adopt Resolution 3133 Authorizing Final Acceptance and Notice of Completion.

3. **APPROPRIATIONS (VV)**

Following Council discussion, a **motion** was made by Zamora-Bragg and seconded by Robertson to approve warrant register dated April 26, 2022. Motion carried by the following vote:

**AYES:** Nolen, Palmerin, Roberston and Zamora-Bragg  
**NOES:**  
**ABSENT:** Ojeda

4. **PRESENTATIONS** – None

5. **PUBLIC HEARINGS**

5-A. Continuation of Public Hearing to Receive Public Comment to Update the City of Corcoran’s 2020 Urban Water Management Plan. Public Works Director presented the staff report. There being no written or oral testimony the Public Hearing was declared closed at 6:49 P.M.

Following Council discussion, a **motion** was made by Ojeda and seconded by Robertson to continue adopt the City of Corcoran’s 2020 Urban Water Management Plan and 2020 Water Shortage Contingency Plan. Motion carried by the following vote:

**AYES:** Nolen, Palmerin, Roberston and Zamora-Bragg  
**NOES:**  
**ABSENT:** Ojeda

6. **WRITTEN COMMUNICATIONS** – None

7. **STAFF REPORTS**

7-A. Following Council discussion, a **motion** was made by Robertson and seconded by Palmerin to table 7-A for the next meeting. Motion carried by the following vote:

**AYES:** Nolen, Palmerin, Roberston and Zamora-Bragg

**NOES:**  
**ABSENT:** Ojeda

**7-B.** Following Council discussion, a **motion** was made by Robertson and seconded by Zamora-Bragg to approve Resolution No. 3134 to authorize approval of the Sustainable Transportation Grant. Motion carried by the following vote:

**AYES:** Nolen, Palmerin, Roberston and Zamora-Bragg  
**NOES:**  
**ABSENT:** Ojeda


**8. MATTERS FOR MAYOR AND COUNCIL**

- 8-A.** Council received information items.
- 8-B.** Staff received referral items.
- 8-C.** Committee reports.

**CLOSED SESSION** – None

**ADJOURNMENT**                      **6:19 P.M.**

  
\_\_\_\_\_  
Marlene Spain, City Clerk

  
\_\_\_\_\_  
Patricia Nolen, Mayor

**APPROVED DATE:** 5-24-22



# LEGAL NOTICES

**PUBLIC NOTICE**  
 City of Corcoran  
 2020 Urban Water Management Plan and  
 2020 Water Shortage Contingency Plan  
 Notice of Public Hearing

The City of Corcoran is currently in the process of reviewing, updating and preparing its 2020 Urban Water Management Plan (UWMP) and 2020 Water Shortage Contingency Plan (WSCP) in accordance with the requirements of the California Water Code.

The City of Corcoran is required to update its UWMP every five years. Among other information and analysis, the UWMP will evaluate current and projected water supplies and demands within the City of Corcoran's service area during next 25-year planning and beyond. The 2020 UWMP and 2020 WSCP will also include information regarding water conservation efforts and water shortage contingency planning.

The City of Corcoran is providing this notice pursuant to Water Code Section 10621(b). The City of Corcoran encourages local agencies, the public, and other interested parties to participate in the development of 2020 UWMP and 2020 WSCP.

A copy of the draft 2020 UWMP and 2020 WSCP will be available for public review and comment by Wednesday, March 10th, at the offices of the City Clerk, 832 Whitley Avenue, Corcoran, CA, 93212, and the City's website.

Public Comments may be submitted in writing to :

Joseph Faulkner  
 City of Corcoran  
 832 Whitley Avenue  
 Corcoran, CA, 93212

The Public Commenting period will conclude with a Public Hearing at the City of Corcoran's regular Council Meeting on April 26th, 2022 at 5:30 PM, 1017 Chittenden Avenue, Corcoran CA 93212. After the Public Hearing, the City of Corcoran will be considering the proposed plan for adoption on regular Council Meeting on May 10th, 2022 at 5:30 PM.

