
Securing Our Water Future

An Overview of the Calimesa Crystal Vault
Project by Yucaipa Valley Water District

Wednesday, February 4, 2026

NOTICE TO STATE WATER PROJECT CONTRACTORS**Date:** January 29, 2026**Number:** 26-01**Subject:** Increase of State Water Project 2026 Allocation to 30 Percent

From: Original signed by
John Yarbrough
 Deputy Director, State Water Project
 Department of Water Resources

A series of atmospheric rivers that arrived mid-December and continued until early January provided for above average precipitation and high runoff, contributing to storage increases in California reservoirs. However, the series of storms were warm, snowpack accumulation has been below average, and continuing warm and dry weather in January has resulted in snowpack loss. Therefore, the Department of Water Resources (DWR) is increasing the State Water Project (SWP) allocation from 10 percent to 30 percent of most SWP contractors' requested Annual Table A Amounts for 2026, as shown in Attachment A – 2026 SWP Allocation. Considering the recent dry and warm conditions and associated forecasts, we will be carefully assessing and evaluating future allocation increases as hydrologic conditions become clearer.

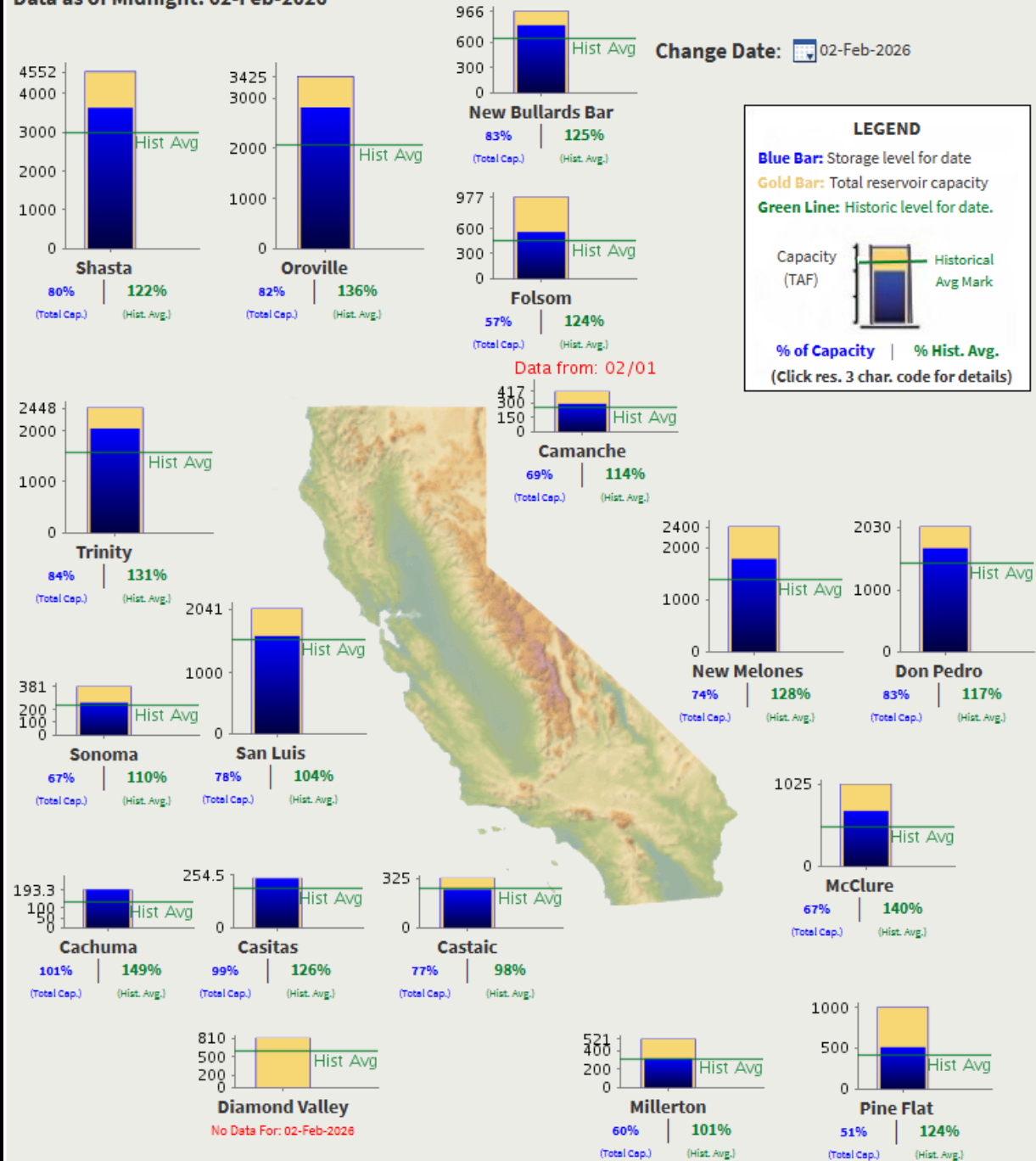
To determine the available SWP water supplies, DWR considers various factors including SWP contractors' 2026 carryover supplies and demands, existing storage in SWP conservation facilities, estimates of future runoff, near-term and seasonal climate forecasts, SWP operational, contractual, and regulatory requirements set forth in the Federal Endangered Species Act and California Endangered Species Act, and water rights obligations under the State Water Resources Control Board's authority.

To schedule SWP water deliveries under this allocation, DWR will utilize the 30-percent water delivery schedules submitted by the SWP contractors in October 2025 (as part of initial requests) or as revised with any subsequent updates. If an SWP contractor foresees

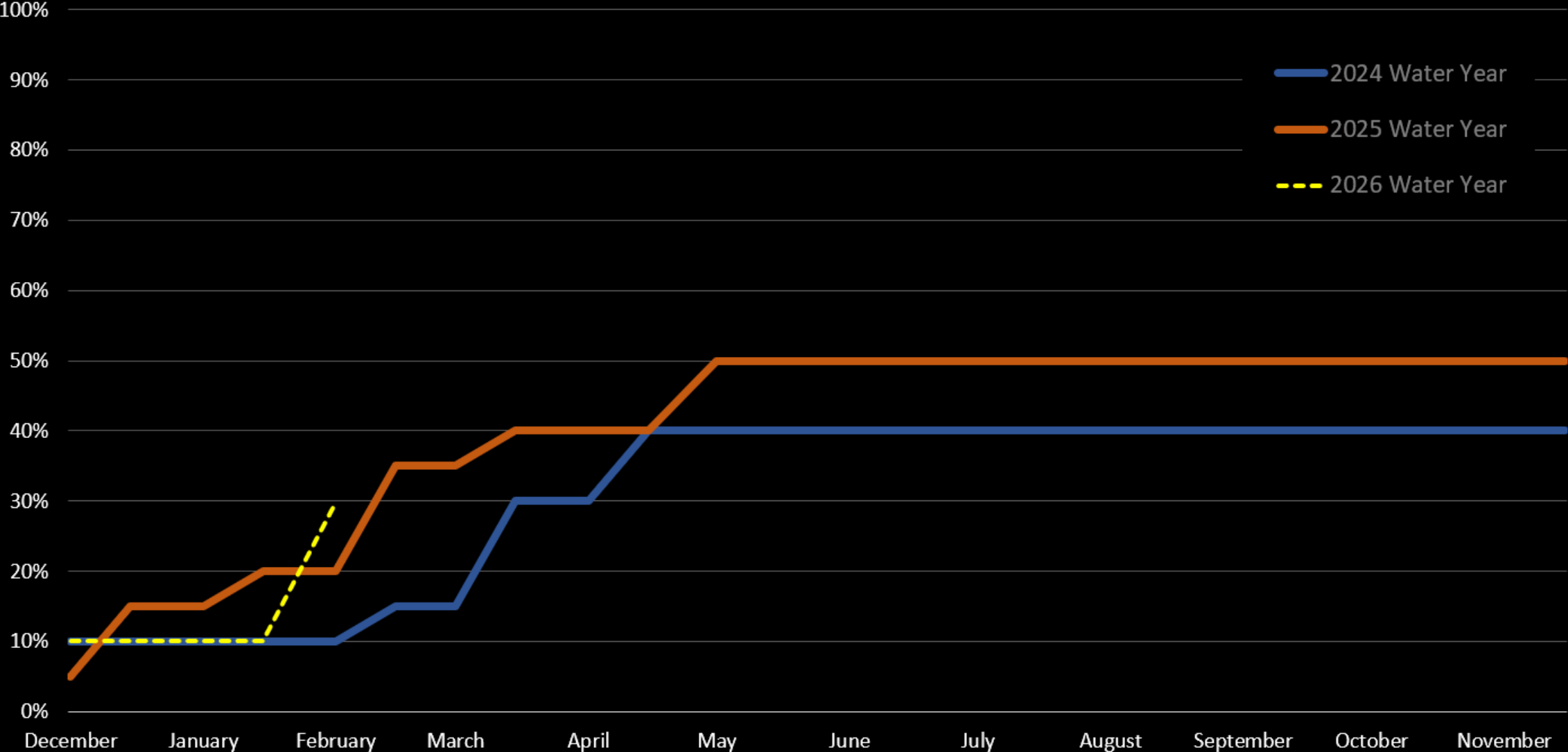
Attachment A
2026 STATE WATER PROJECT ALLOCATION
 Updated
 January 29, 2026

SWP Contractors	Annual Table A Amount (Acre-Feet)	Approved Table A Allocation (Acre-Feet)	Approved Allocation as a Percentage of Annual Table A Amount (3) = (2)/(1)
	(1)	(2)	(3)
FEATHER RIVER			
County of Butte	27,500	16,500	60%
Plumas County FC&WCD	2,700	810	30%
City of Yuba City	9,600	3,840	40%
Subtotal	39,800	21,150	
NORTH BAY			
Napa County FC&WCD	29,025	11,610	40%
Solano County WA	47,756	19,103	40%
Subtotal	76,781	30,713	
SOUTH BAY			
Alameda County FC&WCD, Zone 7	80,619	24,186	30%
Alameda County WD	42,000	12,600	30%
Santa Clara Valley WD	100,000	30,000	30%
Subtotal	222,619	66,786	
SAN JOAQUIN VALLEY			
Oak Flat WD	5,700	1,710	30%
County of Kings	9,305	2,792	30%
Dudley Ridge WD	41,350	12,405	30%
Empire West Side ID	3,617	1,086	30%
Kern County WA	982,730	294,819	30%
Tulare Lake Basin WSD	86,854	26,057	30%
Subtotal	1,129,556	338,869	
CENTRAL COASTAL			
San Luis Obispo County FC&WCD	25,000	7,500	30%
Central Coast Water Authority*	45,486	13,646	30%
Subtotal	70,486	21,146	
SOUTHERN CALIFORNIA			
Antelope Valley-East Kern WA	144,844	43,454	30%
Santa Clarita Valley WA	95,200	28,560	30%
Coachella Valley WD	138,350	41,505	30%
Crestline-Lake Arrowhead WA	5,800	1,740	30%
Desert WA	55,750	16,725	30%
Littlerock Creek ID	2,300	690	30%
Metropolitan WDSC	1,911,500	573,450	30%
Mojave WA	89,800	26,940	30%
Palmdale WD	21,300	6,390	30%
San Bernardino Valley MWD	102,600	30,780	30%
San Gabriel Valley MWD	28,800	8,640	30%
San Geronio Pass WA	17,300	5,190	30%
Ventura County WPD	20,000	6,000	30%
Subtotal	2,633,544	790,064	
TOTAL	4,172,786	1,268,728	~30%

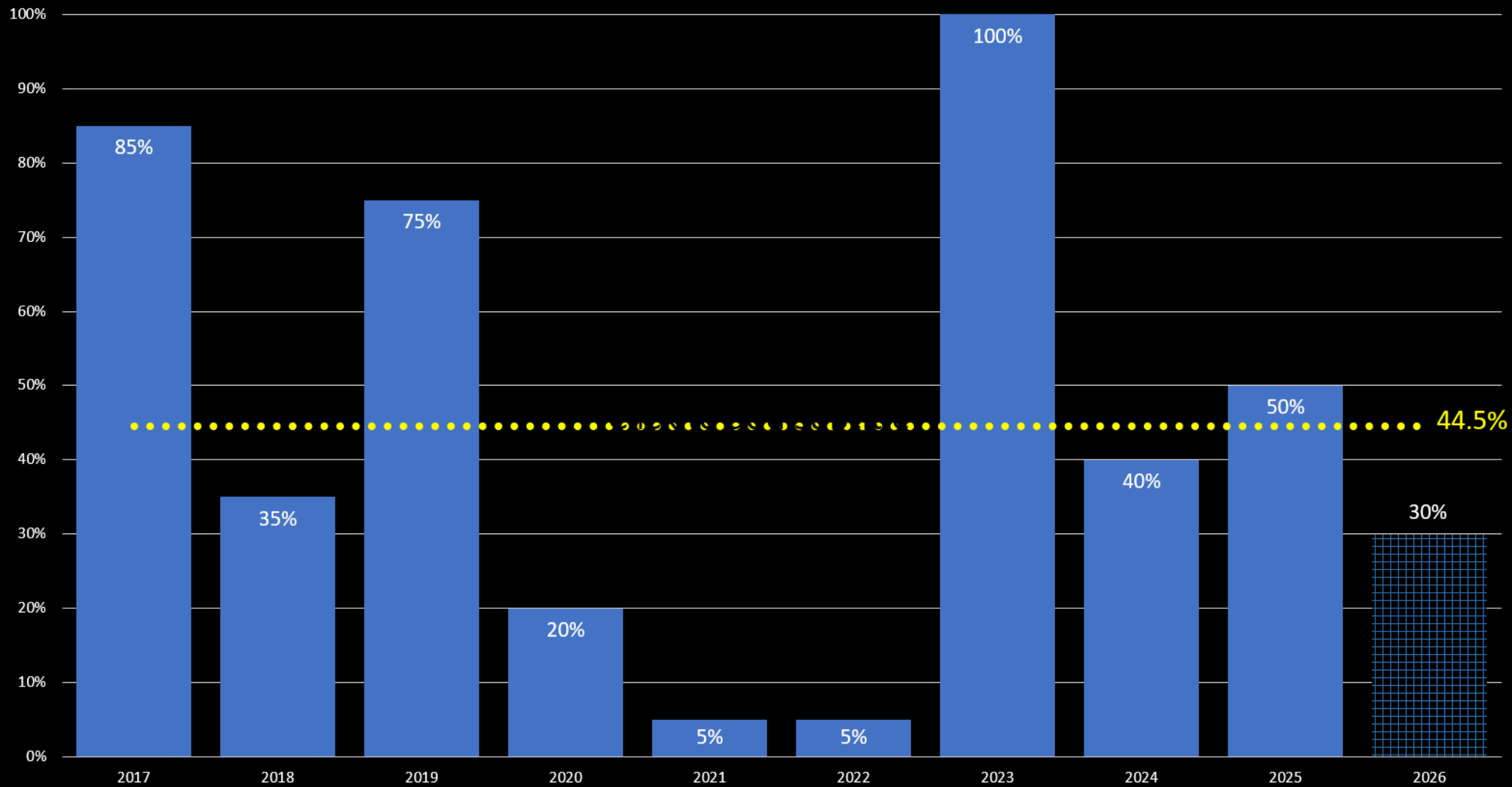
Data as of Midnight: 02-Feb-2026



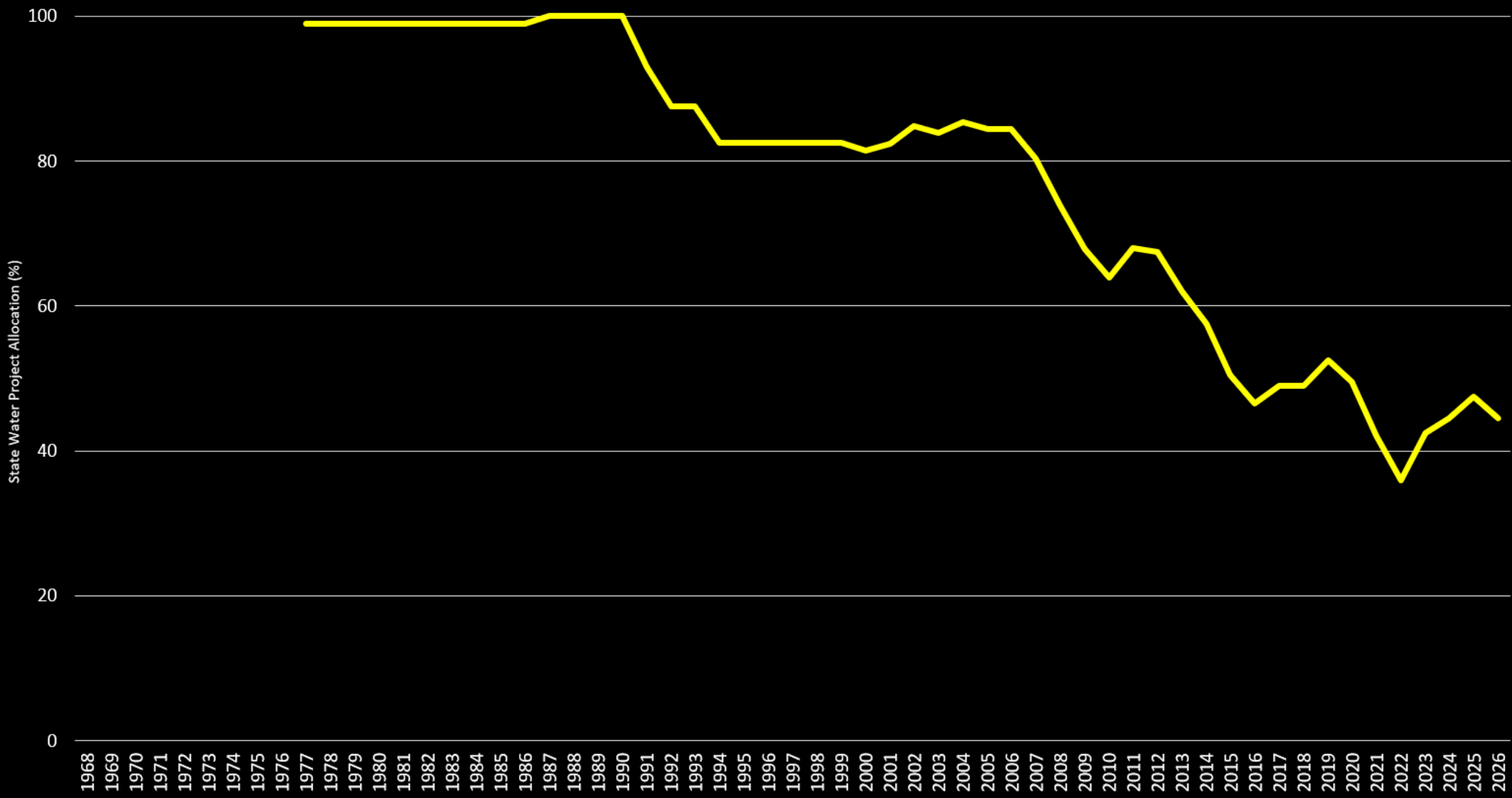
Water Allocations - Comparing Water Year 2024 and Water Year 2025



