



Urban Water Management Plan

Public Hearing

Board of Directors Meeting
June 15, 2021



What is in the 2020 Urban Water Management Plan?

- UWMPs get updated every 5 years
- Describes and quantifies historical and projected water demands and supplies over a 20-year planning horizon
- Demonstrates that local Districts are meeting SB X7-7 “20 by 2020” targets
- Includes a Water Supply Assessment of projected demands and supplies under normal and drought year conditions (including plans for new supplies if warranted)
- Discusses water conservation measures implemented and planned
- Updates the Water Shortage Contingency Plan to address supply shortfalls with six stages of actions

Overview of the 2020 UWMP

1. Introduction
2. Plan Preparation
3. System Description
4. Water Use Characterization (Demand Analysis)
5. Regional Alliance for 20 by 2020 Compliance (Comparison of Demands to Target)
6. Water Supply Characterization
7. Water Service Reliability and Drought Risk Assessment
8. Water Shortage Contingency Plan
9. Demand Management Measures
- 10. Plan Adoption and Submittal**



2020 Water Demand and Conservation Project

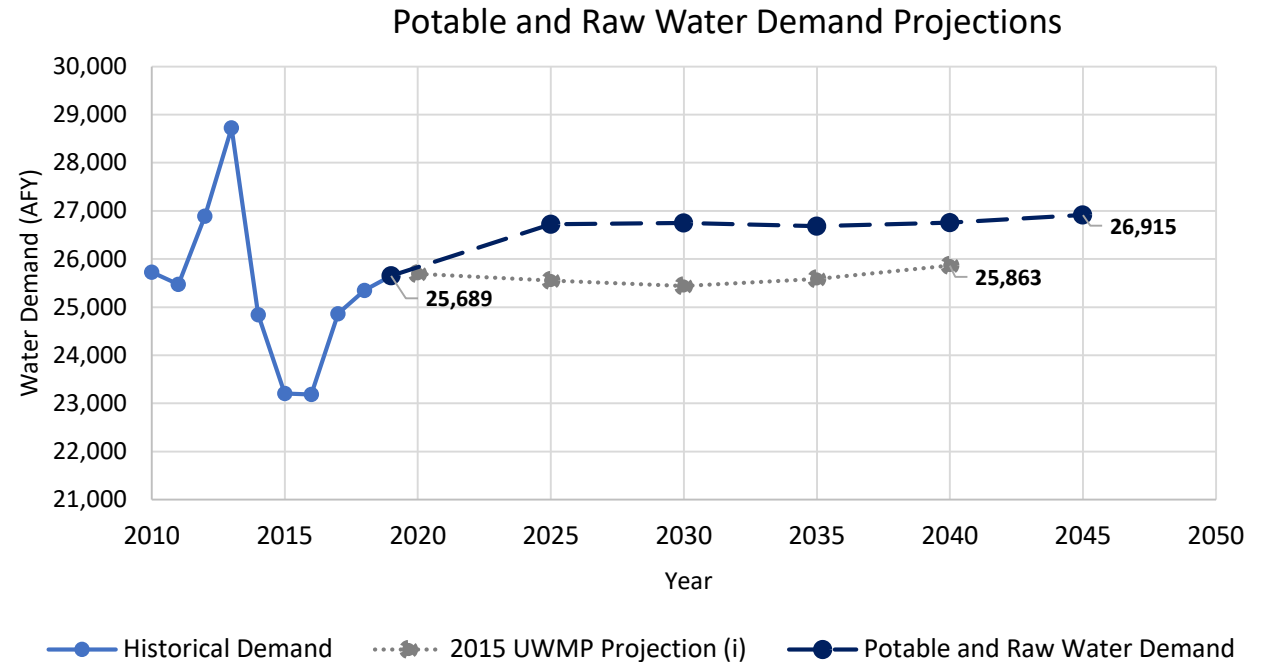
Sonoma Marin Saving Water Partnership members collaborated to develop the 2020 Water Demand and Conservation Project Report to:

