

# 2020 Urban Water Management Plan & 2020 Water Shortage Contingency Plan



Crestline Village Water District



June 15, 2021



# Urban Water Management Plan (UWMP)

## UWMP Act (1983) in California Water Code

- Requires a UWMP from every urban water supplier, updated every 5 years to California Dept. of Water Resources (DWR).
  - *Urban Water Supplier - either publicly or privately owned - providing water for municipal purposes (either directly or indirectly) to more than 3,000 customers, or more than 3,000 AF annually.*
- Public noticing, submittals to DWR, County, State Library, and public.
- Eligibility for DWR and other state grants and loans.
- Substantial additions since 2015.

# Senate Bill X7-7 or “20% by 2020”

## Water Conservation Act of 2009

- 10-year baseline GPCD = 101 (2001-2010)
- 5-year baseline GPCD = 95 (2006-2010)
  - 2015 Interim Target = 131 GPCD
  - 2015 Actual Use = 72 GPCD
    - 2020 Confirmed Target = 161 GPCD
    - 2020 Actual Use = 77 GPCD

**Finding:** CVWD met its 2020 target.

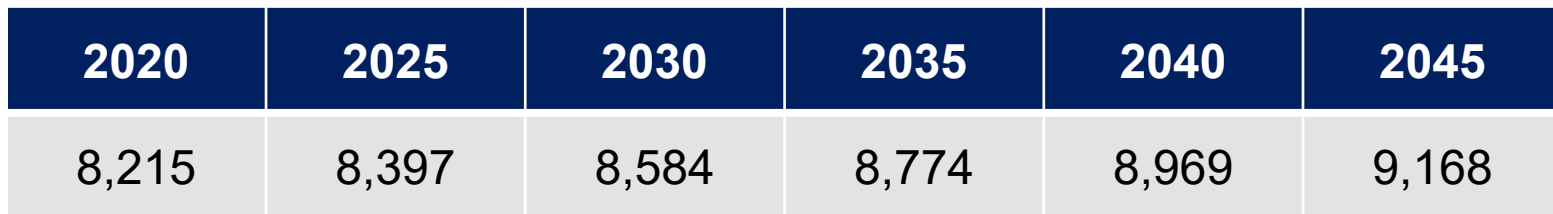
# 2020 Urban Water Management Plan

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# Population

## DWR's "Population Tool"

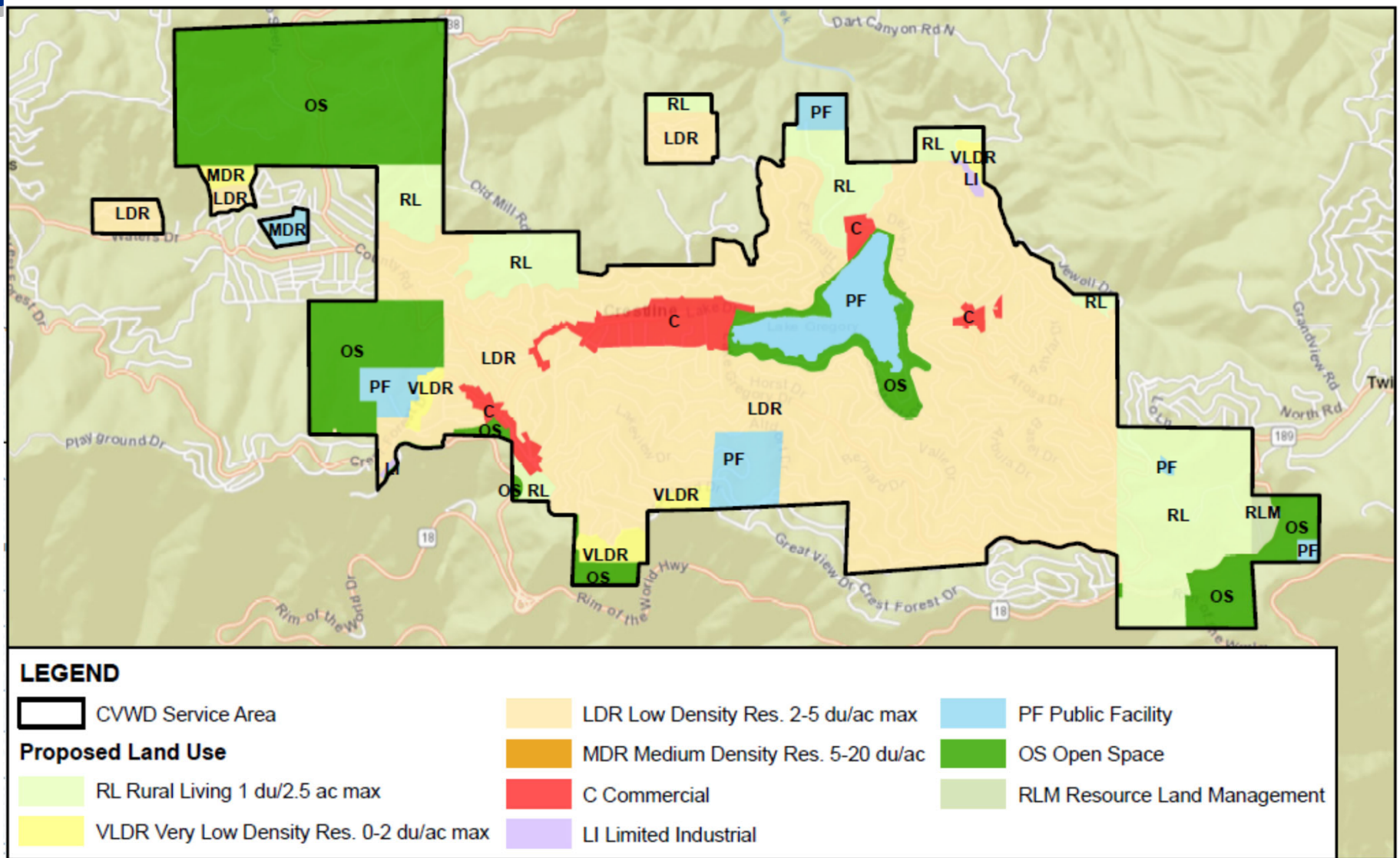


2020	2025	2030	2035	2040	2045
8,215	8,397	8,584	8,774	8,969	9,168

Annual 0.44% increase in population per SCAG 2020 estimate for unincorporated San Bernardino County.

- ~38 additional people every year.

# Land Use



# Water Demand, CY 2020

- Metered Consumption = **290,960 CCF** (hundred cubic feet)
  - + system losses of 18,967 CCF (6.1% of production)
  - = Equals **309,927 CCF** total demand for 2020.
- **Consumption Breakdown**
  - 79% Single-Family Residential
  - 13% Commercial
  - 6% Losses
  - ~2% Multi-family Residential