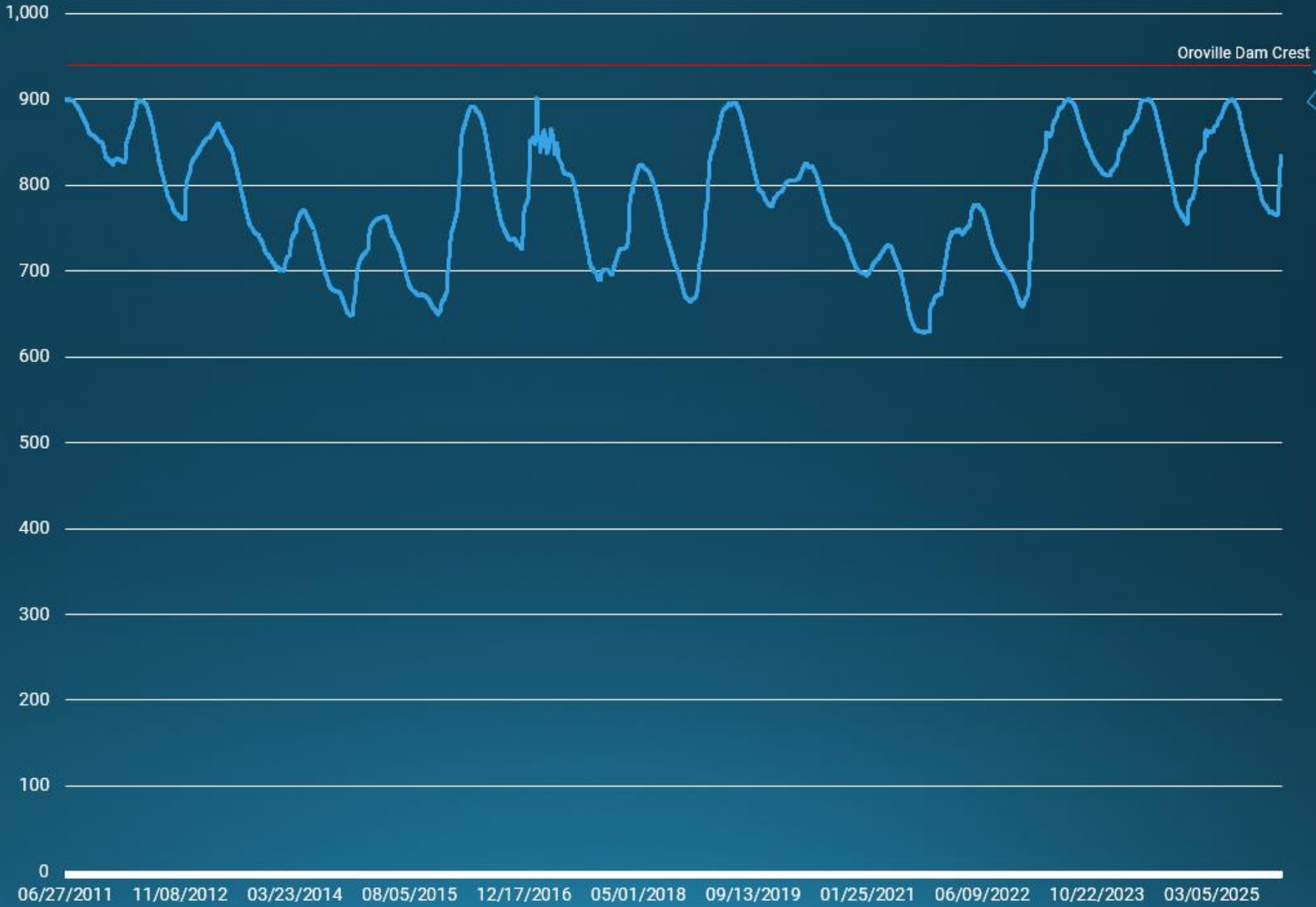
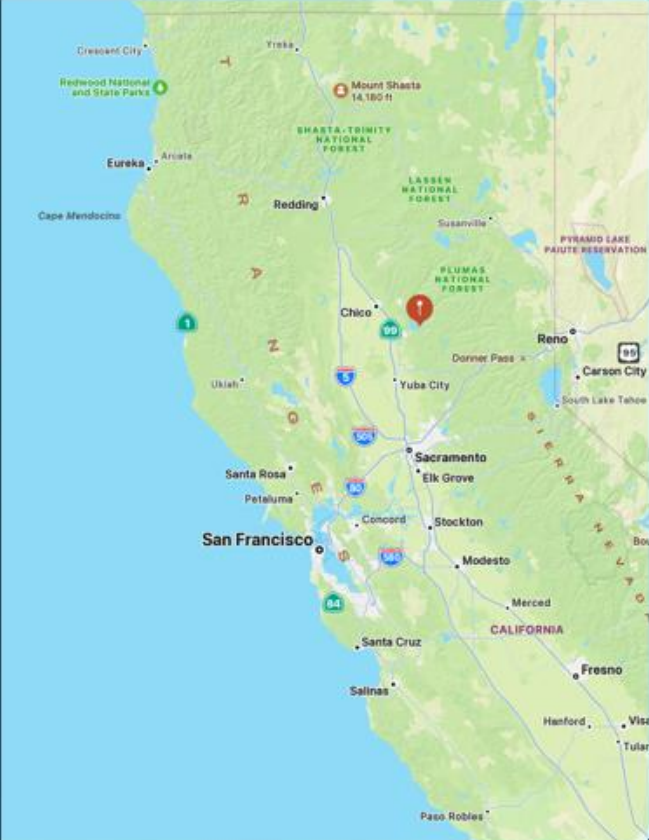
State Water Project Allocation - Ten Year Trend



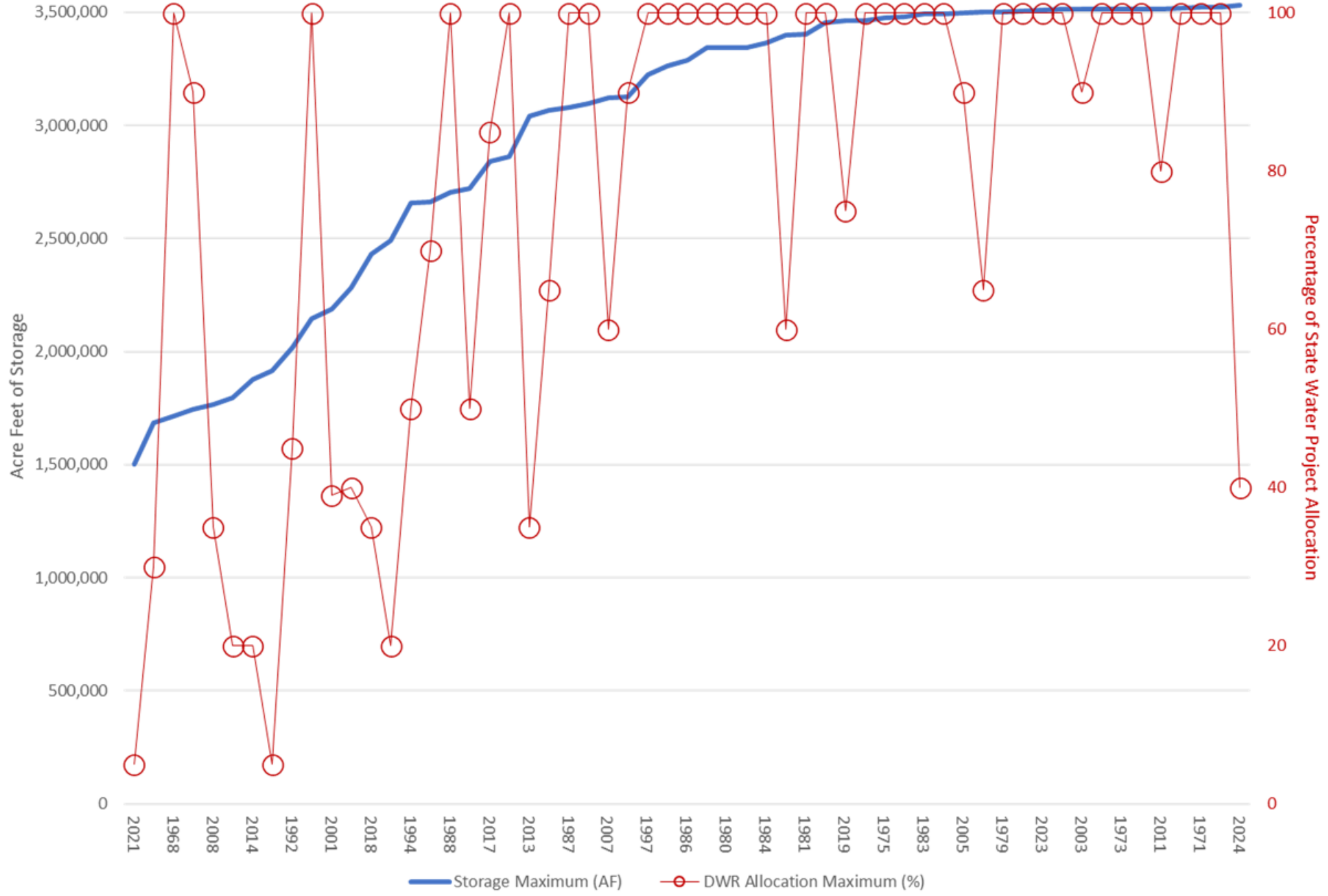
DWR State Water Project Allocation - 10-Year Rolling Average