Public input and coordination with local agencies are encouraged and will be considered during the process of preparing and completing 2020 UWMP and 2020 WSCP.

Publish: March 31, April 7, 2022.

**PUBLIC NOTICE**

**PUBLIC NOTICE**

ORDER TO SHOW CAUSE FOR CHANGE OF NAME  
 Case Number: 21C 0183

TO ALL INTERESTED PERSONS:

Petitioner: Felix Valdez  
 filed a petition with this court for a decree changing names as follows:

Present name  
 a. Felix Valdez  
 to  
 Proposed name  
 a. Felix Valdez

THE COURT ORDERS that all persons interested in this matter appear before this court at the hearing indicated below to show cause, if any, why the petition for change of name should not be granted. Any person objecting to the name changes described above must file a written objection that includes the reasons for the objection at least two court days before the matter is scheduled to be heard and must appear at the hearing to show cause why the petition should not be granted. If no written objection is timely filed, the court may grant the petition without a hearing.

**PUBLIC NOTICE**

ORDER TO SHOW CAUSE FOR CHANGE OF NAME  
 Case Number: 22C 0073

TO ALL INTERESTED PERSONS:

Petitioner: Ashley Leskämä  
 filed a petition with this court for a decree changing names as follows:

Present name  
 a. Cole Edwards  
 to  
 Proposed name  
 a. Cole Leskämä

THE COURT ORDERS that all persons interested in this matter appear before this court at the hearing indicated below to show cause, if any, why the petition for change of name should not be granted. Any person objecting to the name changes described above must file a written objection that includes the reasons for the objection at least two court days before the matter is scheduled to be heard and must appear at the hearing to show cause why the petition should not be granted. If no written objection is timely filed, the court may grant the petition without a hearing.

**PUBLIC NOTICE**

FICTITIOUS BUSINESS NAME STATEMENT  
 File No. 2022-0132

The following person(s) is (are) doing business as:  
 Barreto Family Pismo Partnership No. 1  
 11490 1ST Avenue  
 Hanford, CA 93230

Gilbert M. Barreto, as Co-Trustee of the 1992 Barreto Family Trust  
 11490 1ST Avenue  
 Hanford, CA 93230  
 Gilbert M. Barreto, as Co-Trustee of the Michael J. Barreto Legacy Trust  
 11490 1ST Avenue  
 Hanford, CA 93230

This business is conducted by: A General Partnership.  
 The registrant commenced to transact business under the fictitious business name or names listed above on 1/29/2021.

**PUBLIC NOTICE**

FICTITIOUS BUSINESS NAME STATEMENT  
 File No. 2022-0132

The following person(s) is (are) doing business as:  
 Barreto Family Pismo Partnership No. 2  
 11490 1ST Avenue  
 Hanford, CA 93230

Gilbert M. Barreto, as Co-Trustee of the 1992 Barreto Family Trust  
 11490 1ST Avenue  
 Hanford, CA 93230  
 Gilbert M. Barreto, as Co-Trustee of the Michael J. Barreto Legacy Trust  
 11490 1ST Avenue  
 Hanford, CA 93230

This business is conducted by: A General Partnership.  
 The registrant commenced to transact business under the fictitious business name or names listed above on 1/29/2021.

**PUBLIC NOTICE**

FICTITIOUS BUSINESS NAME STATEMENT  
 File No. 2022-0109

The following person(s) is (are) doing business as:  
 Next Door Home Inspections  
 17612 Lacey Blvd  
 Lemoore, CA 93245

Elaine Margaret Tompkins  
 17612 Lacey Blvd  
 Lemoore, CA 93245  
 This business is conducted by: An Individual.

This statement was filed with the County Clerk of Kings County on February 17, 2022.

**PUBLIC NOTICE**

FICTITIOUS BUSINESS NAME STATEMENT  
 File No. 2022-0115

The following person(s) is (are) doing business as:  
 Pereira Company  
 1495 Lime CT  
 Lemoore, CA 93245

Andres Pereira  
 1495 Lime CT  
 Lemoore, CA 93245  
 This business is conducted by: An Individual.