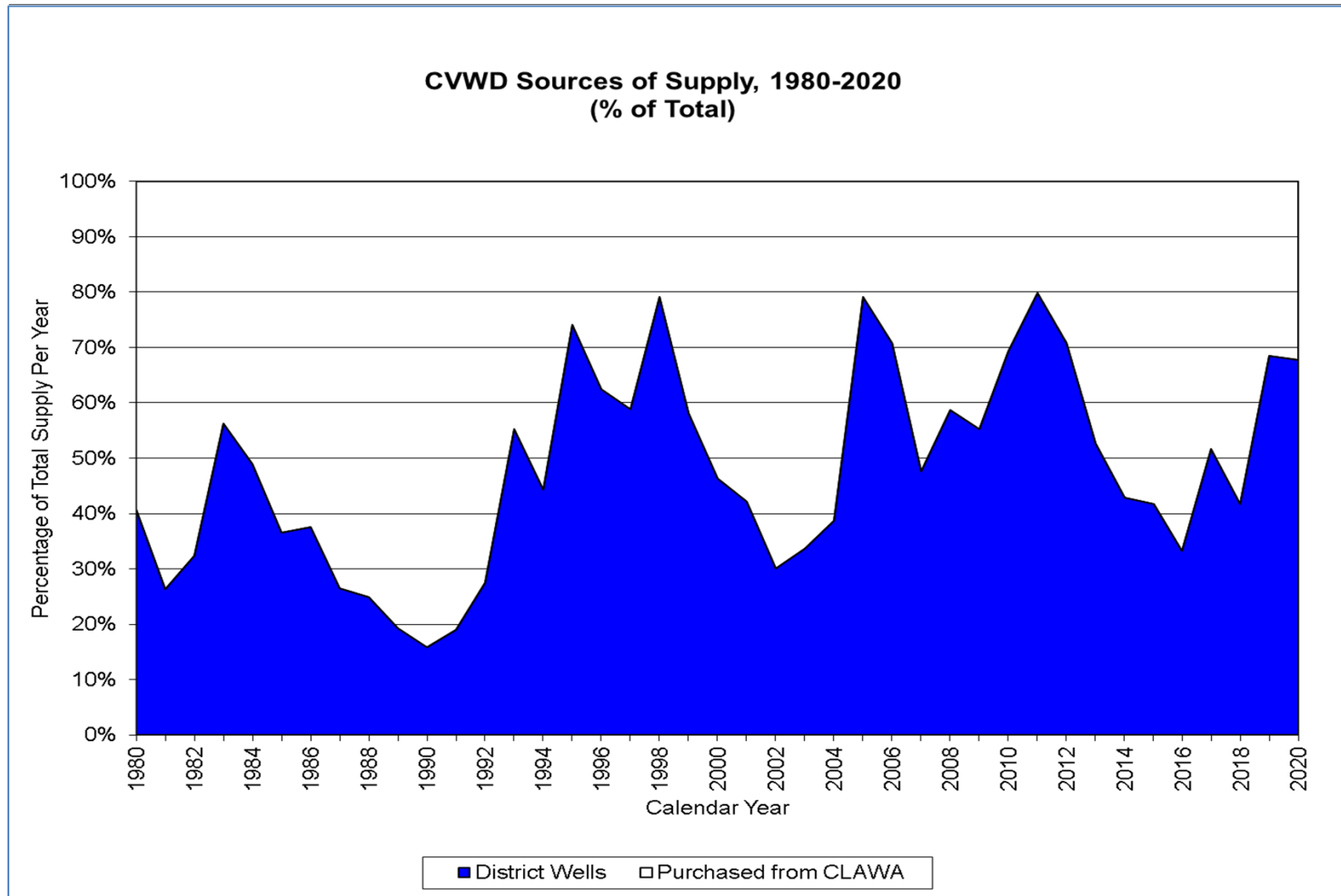
# Water Demand: Projected

	2020	2025	2030	2035	2040
Potable	290,960	305,801	321,401	337,795	355,026
Losses	18,967	18,967	18,967	18,967	18,967
<b>Total (CCF)</b>	<b>309,927</b>	<b>324,768</b>	<b>340,368</b>	<b>356,762</b>	<b>373,993</b>

Assumes 1% per year growth in demand across all sectors, except losses held constant.



# Recorded Sources of Supply



# Future Water Supply Projects

<u>Project</u>	<u>Start Year</u>	<u>Increase in Supply</u>
• Electra Well	2021	8,550 – 11,550 CCF
• New Well #1	2024	8,550 – 11,550 CCF
• New Well #2	2030	8,550 – 11,550 CCF
• New Well #3	2035	8,550 – 11,550 CCF
• New Well #4	2040	8,550 – 11,550 CCF

# Water Supply, Current & Projected

	2020	2025	2030	2035	2040
CVWD wells <sup>(1)</sup>	209,837	232,987	244,487	256,037	267,587
CLAWA <sup>(2)</sup>	100,090	439,607	439,607	439,607	439,607
<b>Total (CCF)</b>	<b>309,927</b>	<b>672,544</b>	<b>684,094</b>	<b>695,644</b>	<b>707,194</b>

(1) Includes additional wells at 11,550 CCF each.

(2) 30% of normal SWP delivery (58% of 5,800 AF).

# Comparing Supply and Demand in Different Conditions

## Basis of Reliability Assessment

CVWD Year Type	Base Year	Volume Available *	% of Average Supply
Average Year	1994-2020	185,770	100%
Single-Dry Year	2015	111,151	60%
Consecutive Dry Years 1st Year	2013	170,884	92%
Consecutive Dry Years 2nd Year	2014	124,266	67%
Consecutive Dry Years 3rd Year	2015	111,151	60%
Consecutive Dry Years 4th Year	2016	91,167	49%
Consecutive Dry Years 5th Year	2017	146,218	79%

The State wants the District to compare supply and demand to demonstrate reliability in normal rainfall years, single-dry, and multiple dry years through at least 2040.

By doing so, the District can identify when a shortfall is expected and then explain how it will be addressed.

**Findings:** Sufficient supply in average and multiple-dry year scenarios through 2040. Slight deficits appear in the Single Dry Year scenario in 2035 (1.24 gpm) and 2040 (4.34 gpm). Can be met with a second new well by 2035.



# Drought Risk Assessment **\*NEW\***

Based on the five driest consecutive years on record taking into account any extra effects to water supplies from plausible changes in climate, regulations, and other locally applicable criteria to identify shortages and effectiveness of response actions.