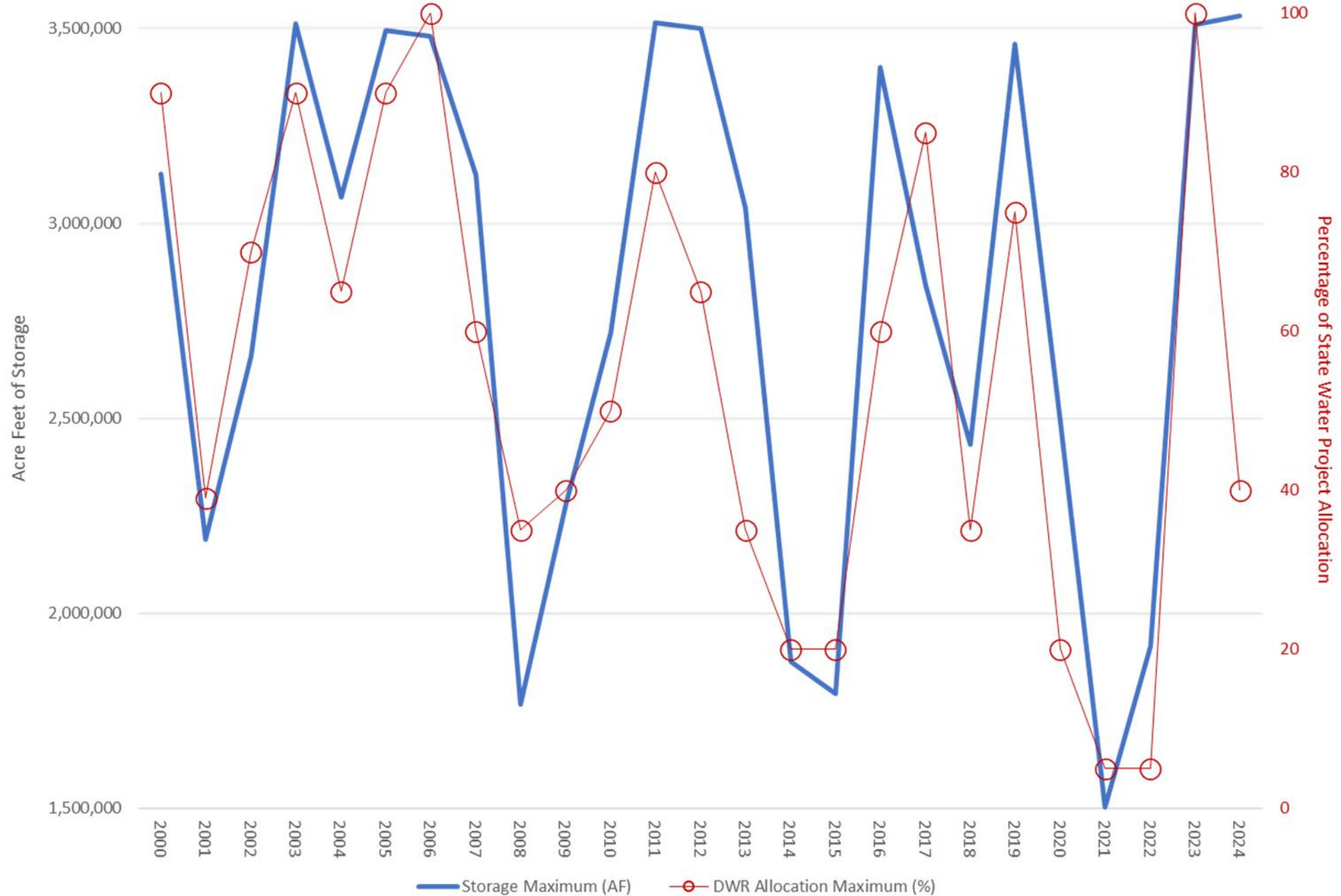
Oroville Reservoir - Water Level



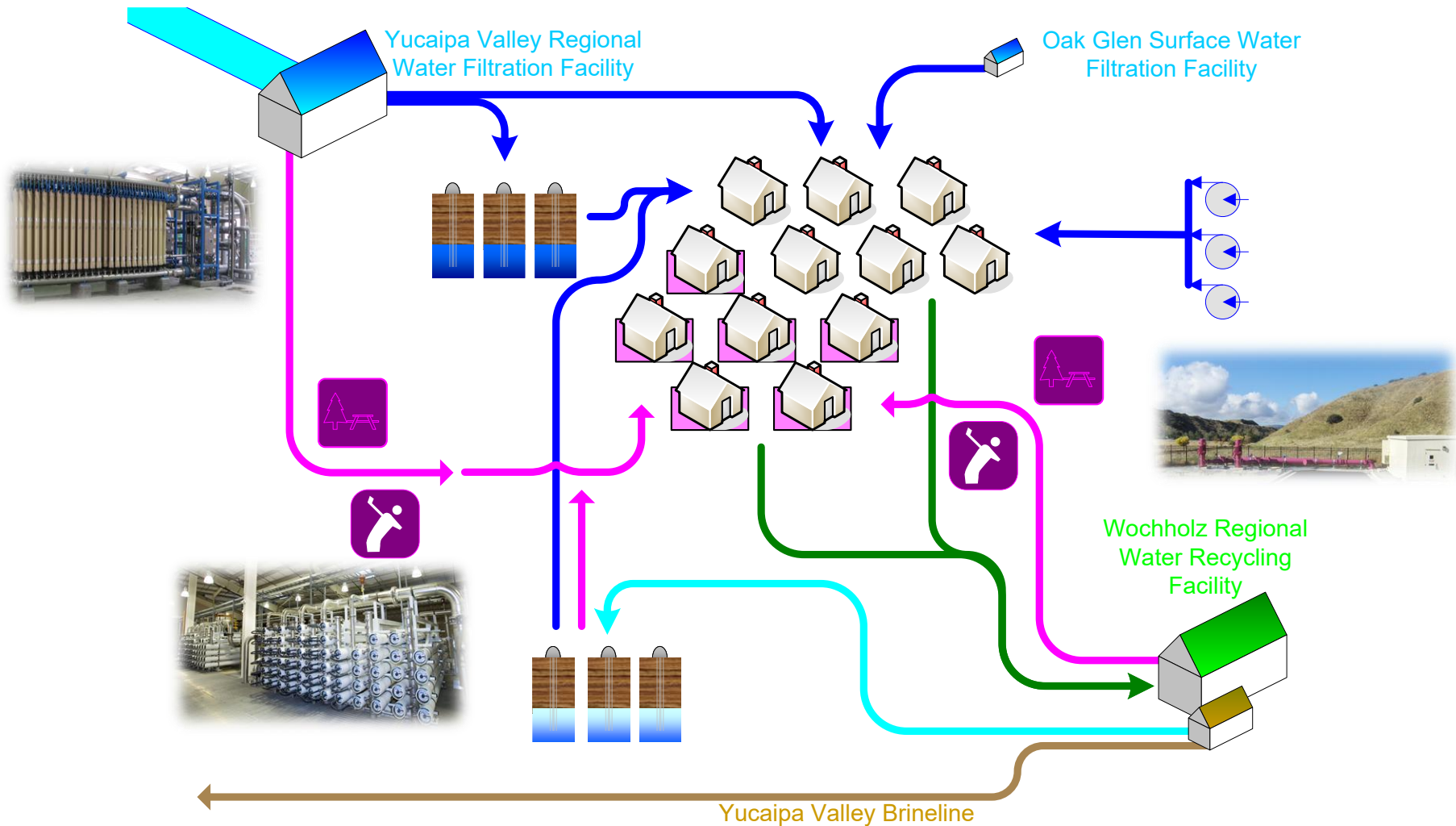
Oroville Storage and DWR Allocations



Oroville Storage and DWR Allocations



Water Resource Management Schematic for the Yucaipa Valley Water District



LEGEND

--- Subbasin borders

— Fault Zones

● Groundwater Production Wells

Geology

Qa, Young Alluvium

Qsdloc, Sedimentary Deposits of Live Oak Formation

QTst, San Timoteo Formation

pKm, Metamorphic formations

gr, Granite and Crystalline rocks

Spreading Basins

Wilson Creek

Oak Glen

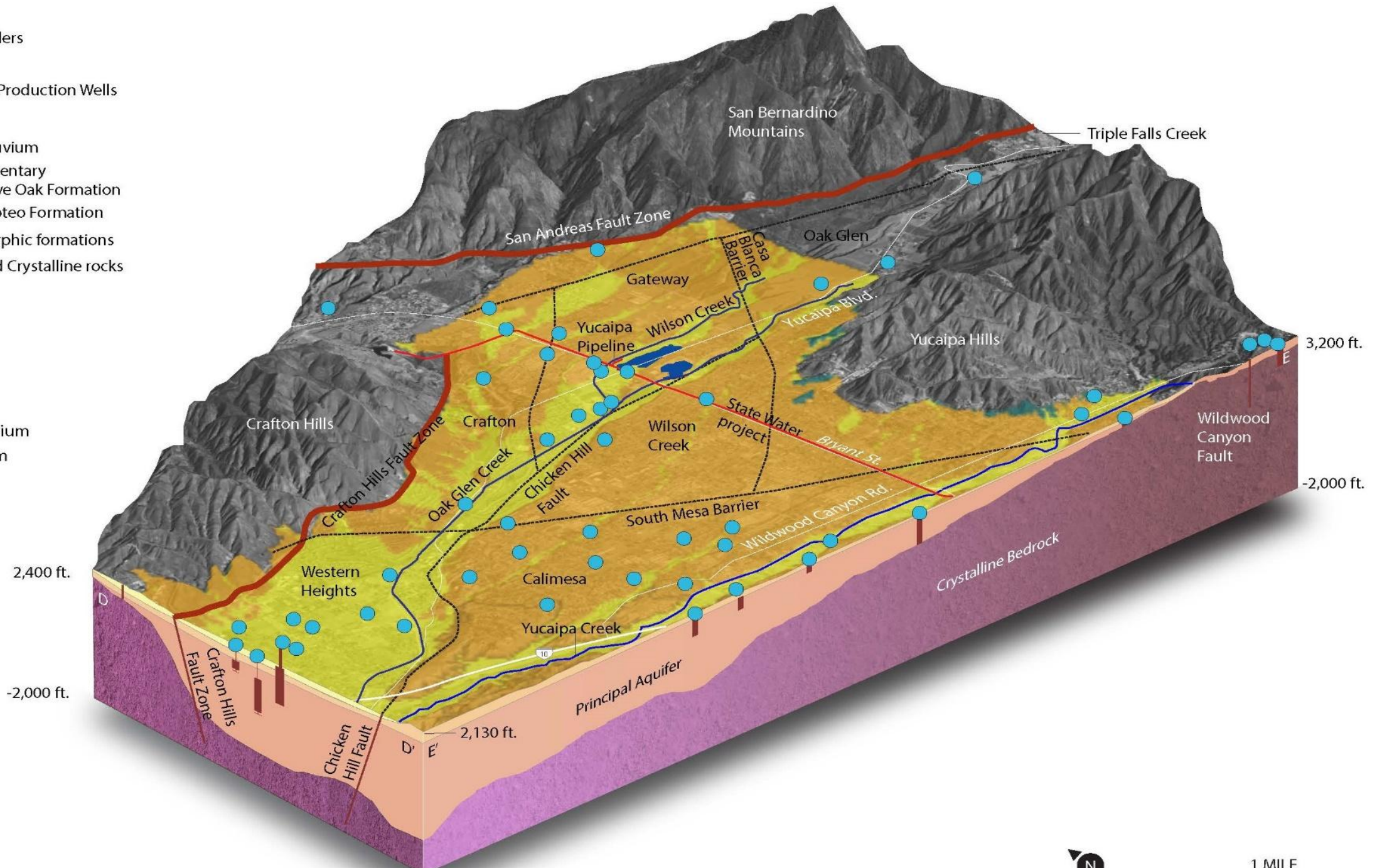
Formations

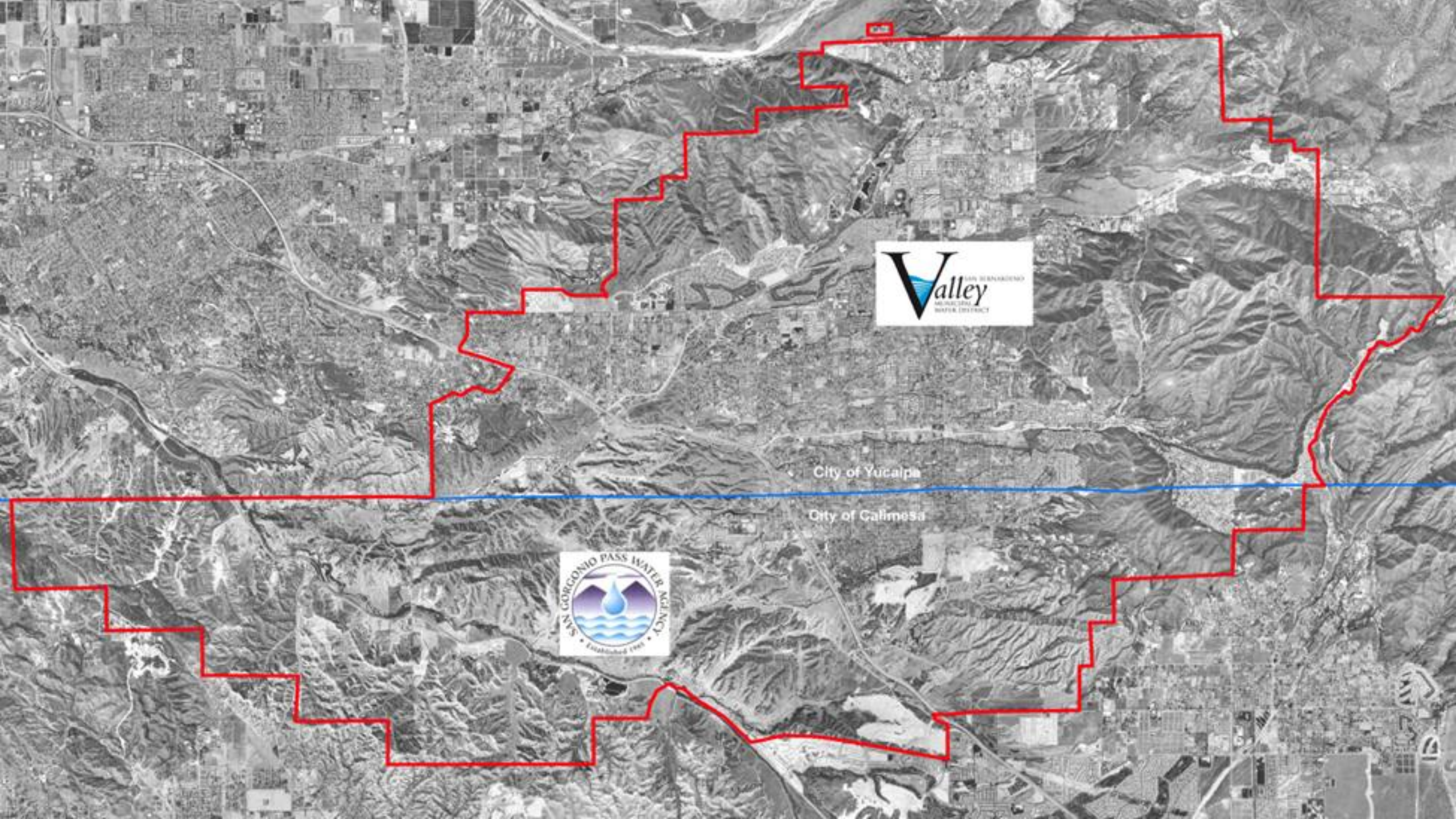
Younger alluvium

Older alluvium

San Timoteo Formation

Bedrock

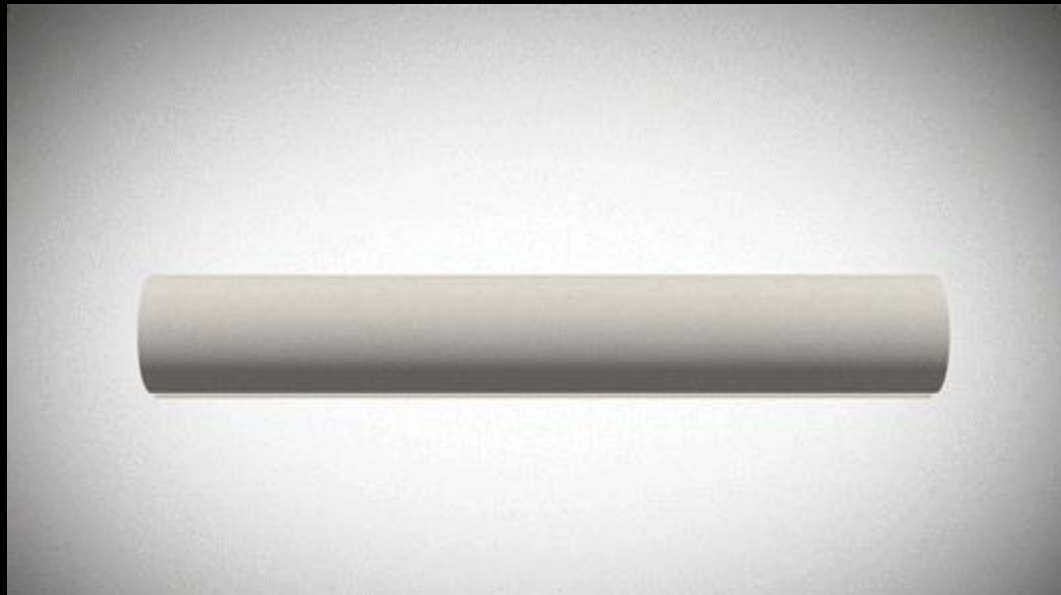
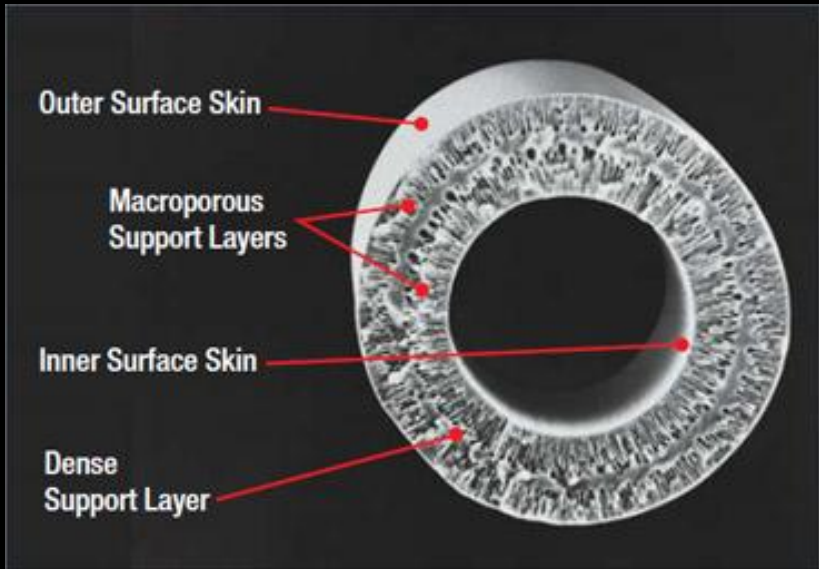
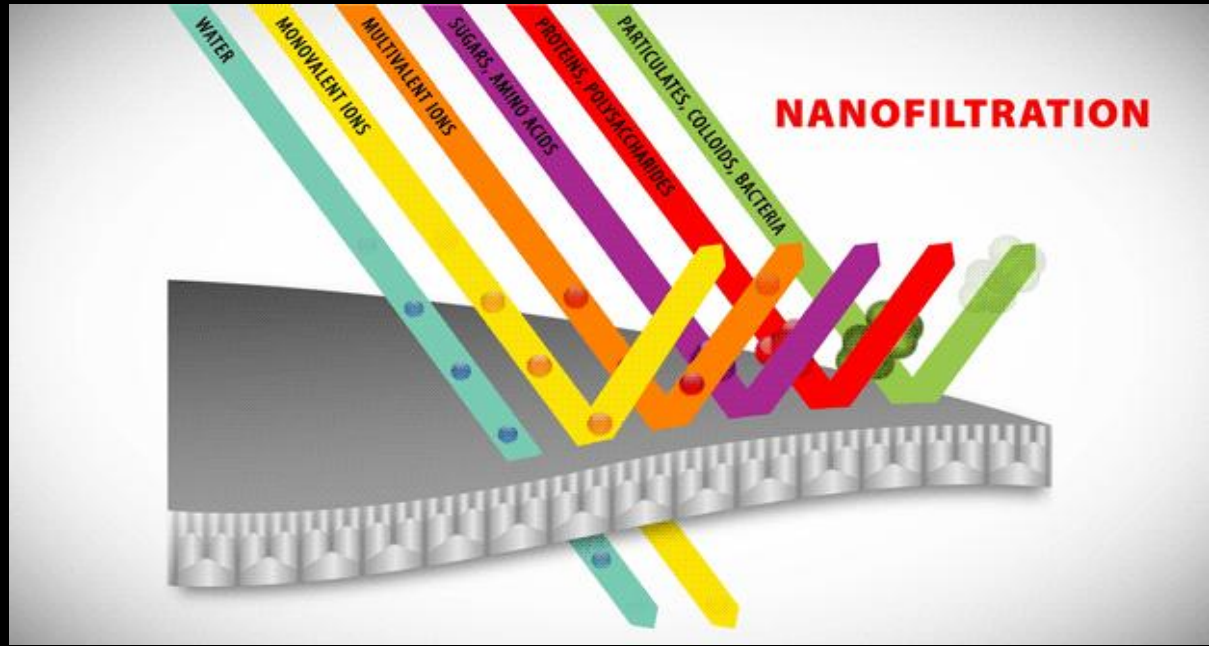
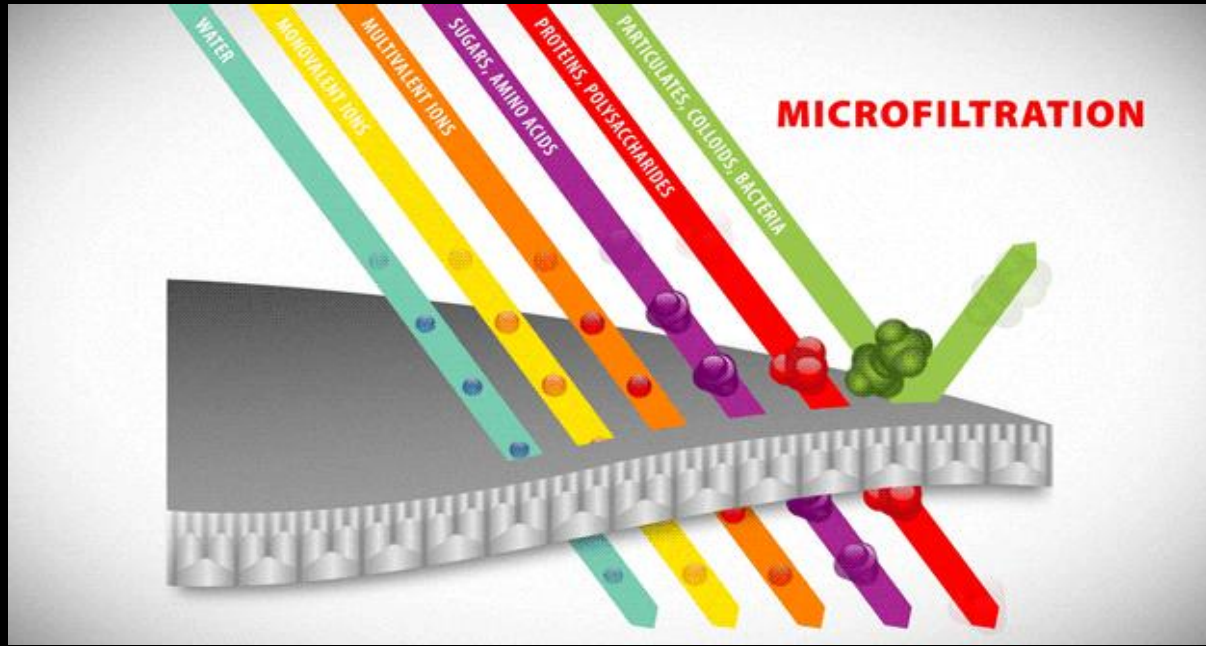




