



# STATUS OF WATER SUPPLY

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Water Resources and Watershed  
Committee

January 11, 2023

Sarah Fleury





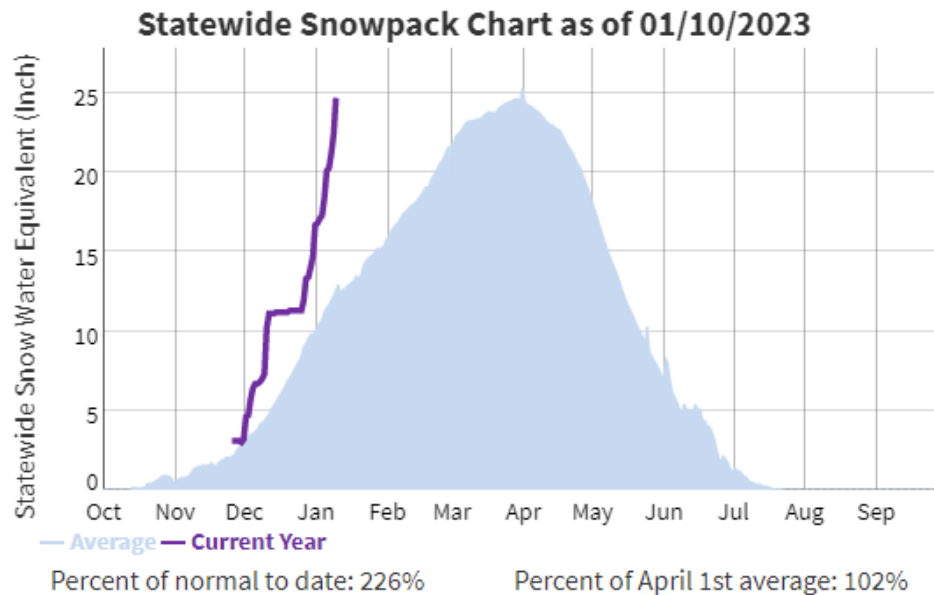
# Overview

- Precipitation Update
  - Statewide Snowpack
  - Local Precipitation
  - Reservoir Conditions
- Operating Plan in a Nutshell
  - Wet Year Challenges & Operations
  - Dry Year Challenges & Operations
  - Constraints and Considerations
  - Coordination

# Statewide Snowpack

## Snowpack as of 01/10/2023

The map of California shows how snowpack conditions compare to the historical averages at various locations across the state. The plot below aggregates this same data to show how the cumulative statewide snowpack is tracking relative to the historical average. This allows us to see how well the snowpack is doing to date, as well as how much snow may still be needed to reach the average peak snowpack (i.e., April 1st snowpack)



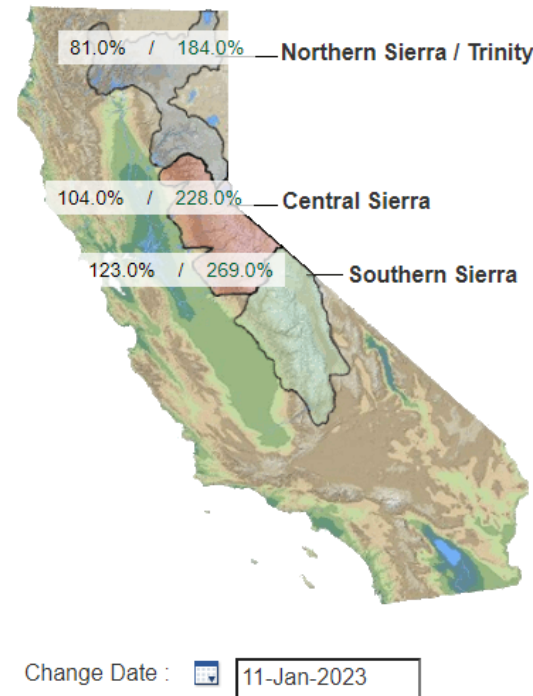
Source: California Water Watch - <https://cww.water.ca.gov/>

## Snow Water Equivalents (inches)

Provided by the California Cooperative Snow Surveys

Data For: 11-Jan-2023

% Apr 1 Avg. / % Normal for this Date



| NORTH                           |             |
|---------------------------------|-------------|
| Data For:                       | 11-Jan-2023 |
| Number of Stations Reporting    | 33          |
| Average snow water equivalent   | 23.1"       |
| Percent of April 1 Average      | 81%         |
| Percent of normal for this date | 184%        |

| CENTRAL                         |             |
|---------------------------------|-------------|
| Data For:                       | 11-Jan-2023 |
| Number of Stations Reporting    | 49          |
| Average snow water equivalent   | 28.2"       |
| Percent of April 1 Average      | 104%        |
| Percent of normal for this date | 228%        |