- Evaluate and document recent historical water use characteristics and trends, including population and account growth
- Estimate projected water demands for the years 2025 through 2045 to support both the 2020 UWMP update and coordinate planning efforts with Sonoma Water



PROJECTED Potable Water Demands

- 2045 projected demand is 4.9% higher than current 2019 demand
- In 2040, projected demand is 895 AF higher than 2015 UWMP projections
- 2045 demand is within range of historical demands



Supply and Demand Assessment

Reliability Dependent on Type of Water Year

Normal Year

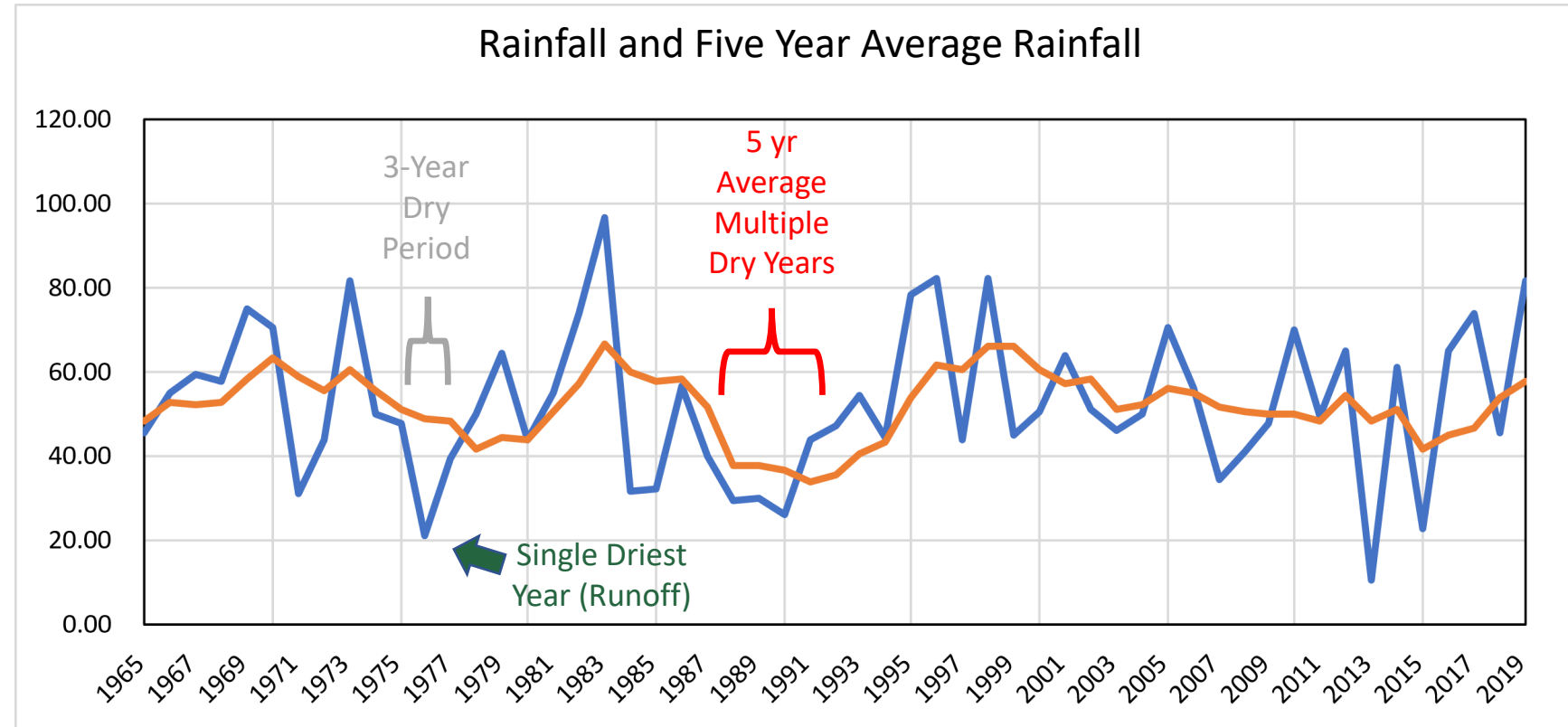
- Average Year
- Basis: 2004

Single Dry Year

- **Year with lowest inflow,** yet not just lowest rainfall
- Basis: 1977

Multiple Consecutive Dry Year

- 5-Year Period with Lowest Rainfall
- Basis: 1987-1991
- Differs from previous basis, which was a 3-year period (1975-1977)