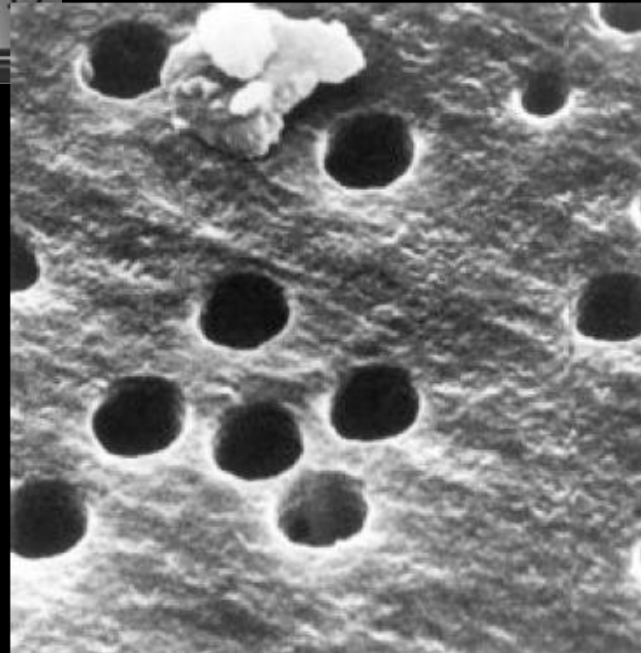
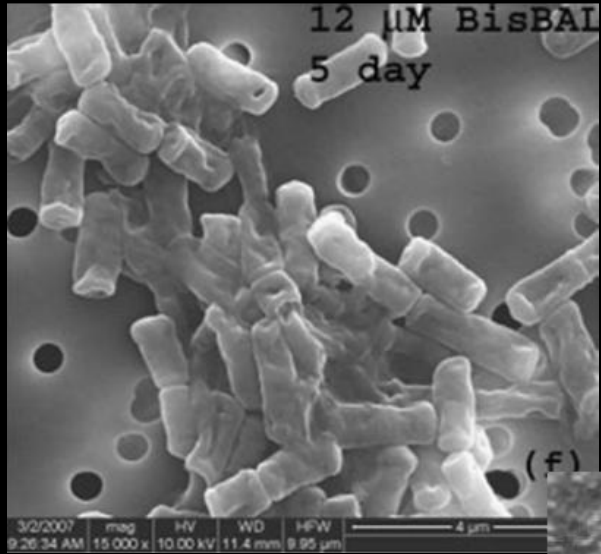
City of Yucalpa

City of Calimesa

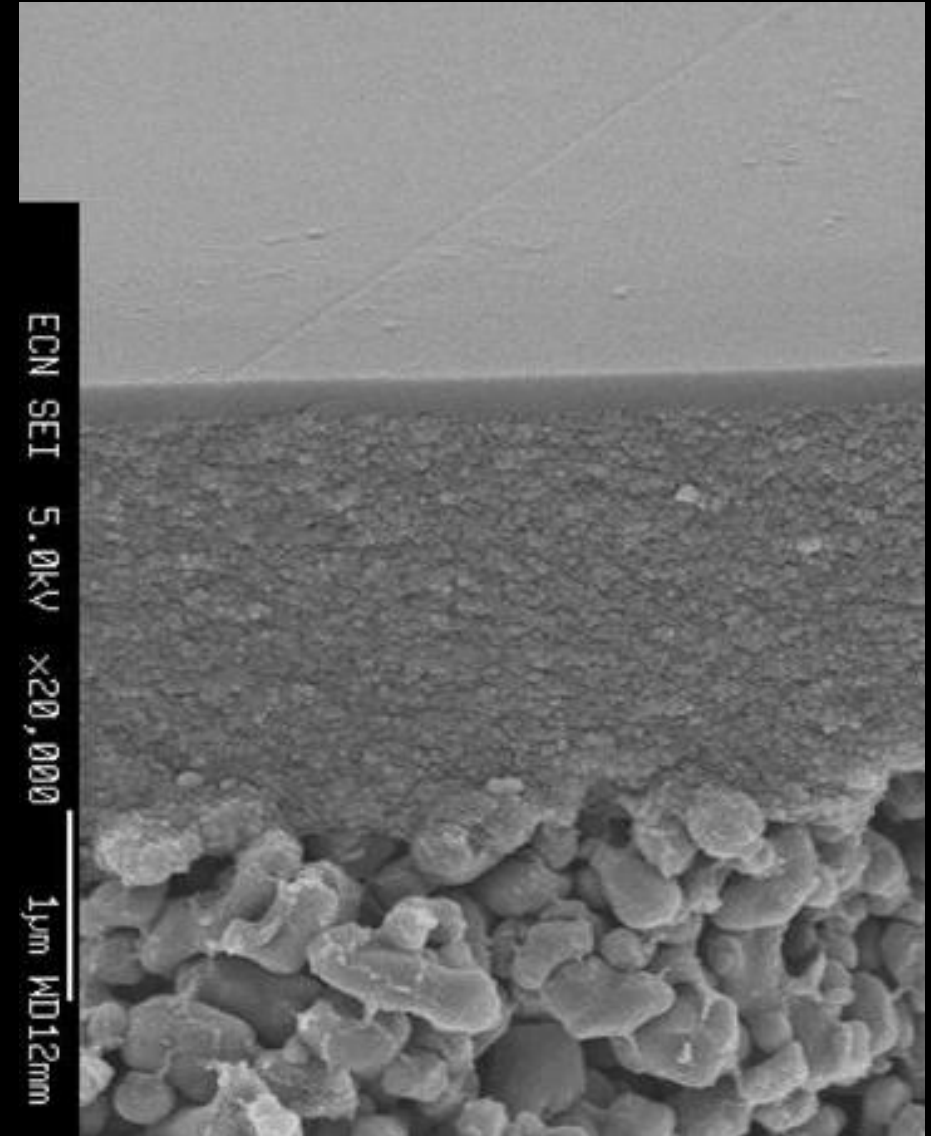




Microfiltration Membrane



Nanofiltration Membrane







← NF FEED →













DURABLE
DESIGN

ALSO:
RESILIENT SCHOOLS • RESTORATIVE RECLAMATION • CREATIVE PRESERVATION

CIVIL ENGINEERING NEWS | SUSTAINABILITY

California Housing Development Will Rely Heavily on Recycled Water



A NEW MASTER-PLANNED community under construction in Southern California has been designed to use recycled water to meet all its nonpotable needs, including the irrigation of private residences' yards. Featuring a dual-plumbed system for distributing potable and nonpotable water, the 2,600-acre Summerwind Trails community in Calimesa, California, is expected to require significantly less treated drinking water compared with similarly sized developments.





California Code of Regulations, Title 22

The four types of recycled water are categories based on treatment levels for nonpotable reuse applications. They are:

- **Non-disinfected secondary recycled water** (or undisinfected secondary): Oxidized but not disinfected, suitable for very limited uses like certain agricultural irrigation where no human contact occurs.
- **Disinfected secondary recycled water** (often specified as disinfected secondary-2.2 or similar variants): Oxidized and disinfected to a basic level, allowing uses such as some food crop irrigation (with restrictions) and landscape irrigation without public access.
- **Disinfected secondary-2.2 recycled water**: A specific subset of disinfected secondary with stricter total coliform limits (median ≤ 2.2 per 100 mL), enabling broader restricted uses.
- **Disinfected tertiary recycled water**: Oxidized, coagulated (or filtered), and disinfected to a high level, allowing unrestricted use including irrigation of food crops eaten raw, parks, playgrounds, and other high-contact areas.

Artificial Recharge via Surface Application (Title 22, Article 5.1)

This involves spreading recycled water on land for percolation through the soil-aquifer system (SAT) to recharge groundwater basins used for drinking water.

- **Advanced Treatment Processes:** Minimum treatment includes filtered wastewater and disinfected tertiary recycled water (e.g., coagulation, filtration, and disinfection to reduce coliforms). Full advanced treatment (e.g., reverse osmosis [RO] and advanced oxidation [AOx]) may be required for the entire flow if SAT alone cannot meet standards.
- **Pathogen Log Reduction Requirements:** At least 12-log reduction for enteric viruses, 10-log for Giardia cysts, and 10-log for Cryptosporidium oocysts, achieved via at least 3 separate processes (each ≥ 1 -log, max 6-log per process).
- **Chemical Control Measures:** Total organic carbon (TOC) limited to ≤ 0.5 mg/L (20-week running average, adjusted for recycled water contribution [RWC]). Total nitrogen ≤ 10 mg/L (weekly average). Priority pollutants, disinfection byproducts (DBPs), and chemicals with notification levels (NLs) must meet drinking water standards (MCLs). Source control program required to minimize contaminants.
- **Monitoring and Reporting Requirements:** Weekly TOC and nitrogen; quarterly inorganics, organics, radionuclides, DBPs; annual secondary contaminants. Monitoring wells (≥ 2 downgradient) track retention (minimum 2-month response time via tracer studies). Annual reporting on compliance, violations, trends, and RWC (initial max ≤ 0.20). Exceedances trigger suspension and corrective actions.
- **Operator Qualifications:** Licensed engineers validate processes; operators must meet general recycled water handling certifications (e.g., T3–T5 levels under Title 23 CCR).

Artificial Recharge via Subsurface Application (Title 22, Article 5.2)

This involves direct injection of recycled water into groundwater aquifers, bypassing surface spreading.

- **Advanced Treatment Processes:** Full advanced treatment required for the entire flow: RO ($\geq 99\%$ NaCl rejection, permeate TOC ≤ 0.25 mg/L in $\geq 95\%$ of initial samples) followed by oxidation (≥ 0.5 -log reduction of 1,4-dioxane or 9 indicator compounds). At least 3 processes total.
- **Pathogen Log Reduction Requirements:** Same as surface application: 12-log virus, 10-log Giardia, 10-log Cryptosporidium. Underground retention provides 1-log virus credit per month (minimum 2-month response time via tracer studies).
- **Chemical Control Measures:** RO and oxidation ensure chemical reduction (e.g., permeate TOC limits). Total nitrogen ≤ 10 mg/L. Same MCL/NL compliance for priority pollutants, DBPs, etc. Source control and aquifer baseline sampling (4 samples per aquifer) required.
- **Monitoring and Reporting Requirements:** Weekly nitrogen; quarterly/annual chemicals as above; monthly effluent for MCL/NL contaminants (reducible after 12 months compliance). Monitoring wells with controlled construction zones based on retention times. Annual reporting includes hydrogeologic assessments.
- **Operator Qualifications:** Same as surface application, with emphasis on advanced treatment system operation.

Indirect Potable Reuse via Surface Water Augmentation (Reservoir Augmentation - Title 22, Article 5.3)

This involves adding recycled water to a surface reservoir upstream of a drinking water treatment plant.

- **Advanced Treatment Processes:** Full advanced treatment: RO ($\geq 99\%$ NaCl rejection) and oxidation (≥ 0.5 -log 1,4-dioxane reduction). Continuous surrogate monitoring with alarms.
- **Pathogen Log Reduction Requirements:** 8–9-log virus, 7–9-log Giardia, 8–9-log Cryptosporidium (higher if public water system [PWS] lacks certain treatments). At least 2–3 processes (each ≥ 1 -log, max 6-log per process).
- **Chemical Control Measures:** RO permeate TOC ≤ 0.25 mg/L (first 20 weeks). MCL/NL compliance for chemicals; source control program.
- **Monitoring and Reporting Requirements:** Monthly reservoir monitoring (TOC, nitrogen, E. coli, temperature, etc.); quarterly/annual chemicals. Reservoir retention ≥ 180 days (or ≥ 60 days with extra log reductions, demonstrated via tracers/models). Baseline reservoir data (2–5 years). Annual reporting; joint plan with PWS.
- **Operator Qualifications:** Similar to GRRPs, plus training in joint operation plan.

Direct Potable Reuse

(Title 22, CCR Sections 64669.00-64669.130, Effective October 1, 2024)

DPR introduces recycled water directly into a raw water supply (raw water augmentation) or finished drinking water system (finished water augmentation), without an environmental buffer.

- **Advanced Treatment Processes:** Full advanced treatment with RO and AOx, plus additional redundancies (e.g., multiple barriers for chemicals and pathogens). Must include at least 4 separate processes for pathogens.
- **Pathogen Log Reduction Requirements:** Significantly higher than IPR: 20-log for viruses, 14-log for Giardia, and 15-log for Cryptosporidium (to account for no buffer). Validated through challenge tests and surrogates.
- **Chemical Control Measures:** Enhanced reduction via RO/AOx (e.g., ≥ 0.5 -log for indicator compounds like 1,4-dioxane). Compliance with all MCLs, NLs, and additional controls for unregulated chemicals. Robust source control program.
- **Monitoring and Reporting Requirements:** Continuous online monitoring with alarms/shutdowns for critical processes. Weekly/quarterly for chemicals/pathogens; real-time surrogates. Annual reporting on compliance, trends, and incidents. Requires a "Direct Potable Reuse Responsible Agency" (DiPRRA, typically the PWS) for oversight, plus a signed joint plan among agencies. Enables State Board inspections at any time.
- **Operator Qualifications:** Higher standards: Operators must hold advanced certifications (e.g., A5 level for advanced water treatment), with specific training for DPR systems.