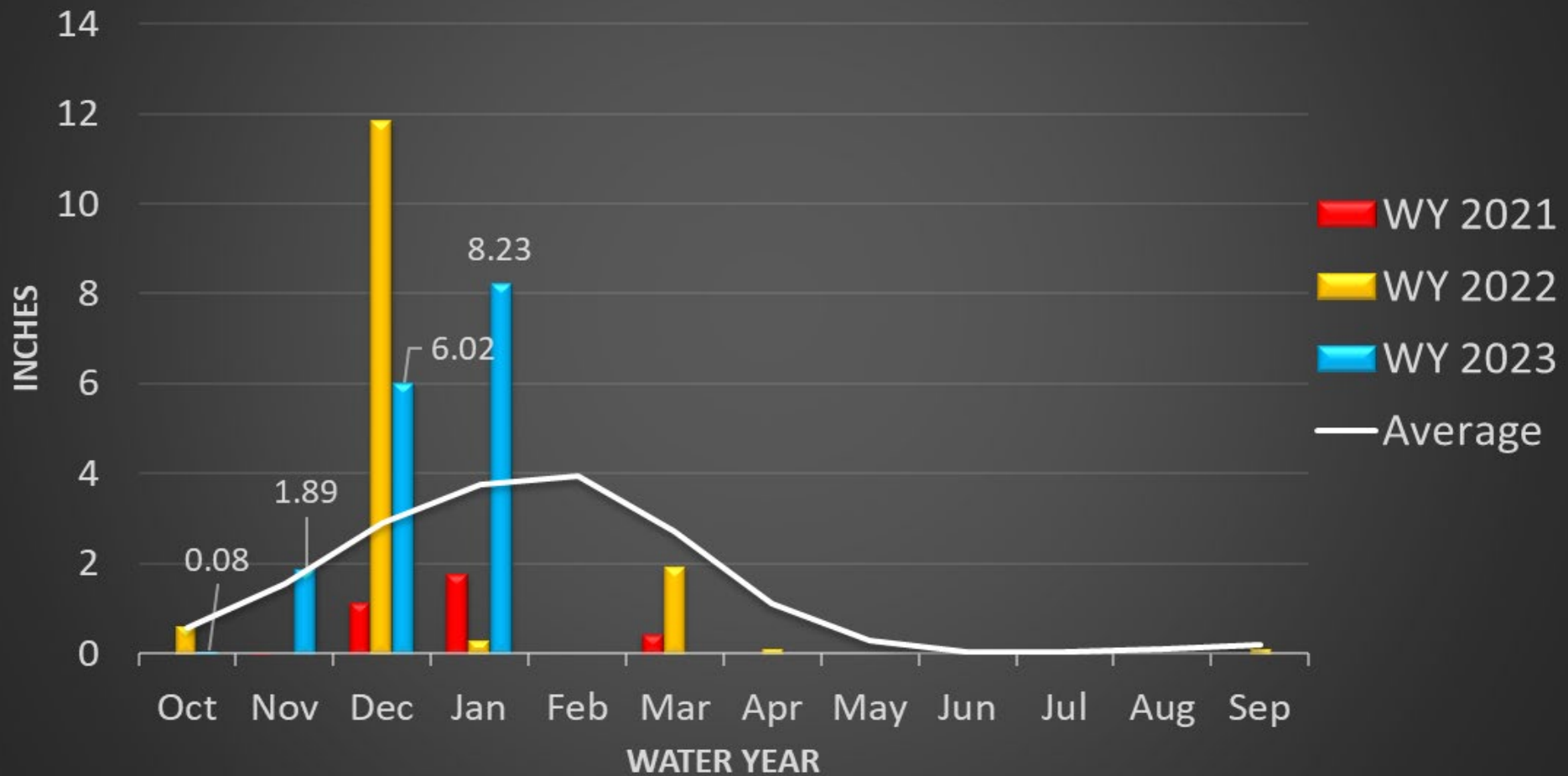
| SOUTH                           |             |
|---------------------------------|-------------|
| Data For:                       | 11-Jan-2023 |
| Number of Stations Reporting    | 33          |
| Average snow water equivalent   | 27.8"       |
| Percent of April 1 Average      | 123%        |
| Percent of normal for this date | 269%        |

| STATEWIDE SUMMARY               |             |
|---------------------------------|-------------|
| Data For:                       | 11-Jan-2023 |
| Number of Stations Reporting    | 115         |
| Average snow water equivalent   | 26.6"       |
| Percent of April 1 Average      | 102%        |
| Percent of normal for this date | 226%        |