Water Supply Assessment for the Historic Single Dry Year

	2025	2030	2035	2040	2045
Supply totals	52,132	52,137	52,135	52,139	52,149
Demand totals	38,019	38,046	37,974	38,051	38,207
Difference	14,113	14,091	14,161	14,088	13,942
NOTES: (a) Volumes are in units of AF.					

Supply and Demand Comparison – Key Takeaways

- Based on historical water supply patterns, the District can meet future demands under normal, single dry year, and multiple dry year scenarios.
- However, there is significant uncertainty in the future due to climate change.
 - The current drought, if it were to continue similar to 2020, would be dryer than the historical five-year drought scenario.
- A five-year drought would be particularly problematic in a climate change scenario.



Drought Risk Assessment

Regulated Methodology for Conducting a Drought Risk Assessment

- Utilize Unconstrained Demand Projections

	2021	2022	2023	2024	2025
Total Projected Use During Drought Period	34,329	34,898	35,476	36,064	36,661

- Compare with historic five year period of lowest rainfall (1987-1991)

Available Supply	79,385	84,150	86,262	72,529	69,270
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- Drought Risk Assessment concludes no water supply shortage, per State Water Code Methodology §10635(b)

Modeling Risk Assessment for a Synthetic 5-year Drought (2020 water demand repeated 5 Years)

	2021	2022	2023	2024	2025
Gross Water Use	28,199	28,199	28,199	28,199	28,199
<i>Local Surface Water</i>	55,578	41,961	31,014	20,956	10,060
SCWA	7,200	4,200	3,600	3,000	3,000
<i>Recycled Water</i>	750	750	750	750	750
Total Supplies	63,528	46,911	35,364	24,706	13,810
Surplus/Shortfall w/o WSCP Actions	35,329	18,712	7,165	(3,493)	(14,389)

Water Shortage Contingency Plan Impacts on a Synthetic 5-Year Drought Scenario

Planned WSCP Actions (use reduction and supply augmentation)					
Gross Water Use	28,199	20,797	18,329	16,919	16,919
<i>Local Surface Water</i>	55,578	41,752	37,555	32,788	30,125
<i>SCWA</i>	7,200	4,200	3,600	3,000	3,000
<i>Recycled Water</i>	750	750	750	750	750
Total Supplies	63,528	46,702	41,905	36,538	33,875
Revised Surplus/(Shortfall)	35,329	25,905	23,576	19,618	16,955
WSCP Reduction and Supply Augementation Benefits					
WSCP – Use Reduction Savings Benefit	0	7,402	9,870	11,280	11,280
WSCP – Supply Augmentation Benefit	0	0	0	0	0
Resulting % Use Reduction from WSCP Action	0%	26%	35%	40%	40%