Full Reverse
Osmosis
Recycled Water

Stormwater

Ocean Water

Non-Potable
Groundwater

Title 22
Recycled Water

Drinking Water
(Treated)

Ocean
Desalination

State Water
Project
(Untreated)

Based on the chemical, biological, and microbial constituents in various water sources, rank the following water types from the most to the fewest chemical constituents, including bacteria and viruses

Stormwater

Non-Potable
Groundwater

Full Reverse
Osmosis
Recycled Water

Title 22
Recycled Water

Ocean
Desalination

Ocean Water

State Water
Project
(Untreated)

Drinking Water
(Treated)

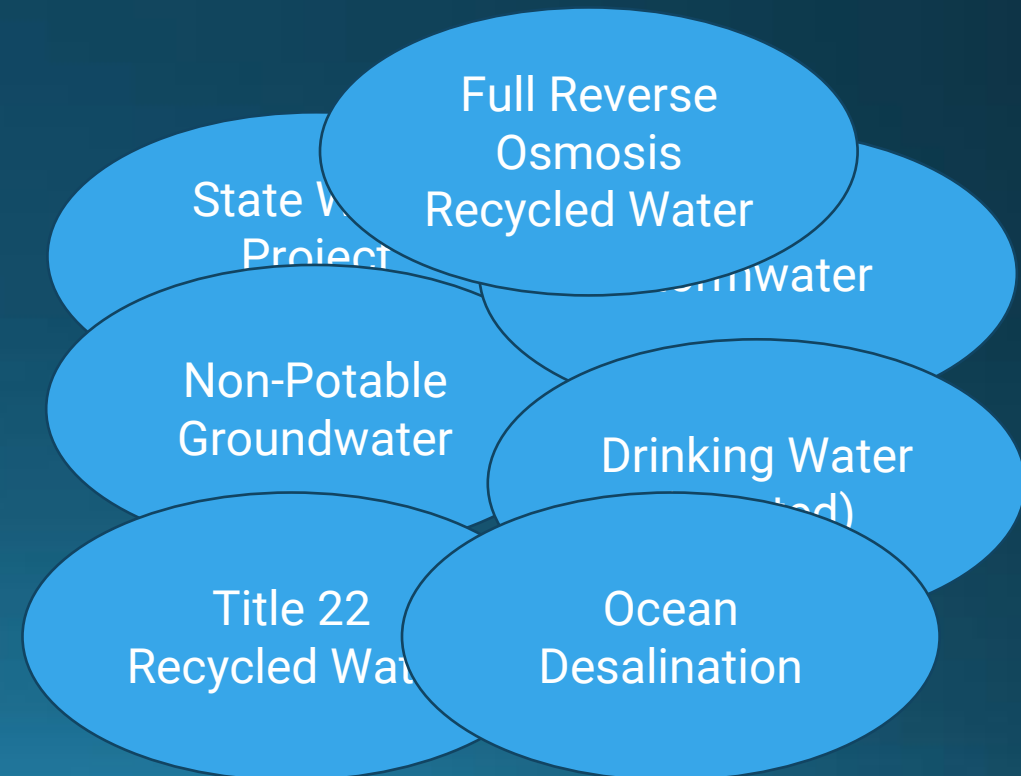
100

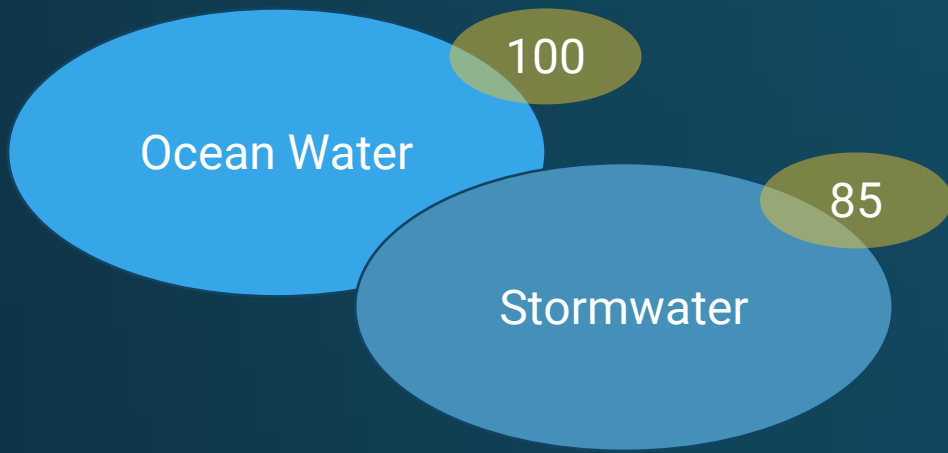
Ocean Water

Based on the chemical, biological, and microbial constituents in various water sources, provide a ranking from most to fewest constituents, including bacteria and viruses (Ocean Water = 100 and Ocean Desalination = 1)

Ocean Water (Seawater)

- Constituent variety: Highest; contains dozens of major and trace inorganic ions (chloride, sodium, sulfate, magnesium, calcium, potassium, bromide, boron, strontium, fluoride, and many more), organic matter, dissolved gases, nutrients, and a diverse array of bacteria and viruses.
- Microbial content: Large populations of bacteria and viruses, essential to marine ecology.
- Total dissolved solids: About 34,000–37,000mg/L.

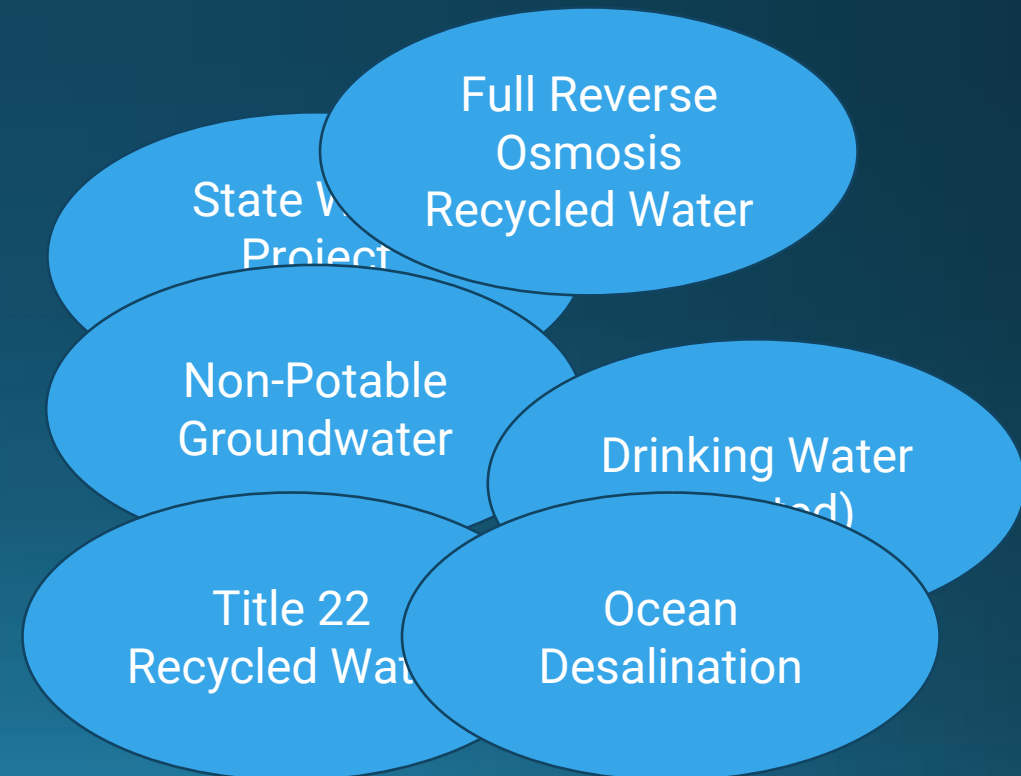


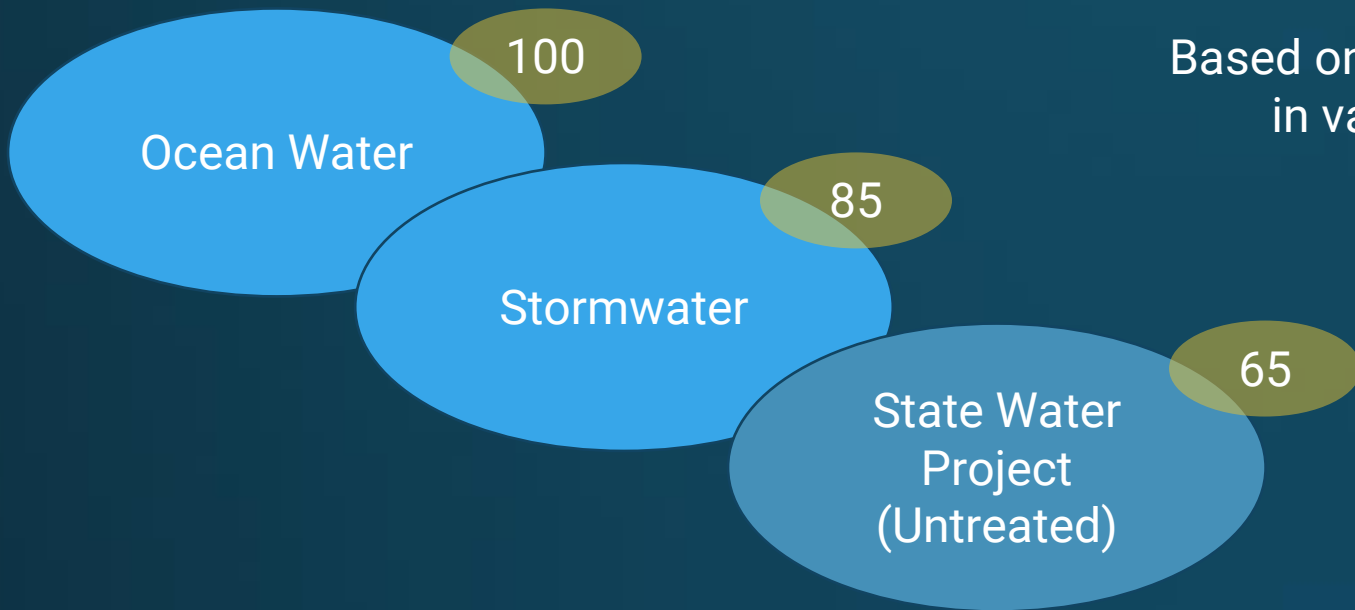


Based on the chemical, biological, and microbial constituents in various water sources, provide a ranking from most to fewest constituents, including bacteria and viruses (Ocean Water = 100 and Ocean Desalination = 1)

Stormwater (Rain Water)

- Constituent variety: Fewer dissolved ions than ground or surface water, usually dominated by sodium, calcium, magnesium, chloride, sulfate, nitrate; organics are usually low, but local atmospheric pollution can increase chemical complexity. Often contains dust, pollen, and microorganisms washed out of the air.
- Microbial content: Variable; can include airborne bacteria and viruses, especially after first flush.





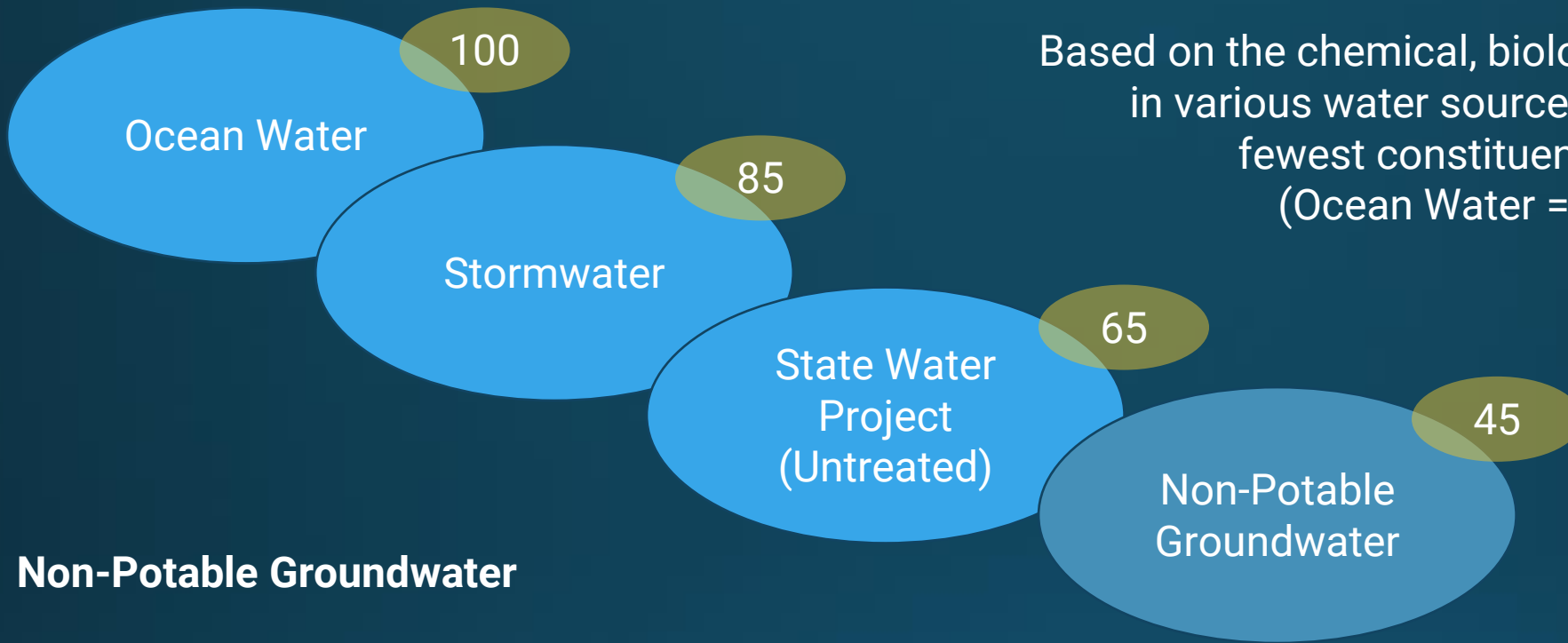
Based on the chemical, biological, and microbial constituents in various water sources, provide a ranking from most to fewest constituents, including bacteria and viruses (Ocean Water = 100 and Ocean Desalination = 1)

Untreated California State Water Project Water (Surface Water)

- Constituent variety: Contains major ions, organic matter, pesticides, herbicides, industrial and agricultural pollutants, naturally occurring minerals, and typically moderate-to-high levels of microorganisms including pathogens. Intermediate between ocean (inorganics) and untreated groundwater (lower organics).
- Microbial content: Often high; includes bacteria, viruses, and protozoa.
- Notes: Water quality varies seasonally and geographically.

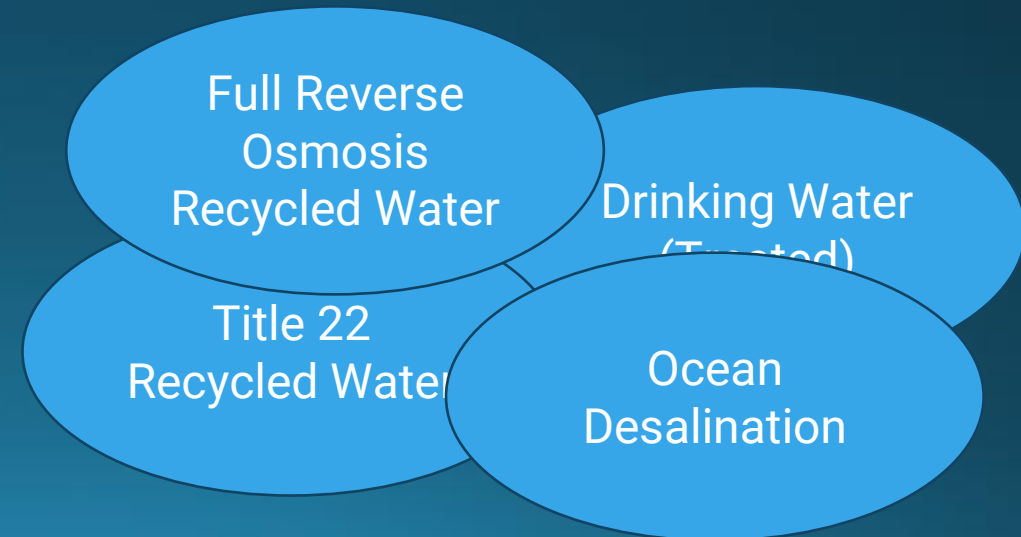


Based on the chemical, biological, and microbial constituents in various water sources, provide a ranking from most to fewest constituents, including bacteria and viruses (Ocean Water = 100 and Ocean Desalination = 1)

