

2020 Urban Water Management Plan: Approach and Preview

Water Resources Committee

February 23, 2021

Zone 7 Water Agency



Urban Water Management Plan

- Urban Water Management Planning Act (1983)
- Required for urban water suppliers serving more than 3,000 customers, or 3,000 acre-feet annually
- Adopt Urban Water Management Plan
 - Every five years, ending in “5” or “0”
 - Demonstrate water supply reliability in normal, single dry, multiple dry years

Draft 2020 UWMP

- Planning horizon: 2020 to 2045
- Incorporates:
 - Updated demands (including Regional M&I Demand Study)
 - DWR's 2019 Delivery Capability Report
 - Findings from the 2019 Water Supply Evaluation Update (2019 WSE Update) and latest status of water supply projects
- Conforms to DWR's Guidebook and California Water Code

2019 WSE Update vs. 2020 UWMP

WSE Update	2020 UWMP
<p>Evaluation study providing data to inform the UWMP and other planning efforts</p>	<p>Plan for managing water supply reliability</p>
<p>Approach developed by Zone 7 in partnership with retailers and other stakeholders</p>	<p>Regulatory requirement with specific guidelines</p>
<p>Publicly available for general use</p>	<p>Publicly available formal communication; used as the basis of retailers' UWMPs and Water Supply Assessments</p>
<p>Risk-based evaluation of eight water supply portfolios and four contingencies to account for varying water supply conditions</p>	<p>Evaluates one water supply portfolio under normal years, one dry year, and five consecutive dry years</p>
<p>Assesses conditions on an annual basis through buildout and beyond</p>	<p>Assesses conditions in five-year periods through 2045; and a drought risk assessment for the next five years</p>

Key Elements of the UWMP

- Demand Projections
- Existing and Planned Water Supplies
- Water Supply Reliability Assessment
- Water Shortage Contingency Plan
- Demonstration of Consistency with the Delta Plan

Water Demand Projections

DEMAND	2025	2030	2035	2040	2045
Retailer Demand	43,000	43,200	43,400	43,700	43,700
Untreated Water Demand	5,500	7,800	8,300	8,300	8,300
Direct Retail Demand	1,300	800	800	800	800
Local Groundwater Basin	9,200	9,200	9,200	9,200	9,200
SWP Carryover	10,000	10,000	10,000	10,000	10,000
Losses	1,300	700	1,300	2,500	2,500
TOTAL	70,300	71,700	73,000	74,500	74,500
Total Direct Demands (no storage)*	51,100	52,500	53,800	55,300	55,300

- M&I buildout demand from the Woodard & Curran Regional Demand Study
- Reflects retailer delivery requests for 2022-2025.
- Includes direct use, normal operational storage, and losses

*Not including groundwater recharge (9,200 AF) and SWP carryover (10,000 AF)

Water Supply Projections

- Existing supplies:
 - Imported water/local rights: SWP (59-54% reliability assumed)
Arroyo Valle
 - From storage: Local Groundwater (Main Basin)
Kern County Water Banks
Carryover
- Potential future water supplies (sample portfolio):
 - Water Transfers (5,000 AFY, 2025-2030)
 - Potable Reuse and/or Bay Area Regional Desalination Project (5,000 AFY by 2030)
 - Sites Reservoir (10,000 AFY by 2030)
 - Delta Conveyance Project (*no addtl yield assumed at this time*)

Projected Normal Year Supplies

Water Supply Portfolio Assumed for the 2020 UWMP

	2025	2030	2035	2040	2045
SWP Table A	47,000	46,000	45,000	44,000	44,000
SWP Carryover	10,000	10,000	10,000	10,000	10,000
Arroyo Valle	5,500	5,500	5,500	5,500	5,500
Main Basin	9,200	9,200	9,200	9,200	9,200
SWP/Other Transfer	5,000	5,000			
BARDP or Potable Reuse		5,000	5,000	5,000	5,000
Sites Reservoir Project		10,000	10,000	10,000	10,000
TOTAL	76,700	90,700	84,700	83,700	83,700

Normal Year Water Supplies and Demands

	2025	2030	2035	2040	2045
DEMANDS	70,300	71,700	73,000	74,500	74,500
SUPPLIES	76,700	90,700	84,700	83,700	83,700
DIFFERENCE (SUPPLIES-DEMAND)	6,400	19,000	11,700	9,200	9,200

Single Dry Year Water Supplies and Demands

Preliminary Analysis

Single Dry Year	Volume (AF)				
	2025	2030	2035	2040	2045
Supply Totals	65,700	97,700	99,800	98,100	98,000
Demand Totals	51,100	52,500	53,900	55,200	55,200
Difference (Supply - Demand)	14,600	45,200	45,900	42,900	42,800