Water Shortage Contingency Plan

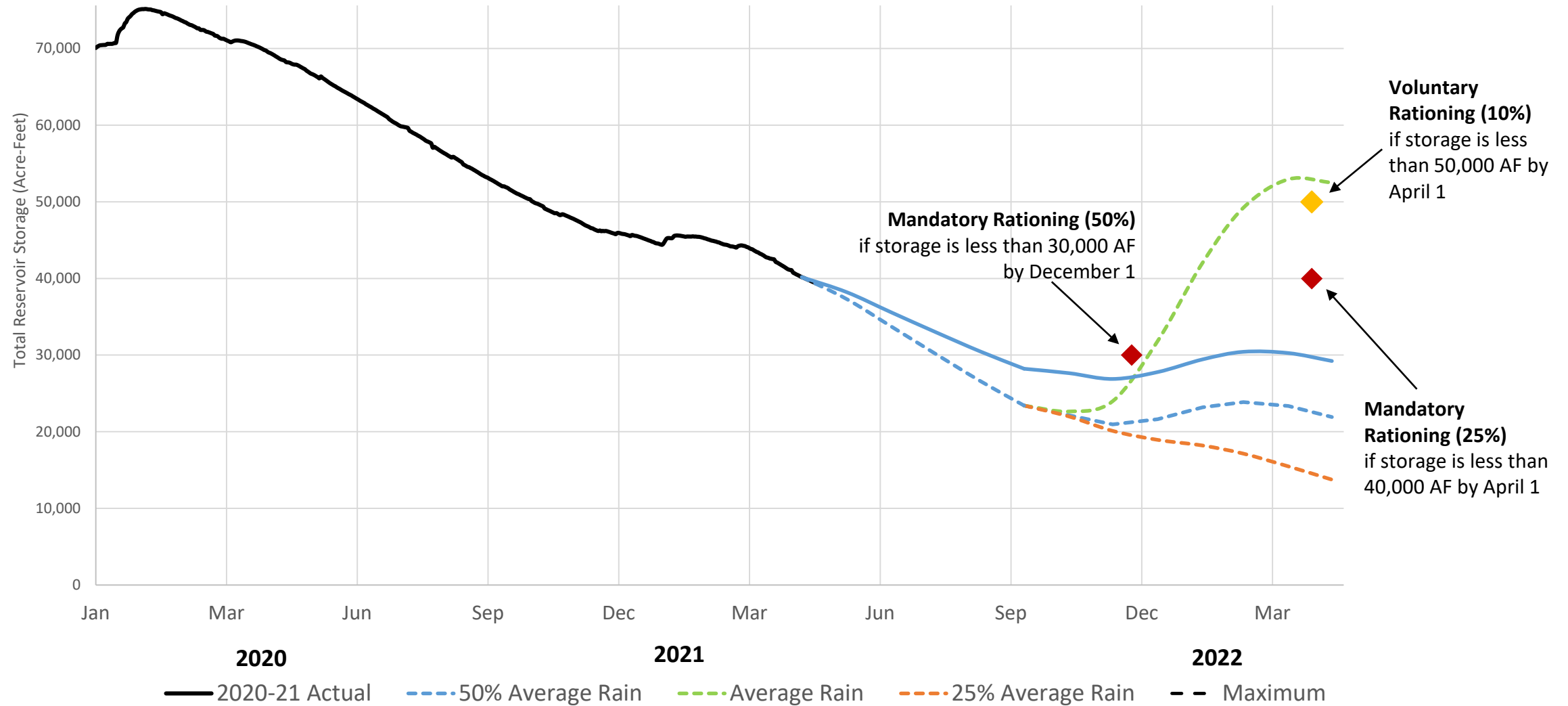
WSCP In Relation to the Current Drought

- Rather than every five years, as required for UWMP, the WSCP can be amended and resubmitted to DWR at any time
- The WSCP describes the district's reevaluation and improvement process to assess the functionality of the district's WSCP and to make appropriate adjustments as may be warranted
- The current drought actions that the district has been undertaking have been used as a guideline in developing the WSCP.
- The WSCP does not create a mandate on how we are to respond to the current drought.
- The intent is to relook at the WSCP following the current drought and revise it based on board actions and lessons learned.

Water Short Contingency Plan Key Elements

- Describes how the district intends to act in the case of any water shortage condition with pre-determined steps
- Creates six standard water shortage levels or stages corresponding to a shortfall of:
10-, 20-, 30-, 40-, 50- and >50-percent
- Lists locally appropriate “shortage response actions” for each shortage level, with a corresponding estimate of the extent the action will address the gap between supplies and demands.
- Water suppliers are now required to submit by July 1st of each year, beginning in 2022, an annual water shortage assessment report to the California Department of Water Resources (DWR).