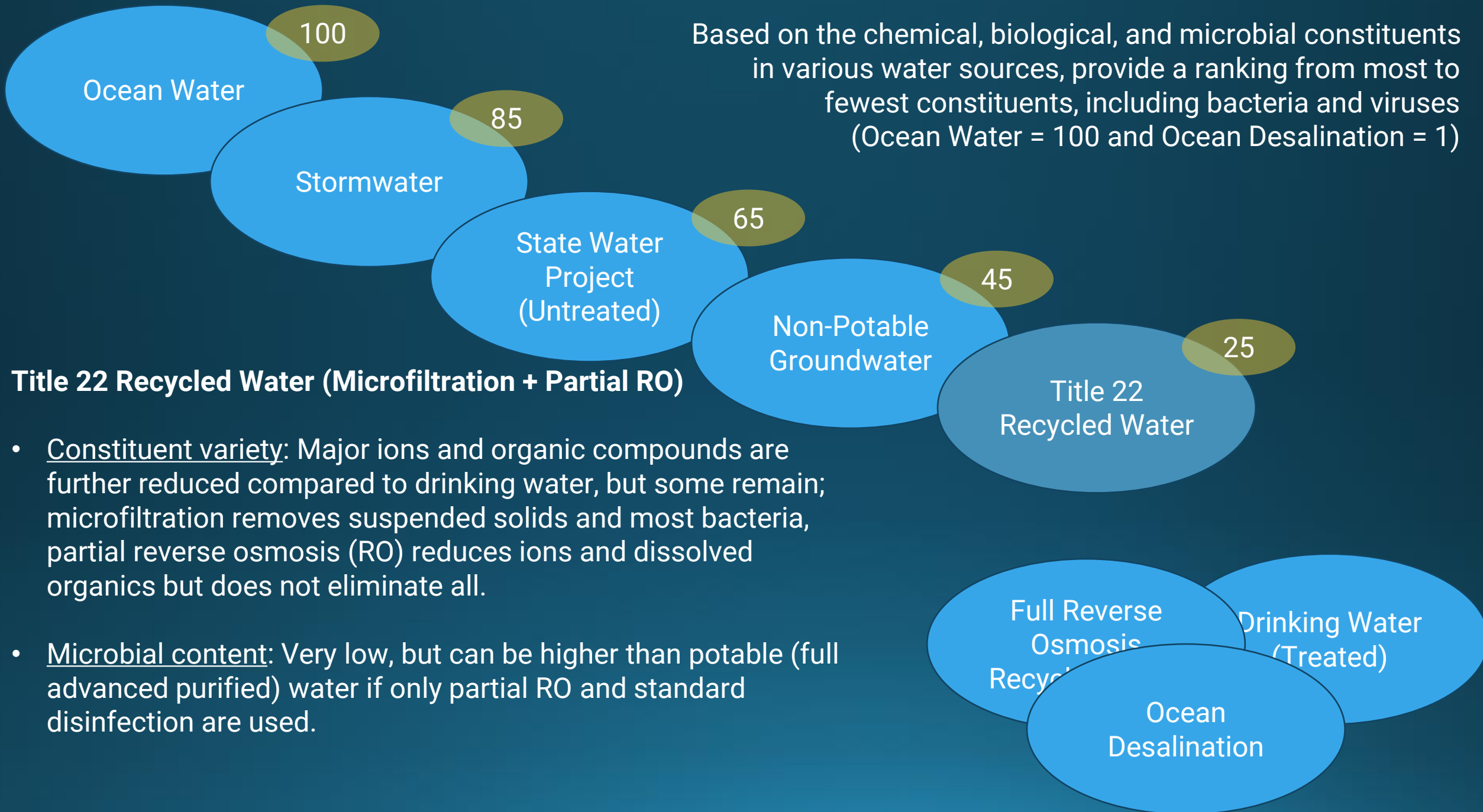


Non-Potable Groundwater

- Constituent variety: Contains major ions (sodium, calcium, magnesium, bicarbonate, sulfate, chloride), trace metals (iron, manganese, arsenic), organics, and, if not well-confined, microbes and sometimes industrial/agricultural pollutants.
- Microbial content: Lower than surface water but still present, especially near points of contamination.



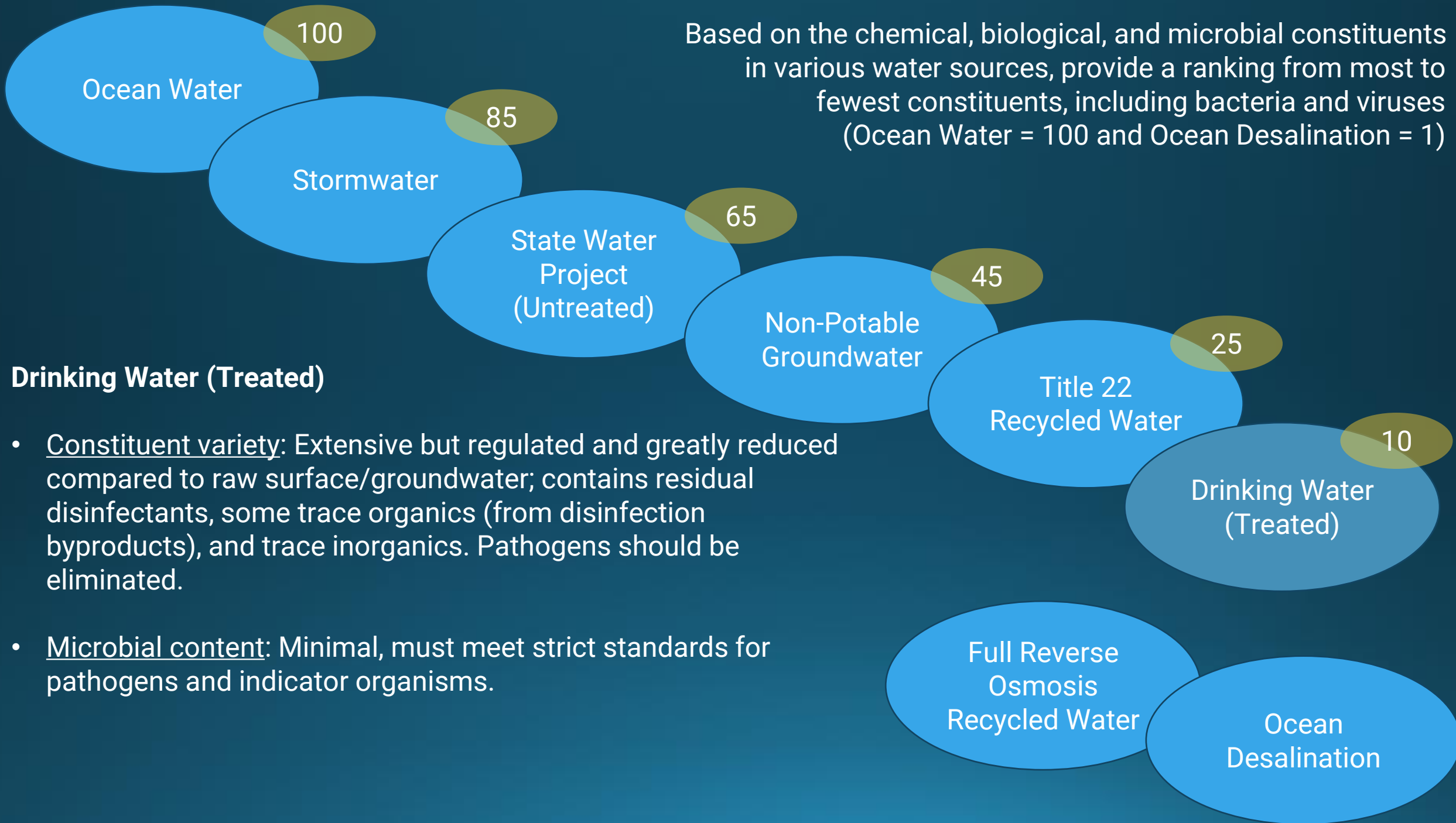
Based on the chemical, biological, and microbial constituents in various water sources, provide a ranking from most to fewest constituents, including bacteria and viruses (Ocean Water = 100 and Ocean Desalination = 1)



Title 22 Recycled Water (Microfiltration + Partial RO)

- Constituent variety: Major ions and organic compounds are further reduced compared to drinking water, but some remain; microfiltration removes suspended solids and most bacteria, partial reverse osmosis (RO) reduces ions and dissolved organics but does not eliminate all.
- Microbial content: Very low, but can be higher than potable (full advanced purified) water if only partial RO and standard disinfection are used.

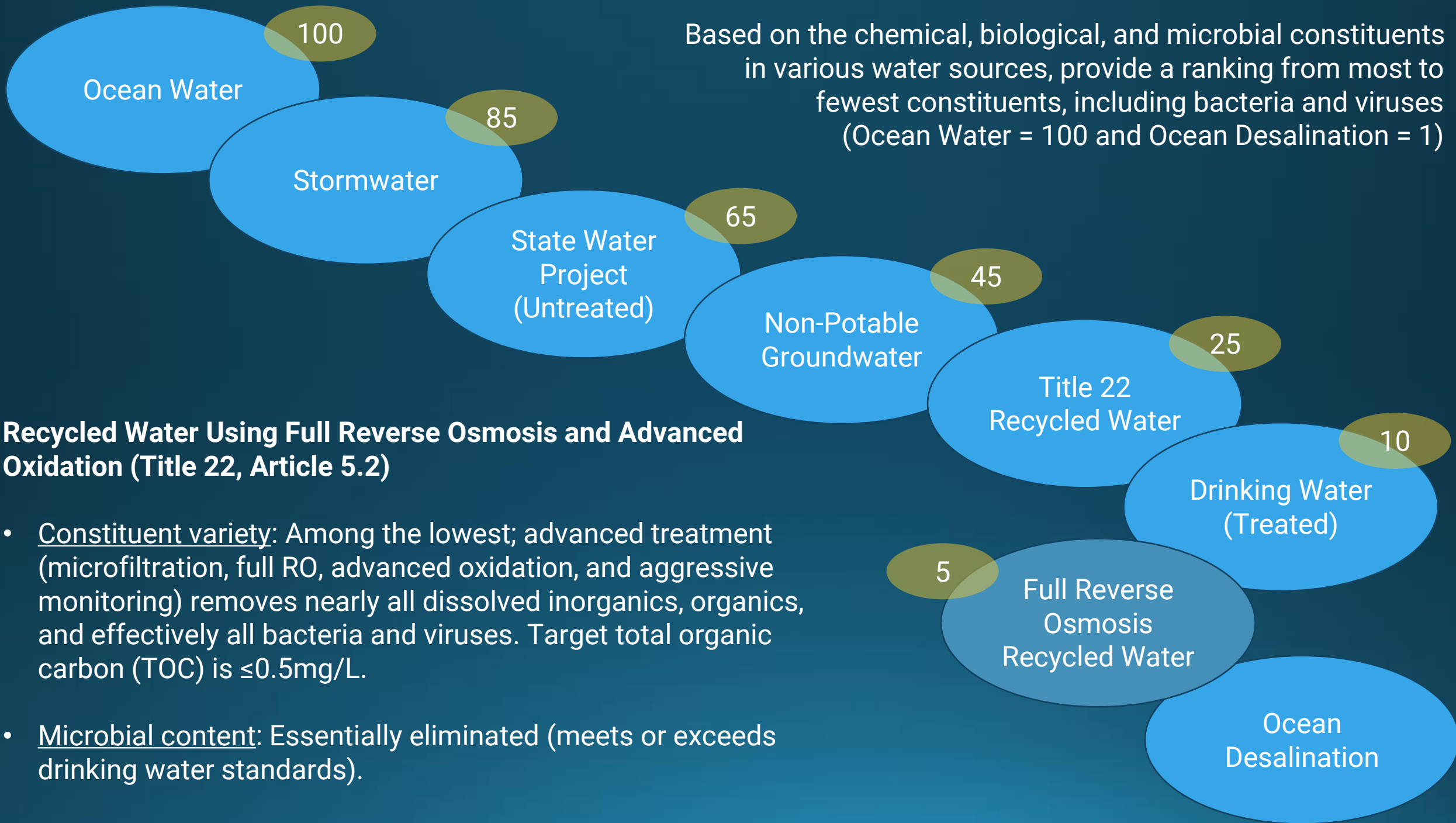
Based on the chemical, biological, and microbial constituents in various water sources, provide a ranking from most to fewest constituents, including bacteria and viruses (Ocean Water = 100 and Ocean Desalination = 1)



Drinking Water (Treated)

- Constituent variety: Extensive but regulated and greatly reduced compared to raw surface/groundwater; contains residual disinfectants, some trace organics (from disinfection byproducts), and trace inorganics. Pathogens should be eliminated.
- Microbial content: Minimal, must meet strict standards for pathogens and indicator organisms.

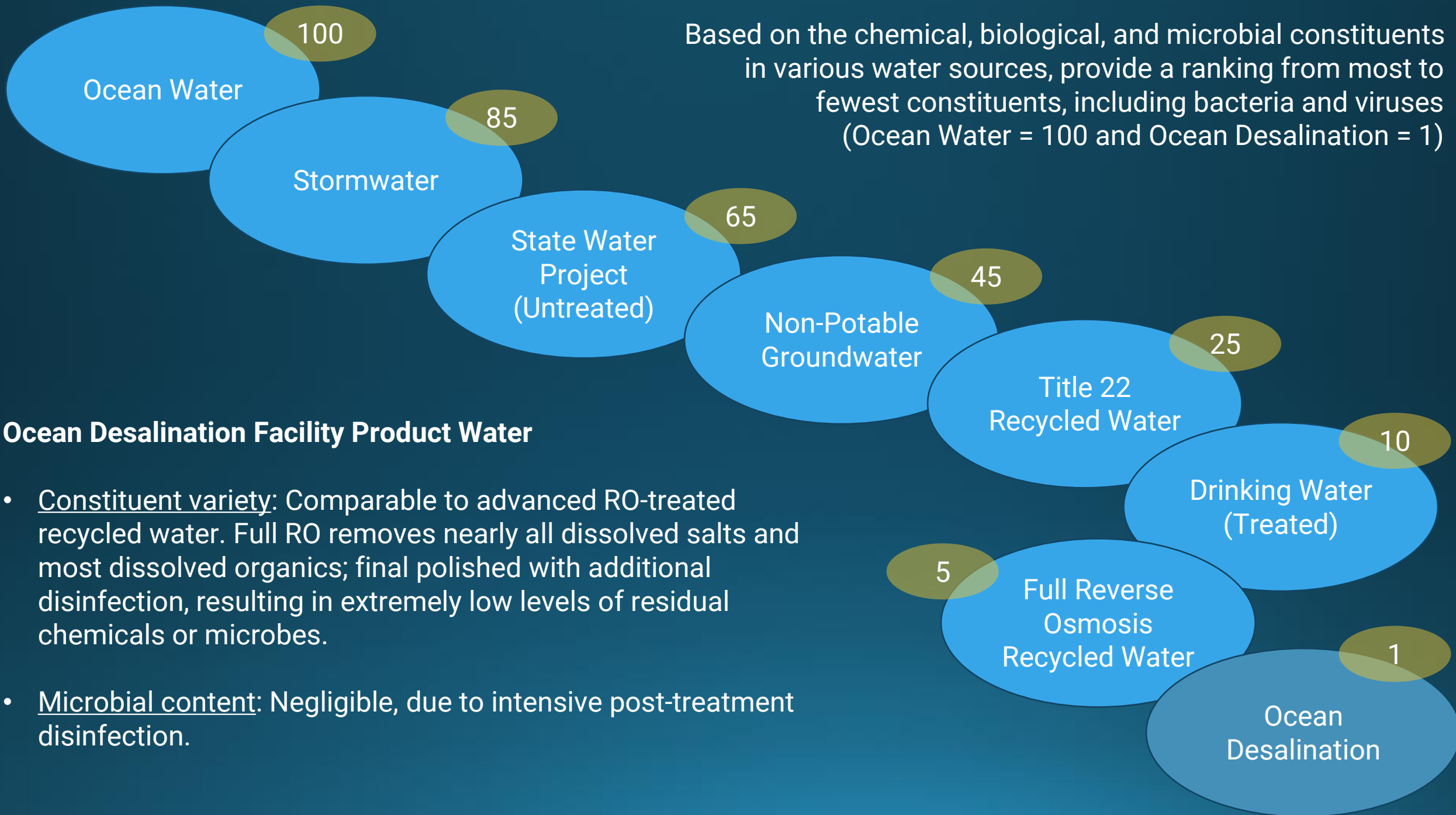
Based on the chemical, biological, and microbial constituents in various water sources, provide a ranking from most to fewest constituents, including bacteria and viruses (Ocean Water = 100 and Ocean Desalination = 1)



Recycled Water Using Full Reverse Osmosis and Advanced Oxidation (Title 22, Article 5.2)

- Constituent variety: Among the lowest; advanced treatment (microfiltration, full RO, advanced oxidation, and aggressive monitoring) removes nearly all dissolved inorganics, organics, and effectively all bacteria and viruses. Target total organic carbon (TOC) is $\leq 0.5\text{mg/L}$.
- Microbial content: Essentially eliminated (meets or exceeds drinking water standards).

Based on the chemical, biological, and microbial constituents in various water sources, provide a ranking from most to fewest constituents, including bacteria and viruses (Ocean Water = 100 and Ocean Desalination = 1)



Ocean Desalination Facility Product Water

- Constituent variety: Comparable to advanced RO-treated recycled water. Full RO removes nearly all dissolved salts and most dissolved organics; final polished with additional disinfection, resulting in extremely low levels of residual chemicals or microbes.
- Microbial content: Negligible, due to intensive post-treatment disinfection.