Five Consecutive Dry Year Water Supplies and Demands

Preliminary Analysis

Five Consecutive Dry Years		Volume (AF)				
		2025	2030	2035	2040	2045
First Year	Supply Totals	90,000	116,900	118,700	117,200	117,100
	Demand Totals	51,100	52,500	53,900	55,200	55,200
	Difference	38,900	64,400	64,800	62,000	61,900
Second Year	Supply Totals	74,800	105,900	108,100	106,900	107,000
	Demand Totals	51,400	52,800	54,100	55,200	55,200
	Difference	23,400	53,100	54,000	51,700	51,800
Third Year	Supply Totals	69,200	100,700	103,000	102,400	102,400
	Demand Totals	51,700	53,000	54,400	55,200	55,200
	Difference	17,500	47,700	48,600	47,200	47,200
Fourth Year	Supply Totals	63,600	97,200	99,600	99,100	99,400
	Demand Totals	51,900	53,300	54,700	55,200	55,200
	Difference	11,700	43,900	44,900	43,900	44,200
Fifth Year	Supply Totals	58,200	94,400	96,600	96,100	96,200
	Demand Totals	52,200	53,600	55,000	55,200	55,200
	Difference	6,000	40,800	41,600	40,900	41,000

Demonstration of Consistency with the Delta Plan

- Delta Plan
 - Required by Delta Reform Act of 2009
 - Further the coequal goals (reliable water supplies, ecosystem restoration)
 - Protect Delta as an evolving place
 - “Covered Actions” must be consistent with Delta Plan
- Consistency with Delta Plan Policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance
- Support certification of consistency for a future covered action
- Include in UWMPs commencing 2015

Delta Plan Reduced Reliance Policy

WR P1

Demonstrating consistency:

- 2020 UWMP reviewed by DWR for compliance
- Pursuit and implementation of locally cost effective and technically feasible programs and projects that reduce reliance on the Delta
- Reduction in the amount of water used, or in the percentage of water used, from the Delta watershed
 - *water efficiency is considered a new source of water supply (baseline GPCD of 191, dropping to 95-143 GPCD over 2015-2045)*

Regional Self-Reliance

Preliminary Analysis

Percent Change in Supplies from the Delta Watershed (As a Percent of Demand w/out WUE)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Percent of Water Supplies from the Delta Watershed	85%	59%	47%	73%	70%	61%	59%	59%
Change in Percent of Water Supplies from the Delta Watershed		-26%	-38%	-12%	-15%	-24%	-26%	-26%

- *Water Use Efficiency contributes 15,000 to 26,000 AFY of non-Delta ‘supply’.*
- *Local groundwater, Arroyo Valle, Sites Reservoir, and potable reuse are non-Delta supplies.*
- *An addendum to the 2015 UWMP will be issued to incorporate this analysis, to be consistent with the Delta Plan.*

Water Shortage Contingency Plan (WSCP)

- Annual Water Supply and Demand Assessment Process – Current Year and a following dry year
- Aligns water shortage “stages” with CA’s standard stages
 - Six water shortage stages
 - Stages triggered by water shortage conditions: Gap between supply and demand
 - Stages defined generally to allow flexible response
- Identifies shortage response actions for each stage
- WSCP can be updated outside UWMP cycle

WSCP Stages

Stage	Shortage Level	Water Supply Condition*
1	≤ 10%	<ul style="list-style-type: none"> • Agency has adequate supply and seeks to preserve water resources for the future; or, • Assessment shows that water supply is not able to meet normal demands by up to 10%; or, • Definable event has reduced water supply by up to 10%.
2	Up to 20%	<ul style="list-style-type: none"> • Assessment leads to a reasonable conclusion that water supplies may not adequately meet normal demands in the current or upcoming years; or, • Assessment shows that water supply is not able to meet normal demands by up to 20%; or, • Definable event has reduced water supply by up to 20%.

* Zone 7 can declare a water shortage stage if any water supply condition for that stage is met.

WSCP Stages, cont'd

Stage	Shortage Level	Water Supply Condition*
3	Up to 30%	<ul style="list-style-type: none">• Previous water conservation target has not been met; or,• Assessment shows that water supply is not able to meet normal demands by up to 30%; or,• Definable event has reduced water supply by up to 30%.
4	Up to 40%	<ul style="list-style-type: none">• Previous water conservation target has not been met; or,• Assessment shows that water supply is not able to meet normal demands by up to 40%; or,• Definable event has reduced water supply by up to 40%.

* Zone 7 can declare a water shortage stage if any water supply condition for that stage is met.