The registrant commenced to transact business under the fictitious business name or names listed above on 2/22/2022.

NOTICE OF HEARING  
 Date: 5/6/2022  
 Time: 10:30 am.  
 Dept.: 7

NOTICE OF HEARING  
 Date: 5/13/2022  
 Time: 10:30 am.  
 Dept.: 7

I hereby certify that the foregoing is a correct copy of the file in my office.

I hereby certify that the foregoing is a correct copy of the file in my office.

Notice-this fictitious name statement expires five years from the date it was filed in the office of the county clerk. A new fictitious business name statement must be filed prior to that date.

Notice-this fictitious name statement expires five years from the date it was filed in the office of the county clerk. A new fictitious business name statement must be filed prior to that date.

Kristine Lee,  
 Kings County Clerk

# LEGAL NOTICES

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2020 Water Shortage Contingency Plan  
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City of Corcoran  
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Corcoran, CA, 93212

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Publish: March 31, April 7, 2022.

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TO ALL INTERESTED PERSONS:

Petitioner: Felix Valdez filed a petition with this court for a decree changing names as follows:

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Proposed name to a. Felix Valdez

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NOTICE OF HEARING  
Date: 5/6/2022  
Time: 10:30 a.m.

## PUBLIC NOTICE

ORDER TO SHOW CAUSE FOR CHANGE OF NAME  
Case Number: 22C 0073

TO ALL INTERESTED PERSONS:

Petitioner: Ashley Leskämä filed a petition with this court for a decree changing names as follows:

Present name a. Cole Edwards

Proposed name to a. Cole Leskämä

THE COURT ORDERS that all persons interested in this matter appear before this court at the hearing indicated below to show cause, if any, why the petition for change of name should not be granted. Any person objecting to the name changes described above must file a written objection that includes the reasons for the objection at least two court days before the matter is scheduled to be heard and must appear at the hearing to show cause why the petition should not be granted. If no written objection is timely filed, the court may grant the petition without a hearing.

NOTICE OF HEARING  
Date: 5/13/2022

## PUBLIC NOTICE

FICTITIOUS BUSINESS NAME STATEMENT  
File No. 2022-0132

The following person(s) is (are) doing business as:

Barreto Family Pismo Partnership No. 1  
11490 1ST Avenue  
Hanford, CA 93230

Gilbert M. Barreto, as Co-Trustee of the 1992 Barreto Family Trust  
11490 1ST Avenue  
Hanford, CA 93230

This business is conducted by: A General Partnership.  
The registrant commenced to transact business under the fictitious business name on 1/29/2021.

This statement was filed with the County Clerk

## PUBLIC NOTICE

FICTITIOUS BUSINESS NAME STATEMENT  
File No. 2022-0132

The following person(s) is (are) doing business as:

Barreto Family Pismo Partnership No. 2  
11490 1ST Avenue  
Hanford, CA 93230

Gilbert M. Barreto, as Co-Trustee of the 1992 Barreto Family Trust  
11490 1ST Avenue  
Hanford, CA 93230

This business is conducted by: A General Partnership.  
The registrant commenced to transact business under the fictitious business name on 1/29/2021.

This statement was filed with the County Clerk

## PUBLIC NOTICE

FICTITIOUS BUSINESS NAME STATEMENT  
File No. 2022-0147

The following person(s) is (are) doing business as:

Fit For Purpose  
763 N Valley Forge DR.  
Hanford, CA 93230

Kendra Raskawn Bostic  
763 N Valley Forge DR.  
Hanford, CA 93230

This business is conducted by: An Individual.  
The registrant commenced to transact business under the fictitious business name on N/A.

This statement was filed with the County Clerk of Kings County on March 09, 2022.

## PUBLIC NOTICE

FICTITIOUS BUSINESS NAME STATEMENT  
File No. 2

The following person(s) is (are) doing business as:

M. Bravo Yrnu  
971 Fallen Leaf  
Lemoore, CA 93245

Mariella Bravo  
971 Fallen Leaf  
Lemoore, CA 93245

This business is conducted by: An Individual.  
The registrant commenced to transact business under the fictitious business name on N/A.