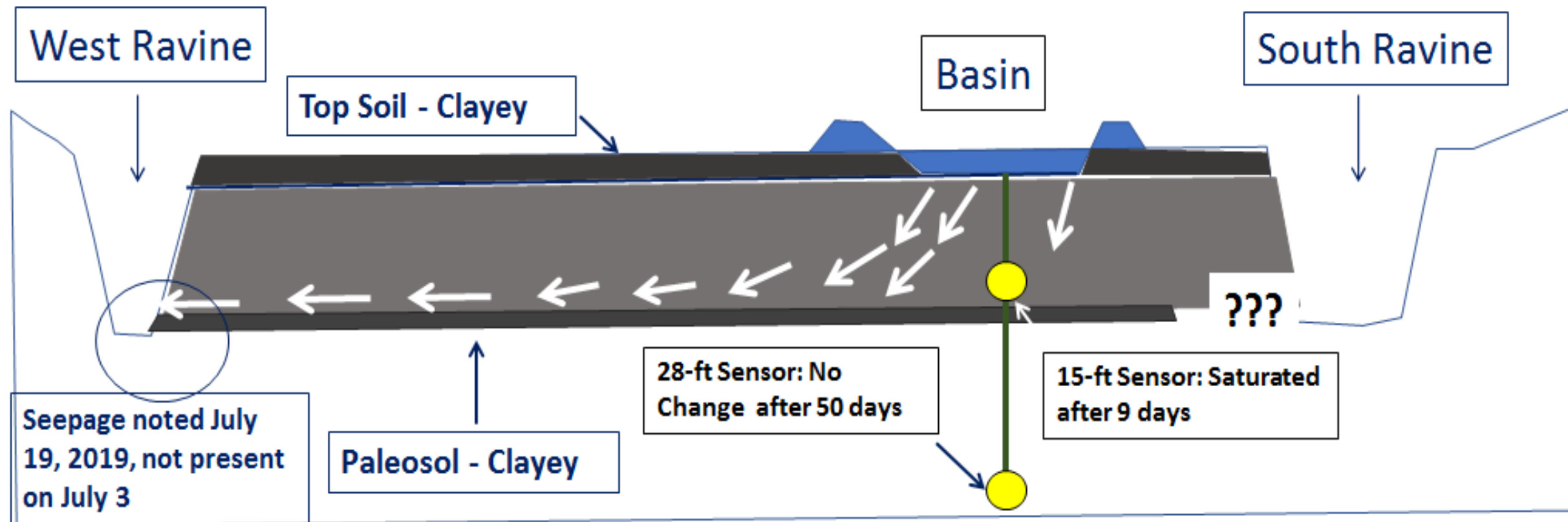


Seepage

Seepage

Validate Flow Path

Hydrogeologic Conceptual Model Shallow Zone







3853982

6NOL676

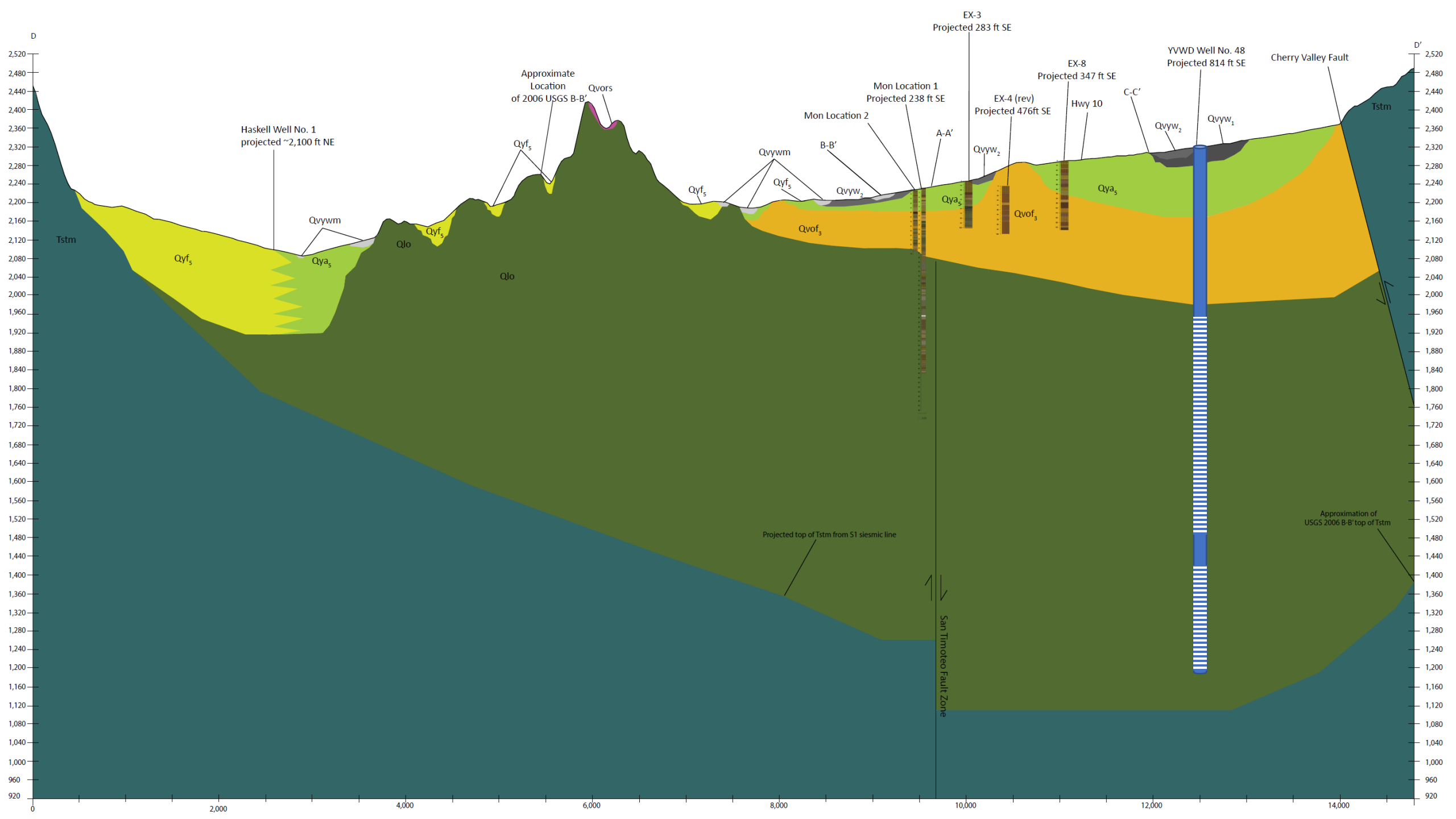
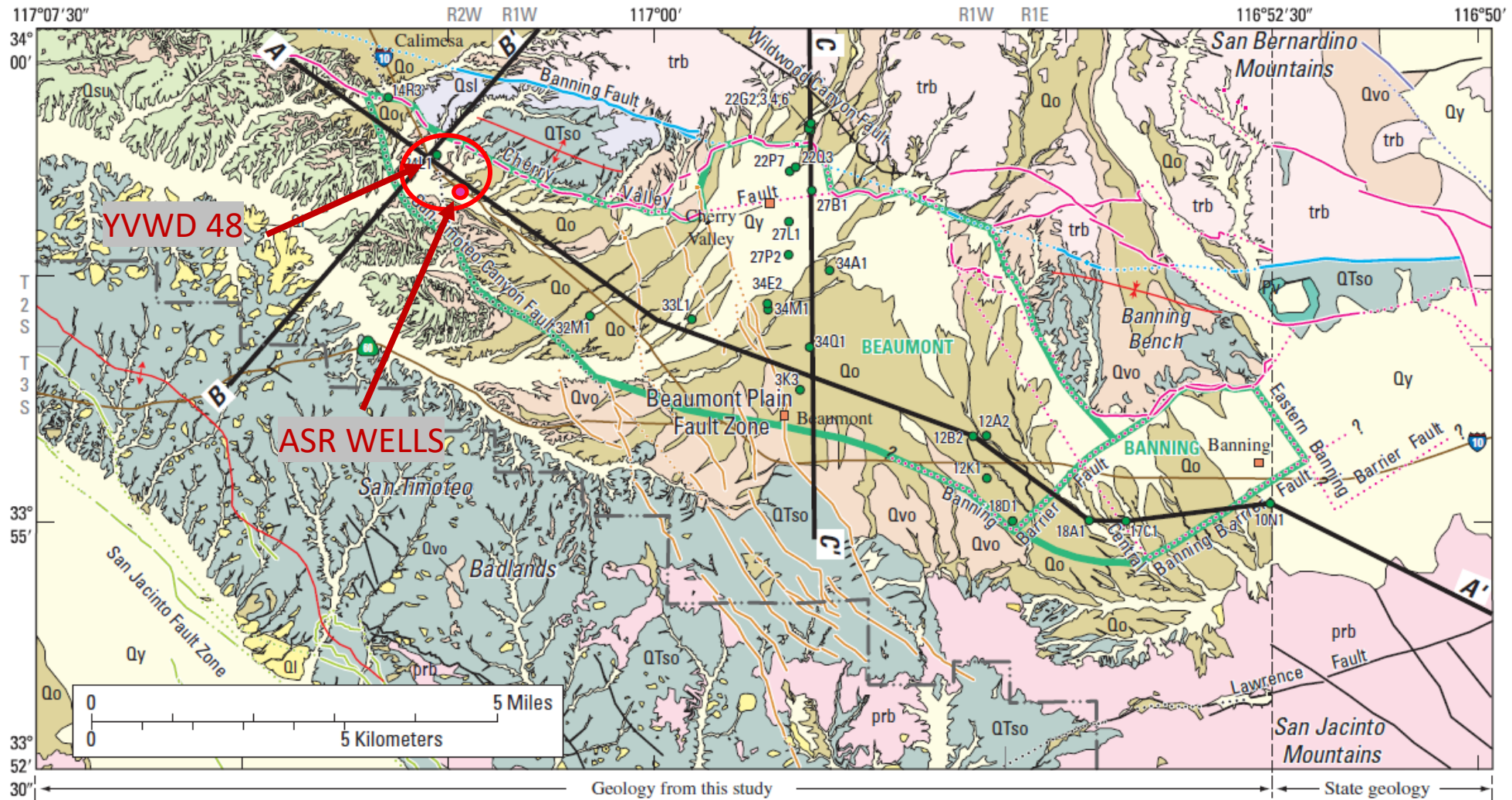








Figure 5. Map showing the generalized geology of the San Gorgonio Pass area, Riverside County California.

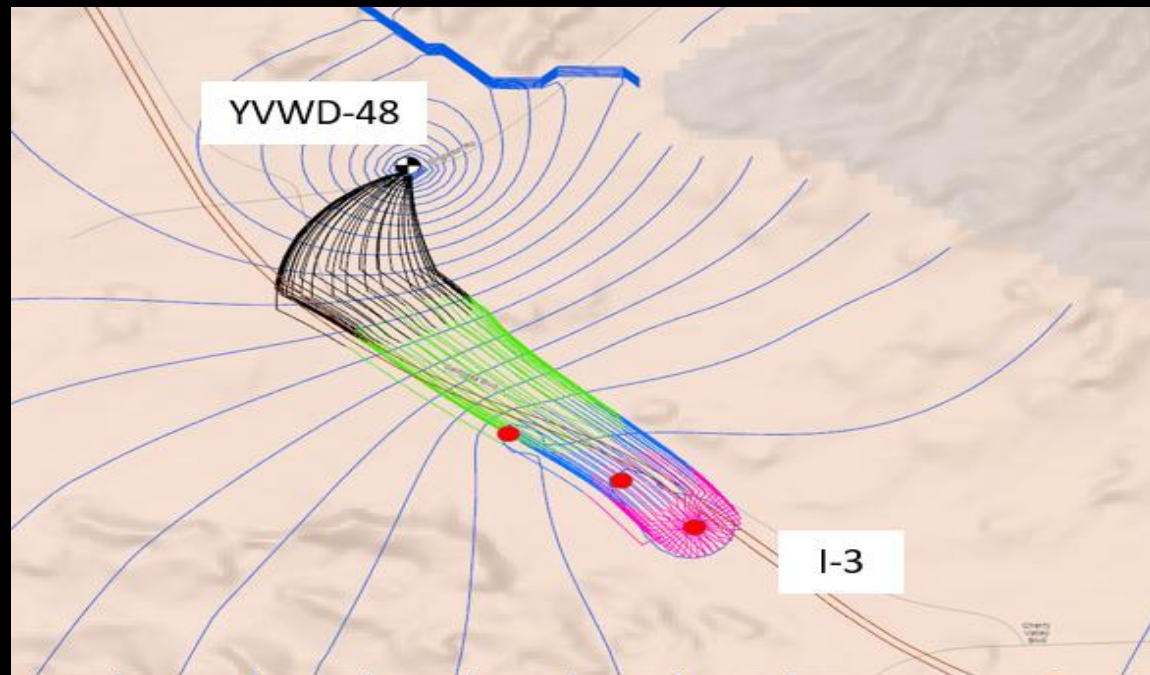
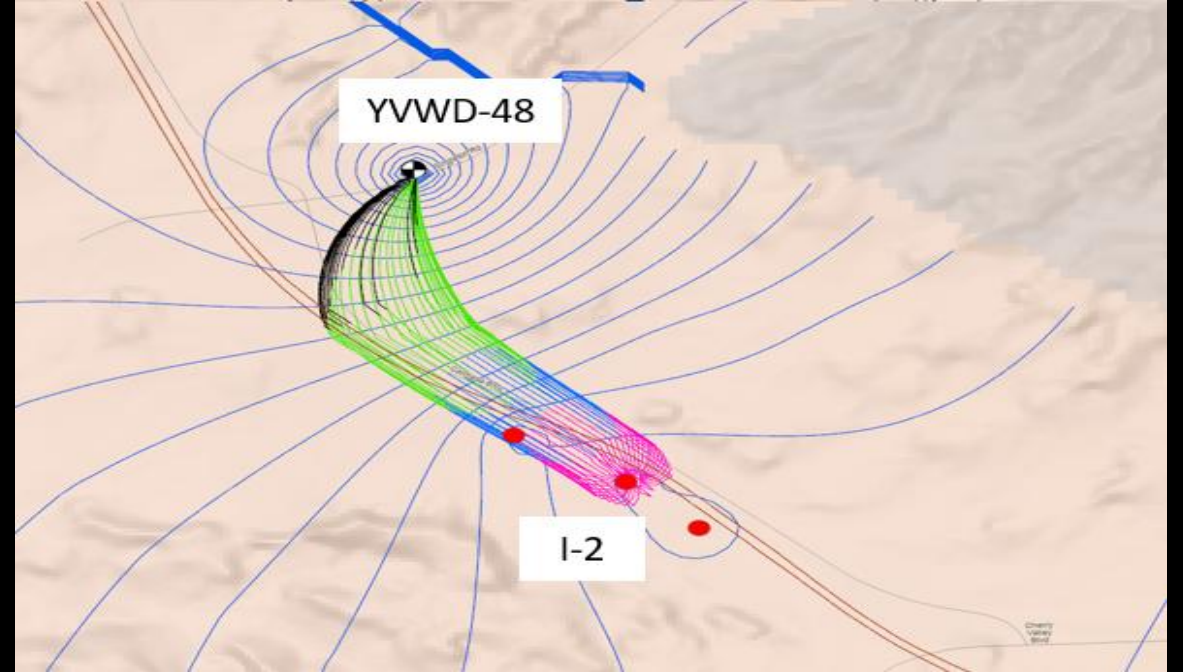
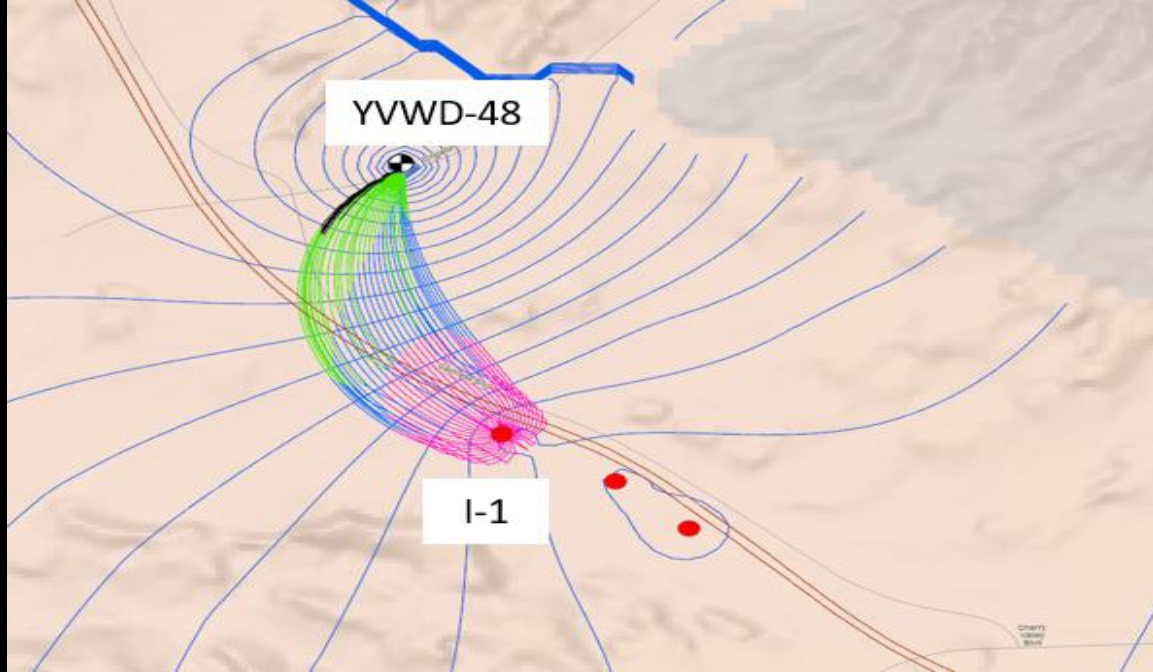


Base from U.S. Geological Survey digital data, 1:24,000, 1927 North American Datum; Universal Transverse Mercator Projection (NGVD 29), Zone 11.