WSCP Stages, cont'd

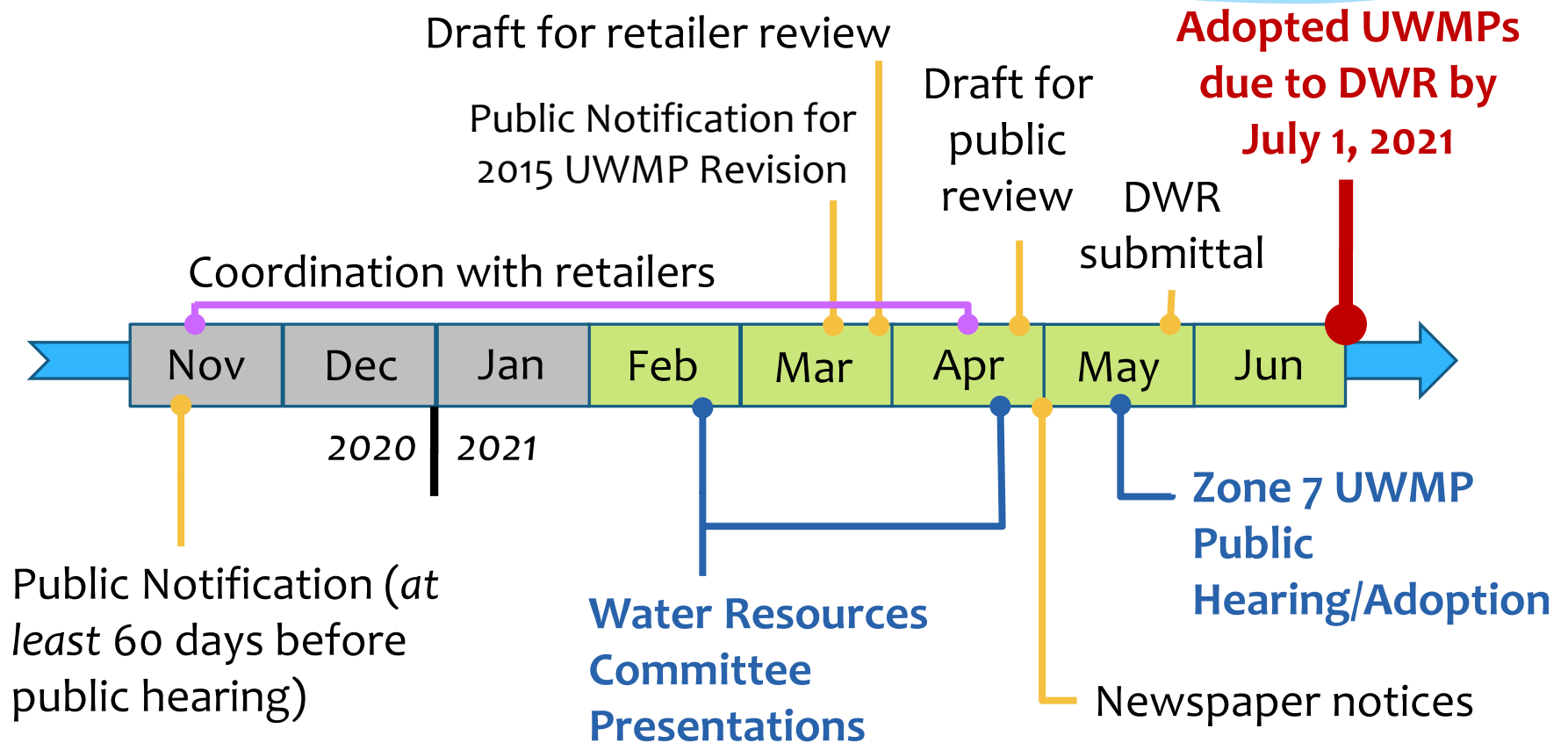
Stage	Shortage Level	Water Supply Condition*
5	Up to 50%	<ul style="list-style-type: none"> • Previous water conservation target has not been met; or, • Assessment shows that water supply is not able to meet normal demands by up to 50%; or, • Definable event has reduced water supply by up to 50%.
6	> 50%	<ul style="list-style-type: none"> • Previous water conservation target has not been met; or, • Assessment shows that water supply is not able to meet normal demands by more than 50%; or, • Definable event has reduced water supply by more than 50%.

* Zone 7 can declare a water shortage stage if any water supply condition for that stage is met.

Examples of Shortage Response Actions

- Demand Reduction—Ask Retailers to reduce demands to corresponding water shortage
- Other Actions
 - Optimize use of water supplies from different sources
 - Review CIP program and accelerate projects to improve water supply management (Stages 3 and greater)
 - Evaluate timing of maintenance activities to minimize water supply loss (Stages 2 and greater)

2020 UWMP Schedule



Questions?