Source: California Data Exchange Center DWR-  
<https://cdec.water.ca.gov/snowapp/sweq.action>



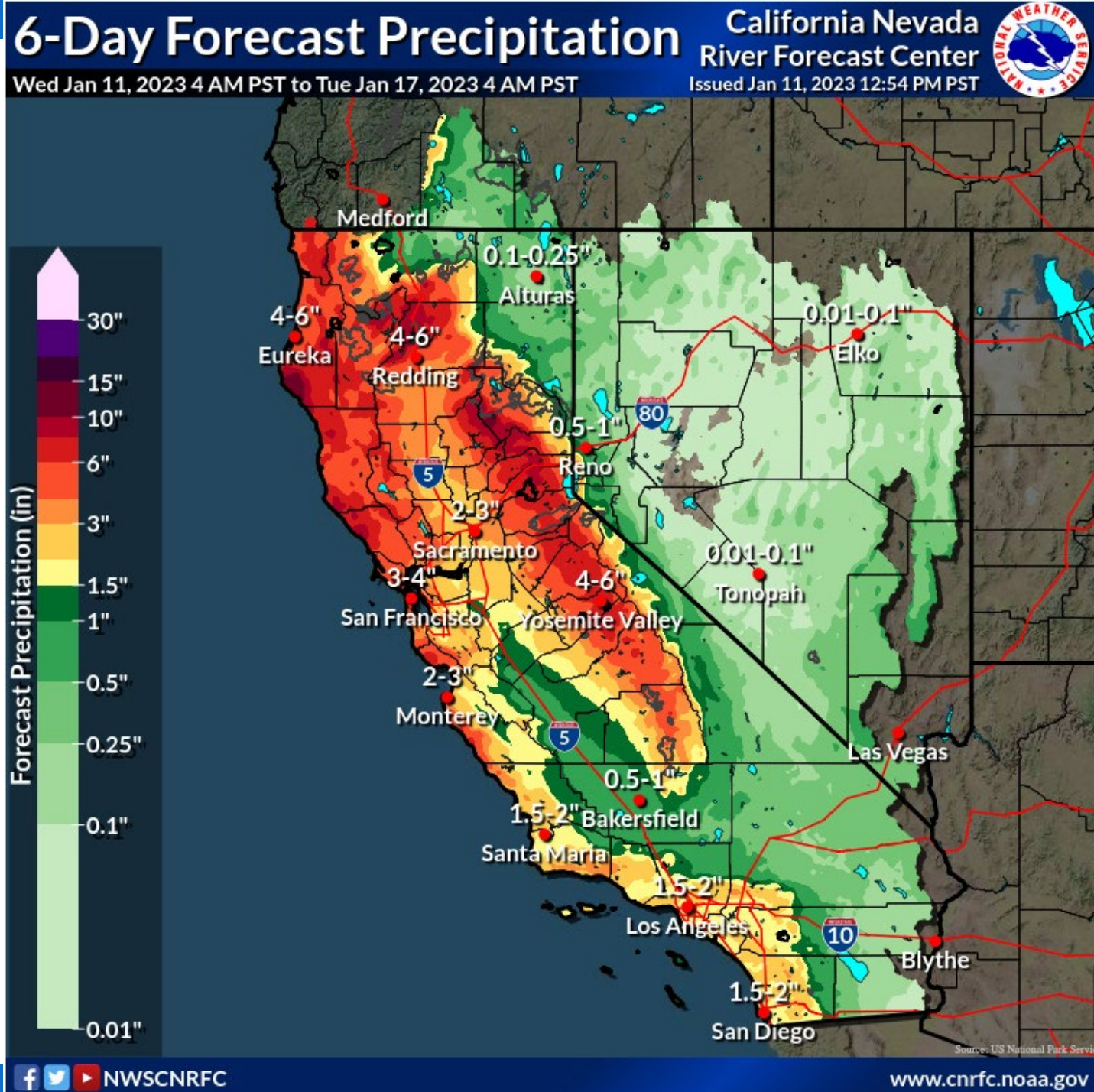
# SCV Precipitation Water Year Comparison 2021-2023 (Oct-Sept)



Source: <https://dpw.lacounty.gov/wrd/rainfall/> (Newhall-Soledad Canyon Precipitation)