The Water Code requires that the DRA include the following:

- a description of the data and methods used;
- the basis for the supply shortage conditions;
- determination of the reliability of each source; and
- comparison of total water supplies and uses during the drought,

## **Assumptions:**

1. Water use increases each year 1%.
2. New well comes online in 2021 and 2024 at 8,500 CCF each.
3. Mandatory conservation starting in 2022.
4. Imported water makes up what wells cannot produce.

**Findings:** Sufficient supply especially with customer conservation.

# Climate Change **\*NEW\***

Beginning in 2020, the Water Code requires the District to consider the impacts of climate change in its water supply and water demand projections.

1. **Cal-Adapt** for the Crestline area.
2. Climate change factors developed by Western (WMWD).
  - Factors increase (outdoor) demand in all year types; increase (precipitation and natural recharge) supply in single-dry year; and decrease supply in normal and multiple-dry (5) years.

**Findings:** No shortage in normal and multiple dry years; shortage in single-dry years in 2030-2040 (up to 21 AF).

Climate Tools

Download Data

Find Resources

# Demand Management Measures

**District & Community efforts have been successful and will continue!**

**6 required measures:**

1. Water waste prevention ordinance(s)
2. Metering
3. Conservation pricing
4. Public education and outreach
5. Programs to assess and manage distribution system real loss
6. Water conservation program coordination and staffing support
7. Other

# UWMP Summary

Success!

CVWD has met the requirements of the UWMP Act (CWC §10610-10656).

CVWD has met the requirements of the Water Conservation Act of 2009 (“SB X7-7,” CWC §10608-10608.64).

The District is projected to have sufficient water supplies to meet projected demands with the addition of future planned wells, taking into account climate change, impacted water quality, future supply projects, and water conservation.

District’s future water loss objective to be developed in the next couple of years is expected to be met through investments in pipeline replacement projects and increased meter calibration/testing activities.



# Future Water Use Objectives

In 2018, AB 1668 and SB 606 were signed into law to develop a new framework for statewide long-term water conservation. It does not set any standards or rules for individual customer use.

1. CVWD has developed a Water Shortage Contingency Plan and Drought Risk Assessment as part of the 2020 UWMP that is due July 1, 2021 and every five years thereafter, or when amended.
2. CVWD will submit to DWR an annual water shortage assessment report beginning June 1, **2022**.
3. Beginning November 1, **2023** and annually thereafter, CVWD will submit a report to DWR on urban water use objectives, actual urban water use, implementation of CII water use performance measures, and progress toward an urban water use objective (yet to be determined).
4. By January 1, **2024**, CVWD will submit to DWR a supplement to the 2020 UWMP that describes how demand management measures are implemented to achieve their urban water use objective (which is yet to be determined).

# 2020 Water Shortage Contingency Plan (WSCP)

In 2018 the State modified UWMP law, strengthening Water Shortage Contingency Plans and making them a standalone document requiring separate adoption with 12 elements.

The State defers to the locally adopted WSCP to the extent practicable, which highlights its important role in supporting local autonomy.

## *Water Code Section 10632.3*

*It is the intent of the Legislature that, upon proclamation by the Governor of a state of emergency under the California Emergency Services Act (Chapter 7 (commencing with Section 8550) of Division 1 of Title 2 of the Government Code) based on drought conditions, the board defer to implementation of locally adopted water shortage contingency plans to the extent practicable.*

# 2020 Water Shortage Contingency Plan

WSCP can be updated anytime following the same noticing, adoption, and submittal process as the UWMP.

1. *Supply Reliability* – Recap of UWMP
2. *Annual Assessment Procedures* – To be refined with DWR guidance.
3. *Six Standard Water Shortage Levels* – Statewide consistency (<10% to > 50%)
4. *Shortage Response Actions* – Demand reduction, supply augment, other
  1. Emergency Response Plan;
  2. Seismic Assessment and mitigation;
  3. Measuring effectiveness.
5. *Communication Protocols* – when implementing the WSCP
6. *Compliance and Enforcement* - of the WSCP

## Key Parts (Cont'd)

7. *Legal Authorities* – to implement the WSCP
8. *Financial Consequences* – of implementing the WSCP
9. *Monitoring and Reporting* – of WSCP effectiveness.
10. *Refinement Procedures* – how to improve the WSCP.
11. *Special Water Features* – distinction between fountains and swimming pools during a drought.
12. *Plan Adoption, Submittal, & Availability* – how the District can amend the WSCP.