Current Triggers and Future Water Supply Projections



Six Water Shortage Triggers for Action

Shortage Level	Percent Shortage Range	Water Shortage Condition
0 – Normal Conservation	0	Shortage conditions have not been met
1 – Low rainfall	Up to 10%	If rainfall is 30% below average for the water year* as of April 1 st
2 – Advisory Stage	Up to 20%	Total reservoir storage is in the vicinity of 45,000 acre-feet on January 1 st .
3 – Alert Stage	Up to 30%	Total reservoir storage is in the vicinity of 50,000 AF on February 1 st
4 – Severe Stage	Up to 40%	Total reservoir storage is in the vicinity of 55,000 AF on April 30th or storage level projections using average rainfall and unconstrained demand indicate December 1st storage in vicinity of 30,000 AF.
5 – Critical Stage	Up to 50%	Total reservoir storage on December 1 st is less than of 30,000 AF.
6 – Emergency Stage	>50%	Projection beyond Stage 5 for continued drop in storage levels or total reservoir storage is projected to be in the vicinity of 30,000 AF April 1 st .

*** Defined as less than 32 inches of rainfall at Lagunitas rainfall gauge for the time period of October 1 through March 31**

Shortage Response Actions

Standard Water Use Restrictions (Stages 1 & 2)

Standard Conservation/Water Use Restrictions

No irrigation 48 hours after rain

No run off or overspray of irrigation

No irrigation between 9:00am and 7:00pm

No irrigation of ornamental turf on street medians

Lodging establishments must provide option of not having towels and linen laundered daily

Using a garden hose without a shutoff nozzle is prohibited

Drinking water served at commercial establishments on request only

Washing sidewalks and hard surfaces with direct hosing is prohibited

Consumer side leaks to be repaired within 48 hours

Use of private fire line for any purpose other than fire suppression is prohibited

Irrigation restricted for ornamental and turf to three days per week

Additional Mandatory Restrictions (Stage 3)

- Increase restrictions on irrigation (e.g. Spray irrigation limited to two days a week; drip irrigation limited to three days a week)
- Covers are required for pools and spas
- Do not wash vehicles at home, use a carwash that recycles water instead
- Do not wash driveways or sidewalks
- Gutter flooding is prohibited
- No watering grass on public medians
- No refilling or topping off decorative fountains
- Increase incentives for water conservation

It's
**drive-it-dirty
time.**

Drought is here. Save water.



Additional Mandatory Restrictions (Stage 4)

- No power washing homes or businesses
- Golf course irrigation is restricted to greens and tees
- No using potable water for dust control, sewer flushing projects or street cleaning
- Increase restrictions on irrigation (e.g. irrigation limited to one day a week; except for minimal irrigation to maintain tree health)
- No installation of new landscapes including no expansion of existing
- Consider implementation of drought rates and water surcharges
- Begin discussion on limiting or excluding new service connections during drought



Additional Mandatory Restrictions (Critical Stage 5)

- Increase restrictions on irrigation (e.g. irrigation limited to minimal irrigation to maintain tree health)
- Additional restrictions for recreational pools
- Consider restrictions on new water service applications such that they will only be granted upon the condition that water shall be used for interior purposes only and landscaping shall be delayed until the District determines that Stage 5 rationing levels are no longer needed
- Enact Drought Rates and Water Surcharges

It's fix-it-when-you-find-it time.

Drought is here. Save water.