This statement was filed with the County Clerk of Kings County on March 08, 2022.

Notice: this fictitious business name is a correct copy of the file in my office.

## APPENDIX C

### Urban Water Management Plan Adoption Resolution and Notifications

**MINUTES  
CORCORAN CITY COUNCIL,  
JOINT POWERS FINANCE AUTHORITY,  
SUCCESSOR AGENCY FOR CORCORAN RDA,  
& HOUSING AUTHORITY REGULAR MEETING**

**Tuesday, May 10, 2022**

The regular session of the Corcoran City Council was called to order by Mayor Nolen, in the City Council Chambers, 1015 Chittenden Avenue, Corcoran, CA at 5:31 P.M.

**ROLL CALL**

Councilmembers present: Patricia Nolen, Sidonio Palmerin, and Zamora-Bragg

Councilmembers absent: Jerry Robertson and Greg Ojeda

Staff present: Joseph Faulkner, Greg Gatzka, Jessica Gutierrez, Tina Gomez, Marlene Spain, Reuben Shortnacy and Kevin Tromborg

Press present: None

**INVOCATION** - Invocation was led by Councilmember Palmerin

**FLAG SALUTE** – Flag salute was led by Councilmember Zamora-Bragg

Councilmember Robertson arrived at 5:32 P.M.

**1. PUBLIC DISCUSSION**

Alicia Jacobo with Senator Hurtado’s office addressed the Council regarding some of the projects Hurtado’s office has been working on.

**2. CONSENT CALENDAR (VV)**

Following Council discussion, a **motion** was made by Robertson and seconded by Palmerin to approve the Consent Calendar. Motion carried by the following vote:

**AYES:** Nolen, Palmerin, and Roberston

**NOES:**

**ABSENT:** Ojeda

**ABSTAIN:** Zamora-Bragg abstained from the minutes.

**2-A.** Approval of minutes of the meeting of the City Council on April 26, 2022.

**2-B.** Authorization to read ordinances and resolutions by title only.

**2-C.** Approve the Final Acceptance of Work for City of Corcoran Pedestrian and Bicycle Facility Improvement Project and adopt Resolution 3132 Authorizing Final Acceptance and Notice of Completion.

- 2-D. Consider request from the Corcoran Chamber of Commerce to hold the annual SpringFest Saturday, May 14, 2022 in downtown Corcoran, utilizing Whitley Ave., Chittenden Ave and Christmas Tree Park.
- 2-E. Approve the Final Acceptance of Work for City of Corcoran Pedestrian and Bicycle Facility Improvement Project and adopt Resolution 3133 Authorizing Final Acceptance and Notice of Completion.

3. **APPROPRIATIONS (VV)**

Following Council discussion, a **motion** was made by Zamora-Bragg and seconded by Robertson to approve warrant register dated April 26, 2022. Motion carried by the following vote:

**AYES:** Nolen, Palmerin, Roberston and Zamora-Bragg  
**NOES:**  
**ABSENT:** Ojeda

4. **PRESENTATIONS** – None

5. **PUBLIC HEARINGS**

- 5-A. Continuation of Public Hearing to Receive Public Comment to Update the City of Corcoran’s 2020 Urban Water Management Plan. Public Works Director presented the staff report. There being no written or oral testimony the Public Hearing was declared closed at 6:49 P.M.