EXPLANATION

- | | | | | |
|---|---|--|--|--|
| <p>Surficial deposits
(Holocene to Pleistocene)</p> <ul style="list-style-type: none"> Qy Younger deposits¹ Ql Landslide deposits¹ Qo Older deposits¹ Qvo Very old deposits¹ | <p>Younger sedimentary deposits
(Pleistocene)</p> <ul style="list-style-type: none"> Qsu Sedimentary deposits¹ (upper) Qsl Sedimentary deposits² (lower) Older sedimentary deposits
(Pleistocene to Pliocene) QTso Older sedimentary deposits | <p>Volcanic rocks
(Pliocene)</p> <ul style="list-style-type: none"> Pv Volcanic rocks <p>Crystalline basement rocks
(Pre-Tertiary)</p> <ul style="list-style-type: none"> prb Peninsular Ranges-type trb San Gabriel Mountains-type | <p>A — A' Cross section</p> <p>— · — · — San Gorgonio Pass Water Agency boundary</p> <p>BANNING Storage unit boundary and identifier</p> <ul style="list-style-type: none"> ● 12B2 Well and identifier ↕ Anticlinal fold ↘ Synclinal fold | <p>Faults—Dotted where concealed. Queried where uncertain</p> <ul style="list-style-type: none"> — · — · — San Andreas Fault Zone — · — · — San Jacinto Fault Zone — · — · — Banning Fault — · — · — San Gorgonio Pass Fault Zone — · — · — Beaumont Plain Fault Zone — · — · — Other faults |
|---|---|--|--|--|

¹ Upper aquifer in Beaumont and ² Lower aquifer in Beaumont and

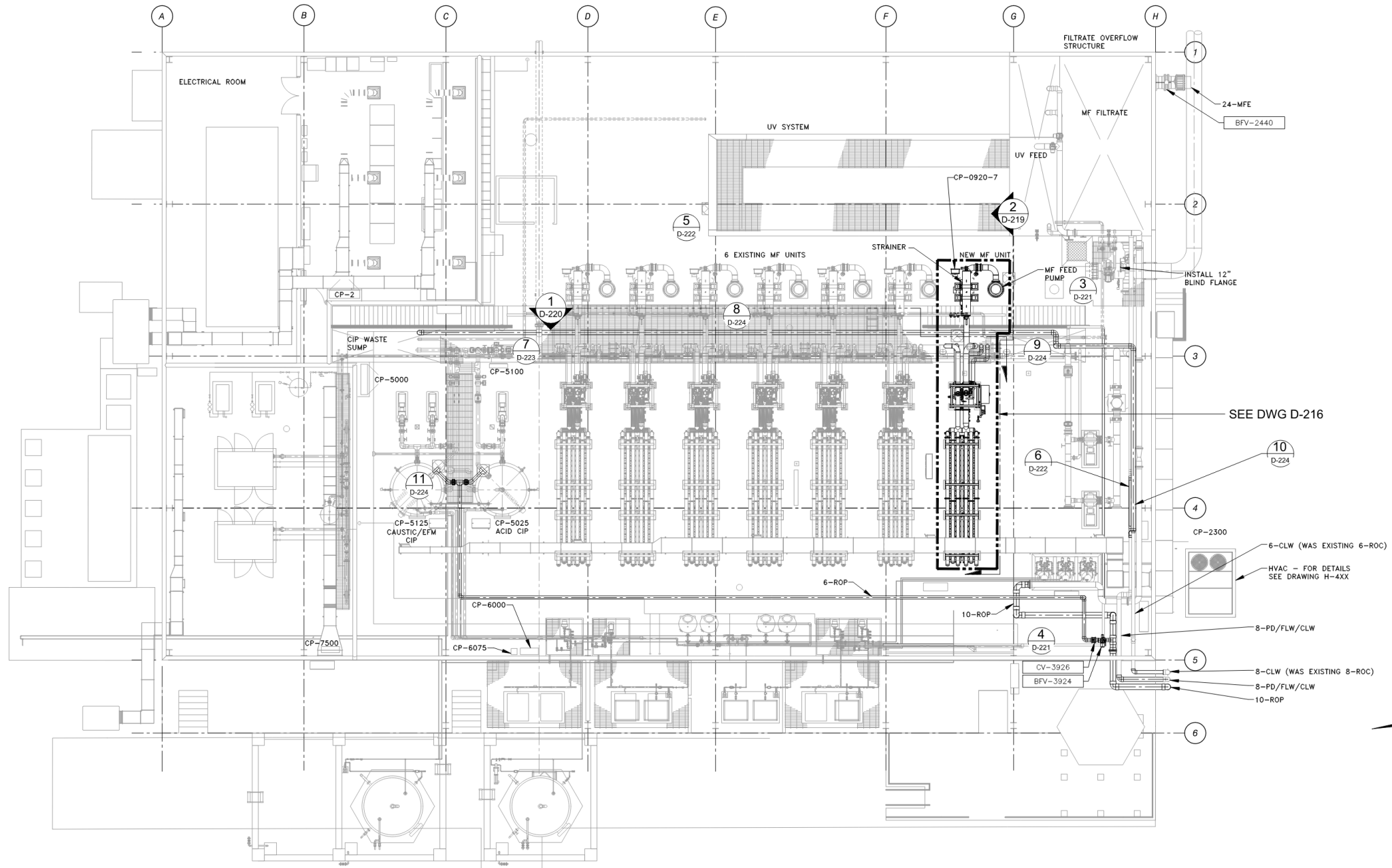


Injection Well	Recovery Well	Travel Time (Months)
I-1	YVWD-48	6 (188 days) – 13
I-2	YVWD-48	10 – 17
I-3	YVWD-48	15 – 23

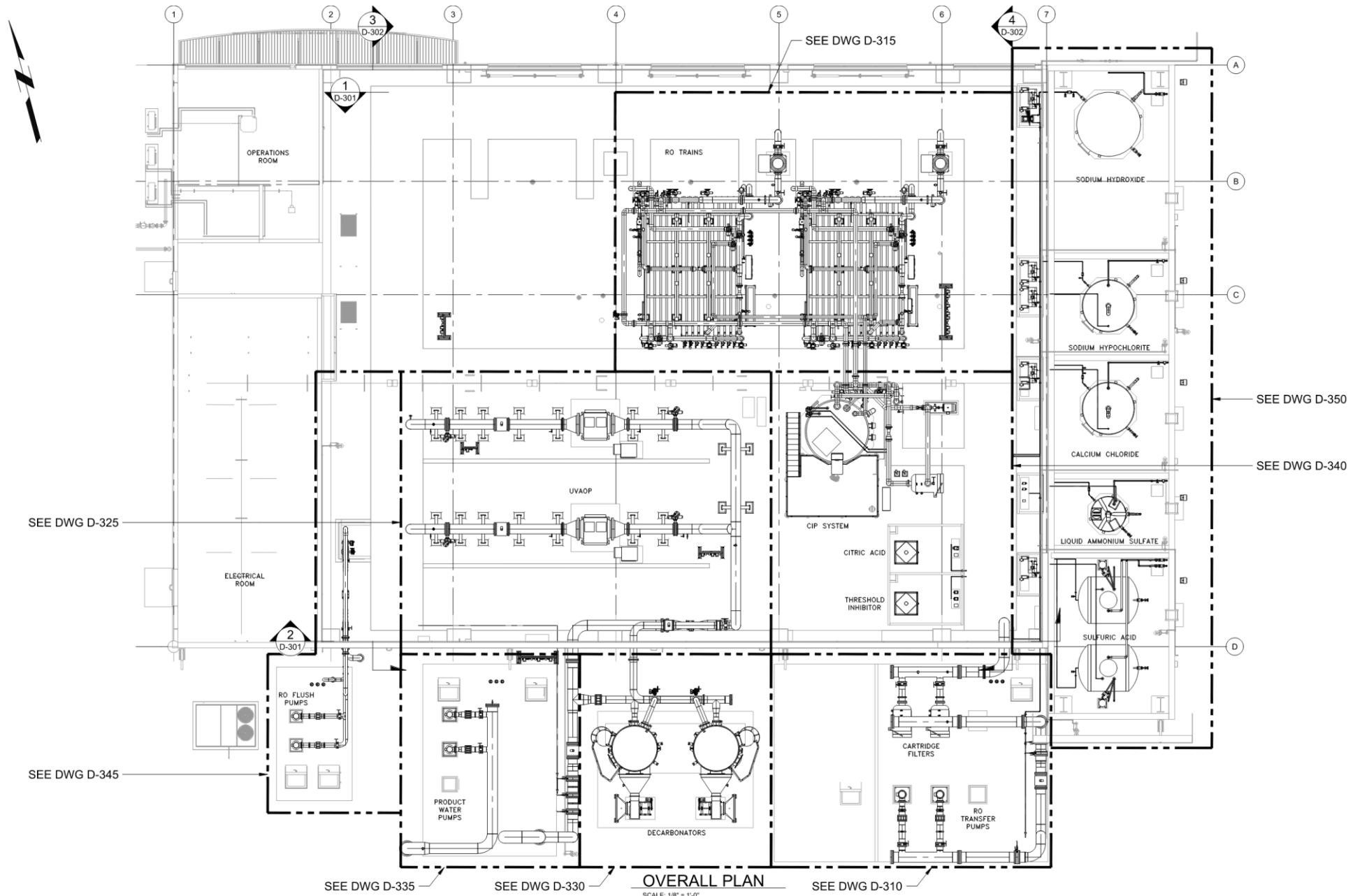




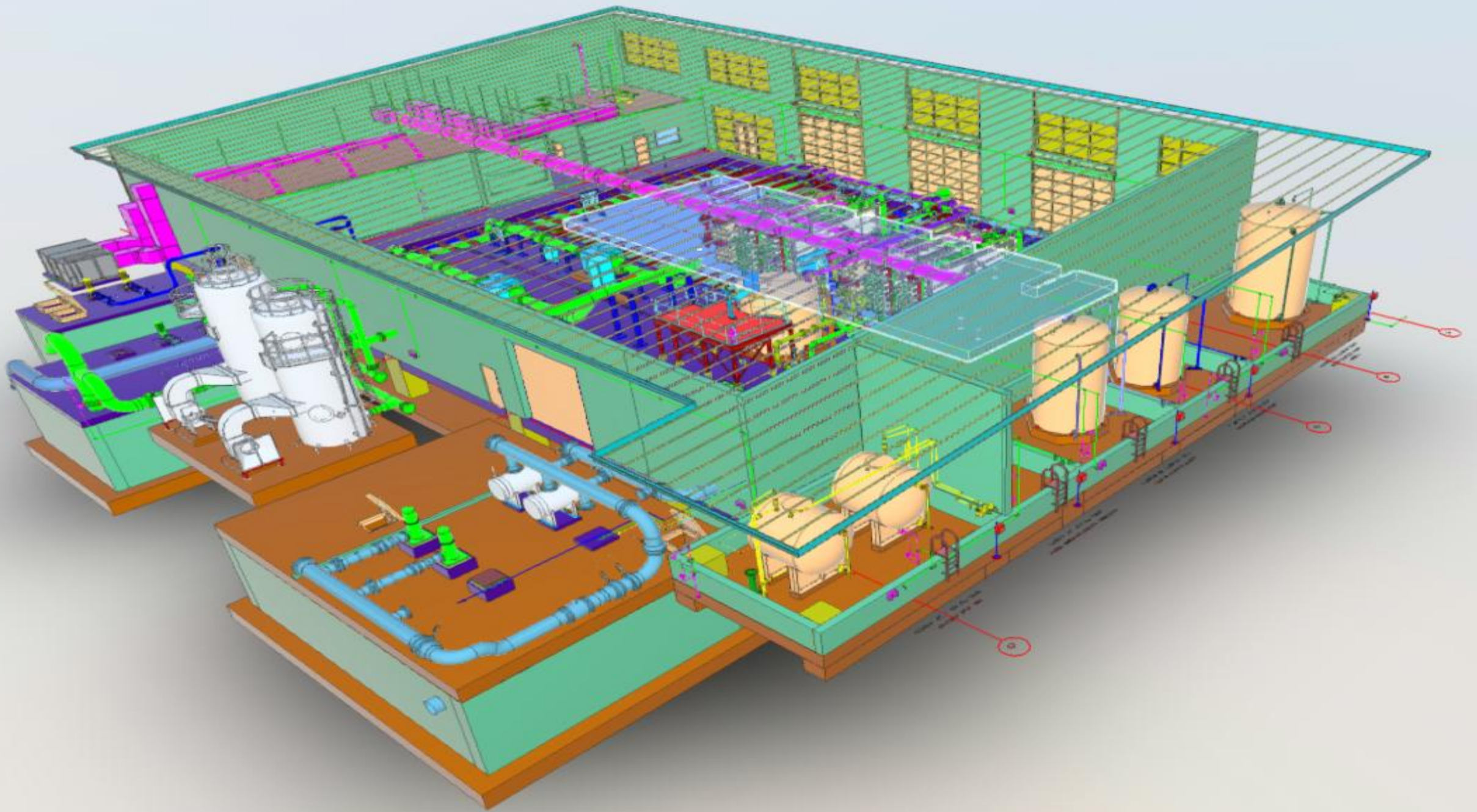
Site Layout - Existing MF/UV Building



Site Layout - AWP Building





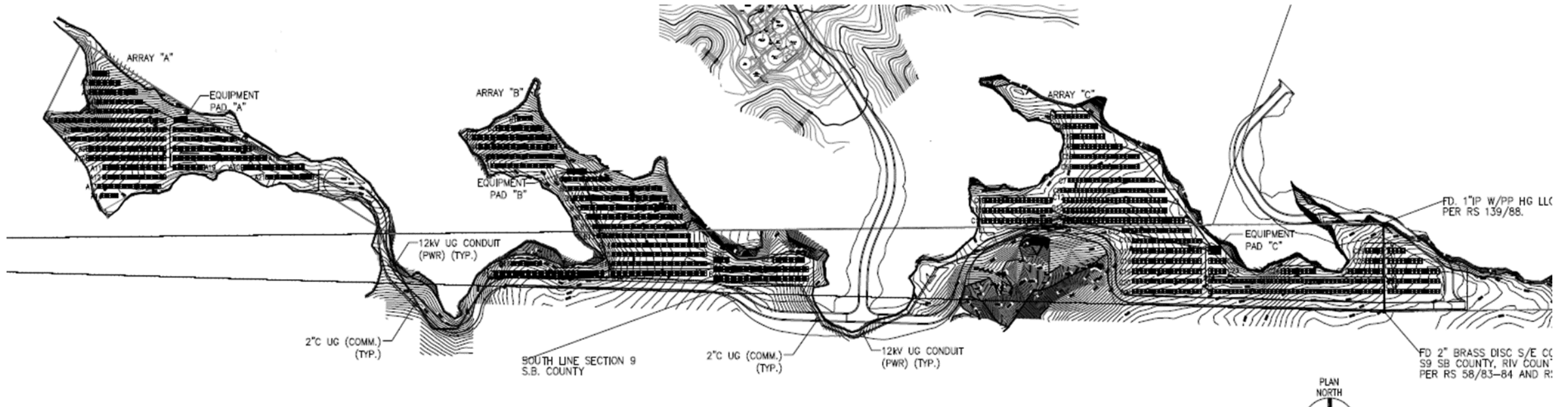


Wochholz Regional Water Recycling Facility

Solar PV: 3,763 kW

Battery Energy Storage System: 1,795 kW / 7,181 kWh

Natural Gas Generator: 1,750 kW









KA



The Judgment and the Rules and Regulations direct the Watermaster to pursue and obtain the highest practicable quality of replenishment water available. The Calimesa Crystal Vault Project directly advances this objective by delivering ultra-pure water representing one of the highest-quality supplemental sources ever used within the Beaumont Basin. Additionally, the Calimesa Crystal Vault relies on established mechanisms already in use within the basin, including existing water storage accounts and the “put-and-take” recovery of injected volumes, both of which are explicitly contemplated and supported under the Judgment’s storage and accounting framework.

The Yucaipa Valley Water District respectfully requests that the Beaumont Basin Watermaster:

1. Receive and file this report;
2. Adopt by minute order the acknowledgement of the Project's consistency with the Amended Judgment, its demonstrable basin-wide benefits - including improved groundwater quality and enhanced drought resilience - and the absence of any adverse impacts.