Additional Mandatory Restrictions (Emergency Stage 6)

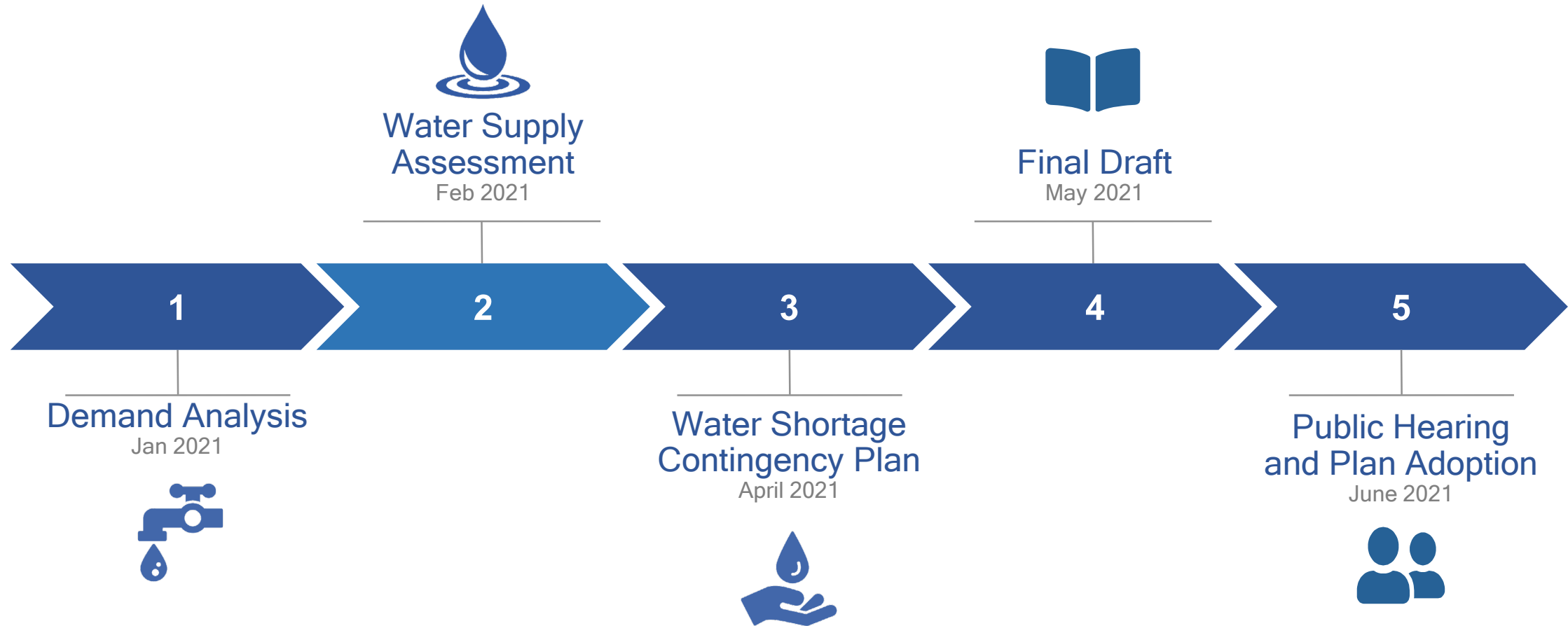
- Increase restrictions on irrigation (e.g. all landscape irrigation is prohibited)
- Impose water allotments
- The use of potable water for any purpose other than human health and safety is prohibited
- New water service applications will not be granted



Supply Augmentation

Shortage Level	Supply Augmentation Methods and Other Actions by Water Supplier	How much is this going to reduce the shortage gap?	Additional Explanation or Reference (optional)
1	Increase supplemental water imports and closely monitor storage levels and weather conditions	Up to 5,000 AF	Range dependent on hydraulic capabilities
1	Enact dry year stream release flow reductions	Up to 100 AF	As defined under Water Right Order 95-17 and agreements with NMWD
4	Initiate Study/Application for Temporary Urgency Change Petition	Up to 2500 AF	Change to environmental releases – possible reduction of migration flow volumes.
5	Access Stored Emergency Supply	500 AF	Develop access to unusable water in reservoir
5	Initiate Emergency Water Supply Projects <ul style="list-style-type: none"> • Water Transfers • Groundwater Banking • Desal, e.g. 	Unknown	Pending investigation, Long Term, Conducting Feasibility Analysis

Key Milestones



Questions?

Past UWMP Projections versus Actual Demands per Year