Following Council discussion, a **motion** was made by Ojeda and seconded by Robertson to continue adopt the City of Corcoran’s 2020 Urban Water Management Plan and 2020 Water Shortage Contingency Plan. Motion carried by the following vote:

**AYES:** Nolen, Palmerin, Roberston and Zamora-Bragg  
**NOES:**  
**ABSENT:** Ojeda

6. **WRITTEN COMMUNICATIONS** – None

7. **STAFF REPORTS**

- 7-A. Following Council discussion, a **motion** was made by Robertson and seconded by Palmerin to table 7-A for the next meeting. Motion carried by the following vote:

**AYES:** Nolen, Palmerin, Roberston and Zamora-Bragg

**NOES:**  
**ABSENT:** Ojeda

**7-B.** Following Council discussion, a **motion** was made by Robertson and seconded by Zamora-Bragg to approve Resolution No. 3134 to authorize approval of the Sustainable Transportation Grant. Motion carried by the following vote:

**AYES:** Nolen, Palmerin, Roberston and Zamora-Bragg  
**NOES:**  
**ABSENT:** Ojeda


**8. MATTERS FOR MAYOR AND COUNCIL**

- 8-A.** Council received information items.
- 8-B.** Staff received referral items.
- 8-C.** Committee reports.

**CLOSED SESSION** – None

**ADJOURNMENT**                      **6:19 P.M.**

  
\_\_\_\_\_  
Marlene Spain, City Clerk

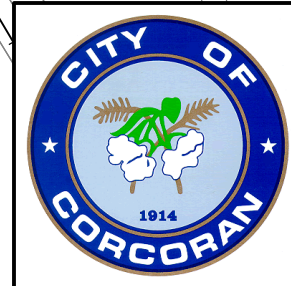
  
\_\_\_\_\_  
Patricia Nolen, Mayor

**APPROVED DATE:** 5-24-22

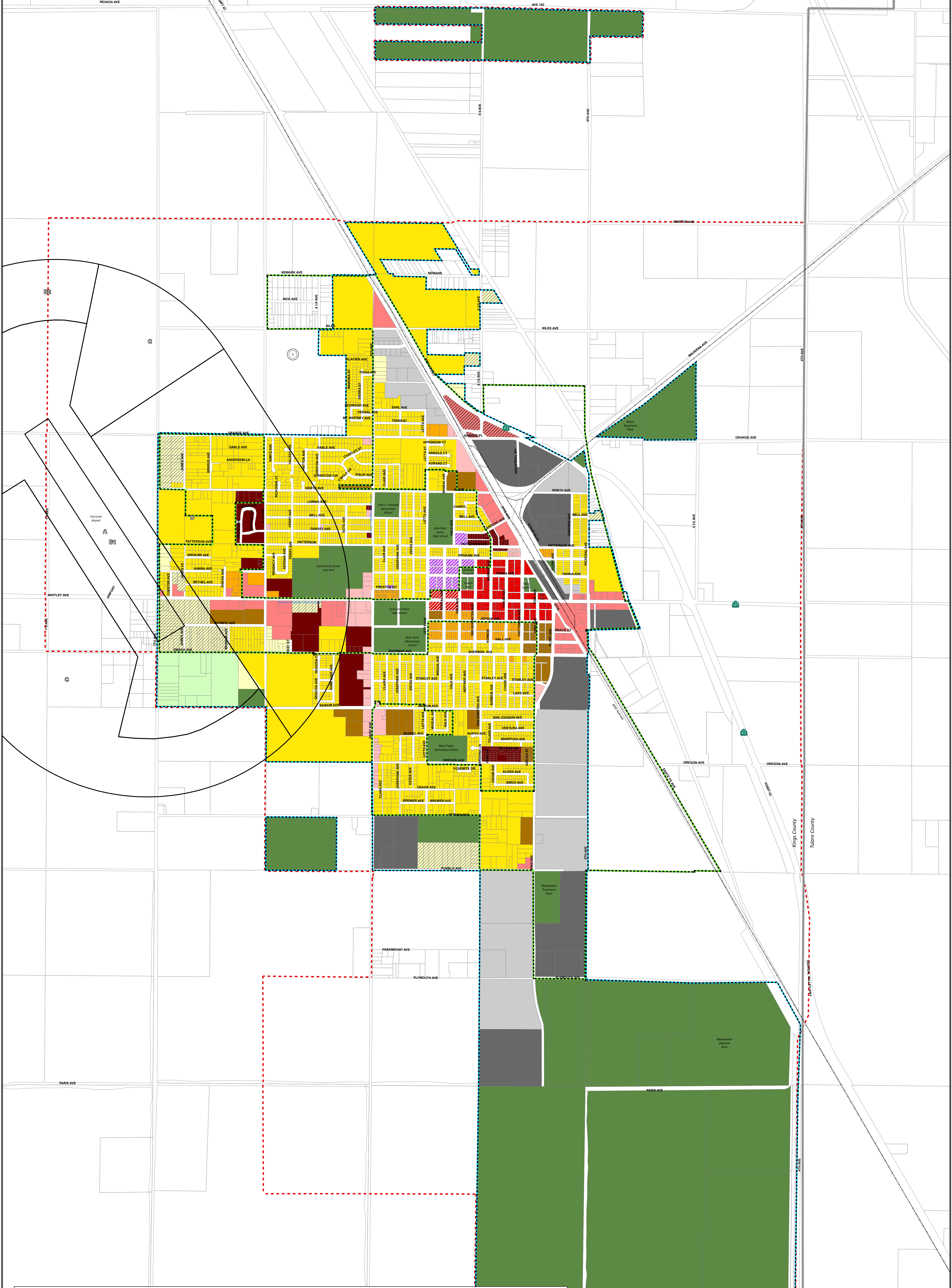
# APPENDIX C

## Corcoran Zoning Map





# Zoning Map



### Legend

- County Boundary
- City Limits
- Sphere of Influence
- Redevelopment Zone
- West Airport Zones
- Parcels
- Railroads

### ZONING

- CN - Neighborhood Commercial
- CS - Service Commercial
- CH - Highway Commercial
- CD - Downtown Commercial
- CC - Central Commercial
- PO - Professional Office
- IL - Light Industrial
- IH - Heavy Industrial

- RCO - Resource Conservation and Open Space
- AG - Agriculture
- RA - Residential Acreage
- R-1-10 - Single Family Residential - 10,000 Sq. Ft. Minimum Site Area
- R-1-6 - Single Family Residential - 6,000 Sq. Ft. Minimum Site Area
- RM-2 - Multi-Family Residential - 2,000 Sq. Ft. Minimum Site per Dwelling Unit
- RM-2.5 - Multi-Family Residential - 2,500 Sq. Ft. Minimum Site per Dwelling Unit
- RM-3 - Multi-Family Residential - 3,000 Sq. Ft. Minimum Site per Dwelling Unit

0 500 1,000 2,000 Feet

Quad Knopf  
Last Updated: January 2010



# APPENDIX D

## Estimated Sustainable Yield

## Estimate of Sustainable Yield

### Tulare Lake Groundwater subbasin<sup>1</sup>

Basin Area	(acres)	535,869
Average groundwater pumping	(AFY)	348,700
Average net recharge	(AFY)	335,360
Groundwater Overdraft	(AFY)	-13,340
Estimated Sustainable Yield	(AFY)	335,360
Sustainable Yield per Unit Area	(AFY/acre)	0.63

### City of Corcoran

Planning Area	(acres)	9,408
Sustainable Yield per Unit Area	(AFY/acre)	0.63
Estimated Sustainable Yield	(AFY)	5,888

**AKEL**  
ENGINEERING GROUP, INC.  
Notes:

12/22/2021

1. Source: Tulare Lake Subbasin Groundwater Sustainability Plan, January 2020.

## APPENDIX E

### Urban Water Management Plan Adoption Resolution and Notifications

**MINUTES  
CORCORAN CITY COUNCIL,  
JOINT POWERS FINANCE AUTHORITY,  
SUCCESSOR AGENCY FOR CORCORAN RDA,  
& HOUSING AUTHORITY REGULAR MEETING**

**Tuesday, May 10, 2022**

The regular session of the Corcoran City Council was called to order by Mayor Nolen, in the City Council Chambers, 1015 Chittenden Avenue, Corcoran, CA at 5:31 P.M.

**ROLL CALL**

Councilmembers present: Patricia Nolen, Sidonio Palmerin, and Zamora-Bragg

Councilmembers absent: Jerry Robertson and Greg Ojeda

Staff present: Joseph Faulkner, Greg Gatzka, Jessica Gutierrez, Tina Gomez, Marlene Spain, Reuben Shortnacy and Kevin Tromborg

Press present: None

**INVOCATION** - Invocation was led by Councilmember Palmerin

**FLAG SALUTE** – Flag salute was led by Councilmember Zamora-Bragg

Councilmember Robertson arrived at 5:32 P.M.

**1. PUBLIC DISCUSSION**

Alicia Jacobo with Senator Hurtado’s office addressed the Council regarding some of the projects Hurtado’s office has been working on.

**2. CONSENT CALENDAR (VV)**

Following Council discussion, a **motion** was made by Robertson and seconded by Palmerin to approve the Consent Calendar. Motion carried by the following vote:

**AYES:** Nolen, Palmerin, and Roberston

**NOES:**

**ABSENT:** Ojeda

**ABSTAIN:** Zamora-Bragg abstained from the minutes.

**2-A.** Approval of minutes of the meeting of the City Council on April 26, 2022.

**2-B.** Authorization to read ordinances and resolutions by title only.

**2-C.** Approve the Final Acceptance of Work for City of Corcoran Pedestrian and Bicycle Facility Improvement Project and adopt Resolution 3132 Authorizing Final Acceptance and Notice of Completion.

- 2-D. Consider request from the Corcoran Chamber of Commerce to hold the annual SpringFest Saturday, May 14, 2022 in downtown Corcoran, utilizing Whitley Ave., Chittenden Ave and Christmas Tree Park.
- 2-E. Approve the Final Acceptance of Work for City of Corcoran Pedestrian and Bicycle Facility Improvement Project and adopt Resolution 3133 Authorizing Final Acceptance and Notice of Completion.

3. **APPROPRIATIONS (VV)**

Following Council discussion, a **motion** was made by Zamora-Bragg and seconded by Robertson to approve warrant register dated April 26, 2022. Motion carried by the following vote:

**AYES:** Nolen, Palmerin, Roberston and Zamora-Bragg  
**NOES:**  
**ABSENT:** Ojeda

4. **PRESENTATIONS** – None

5. **PUBLIC HEARINGS**

5-A. Continuation of Public Hearing to Receive Public Comment to Update the City of Corcoran’s 2020 Urban Water Management Plan. Public Works Director presented the staff report. There being no written or oral testimony the Public Hearing was declared closed at 6:49 P.M.

Following Council discussion, a **motion** was made by Ojeda and seconded by Robertson to continue adopt the City of Corcoran’s 2020 Urban Water Management Plan and 2020 Water Shortage Contingency Plan. Motion carried by the following vote:

**AYES:** Nolen, Palmerin, Roberston and Zamora-Bragg  
**NOES:**  
**ABSENT:** Ojeda

6. **WRITTEN COMMUNICATIONS** – None

7. **STAFF REPORTS**

7-A. Following Council discussion, a **motion** was made by Robertson and seconded by Palmerin to table 7-A for the next meeting. Motion carried by the following vote:

**AYES:** Nolen, Palmerin, Roberston and Zamora-Bragg

**NOES:**  
**ABSENT:** Ojeda

**7-B.** Following Council discussion, a **motion** was made by Robertson and seconded by Zamora-Bragg to approve Resolution No. 3134 to authorize approval of the Sustainable Transportation Grant. Motion carried by the following vote:

**AYES:** Nolen, Palmerin, Roberston and Zamora-Bragg  
**NOES:**  
**ABSENT:** Ojeda


**8. MATTERS FOR MAYOR AND COUNCIL**

- 8-A.** Council received information items.
- 8-B.** Staff received referral items.
- 8-C.** Committee reports.

**CLOSED SESSION** – None

**ADJOURNMENT**                      **6:19 P.M.**

  
\_\_\_\_\_  
Marlene Spain, City Clerk

  
\_\_\_\_\_  
Patricia Nolen, Mayor

**APPROVED DATE:** 5-24-22