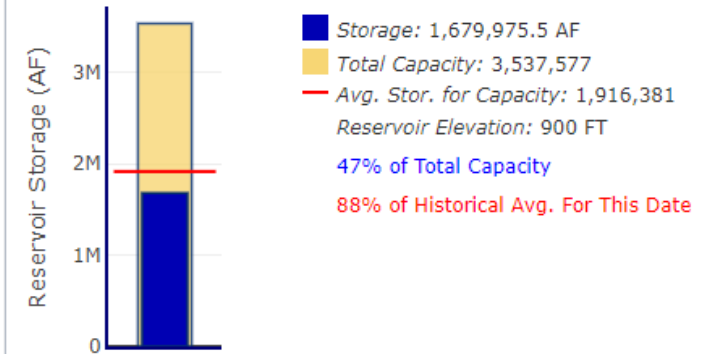
# Forecast

Jan 11, 2023 to Sun Jan 17, 2023

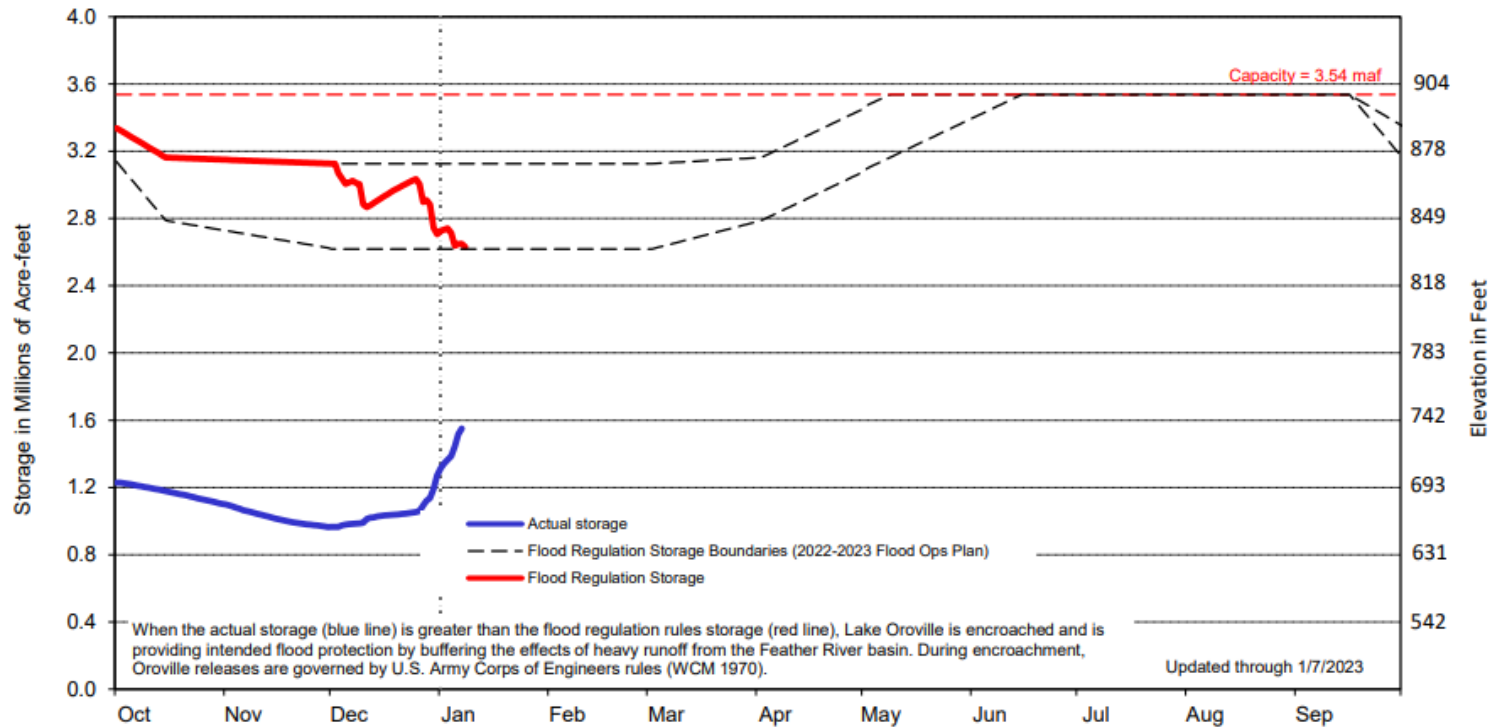


# DWR Reservoir Operations

Lake Oroville (ORO) - Storage Conditions as of 01/10/2023



**Lake Oroville Storage**  
 October 1, 2022 to September 30, 2023



## Winter Reservoir Operations

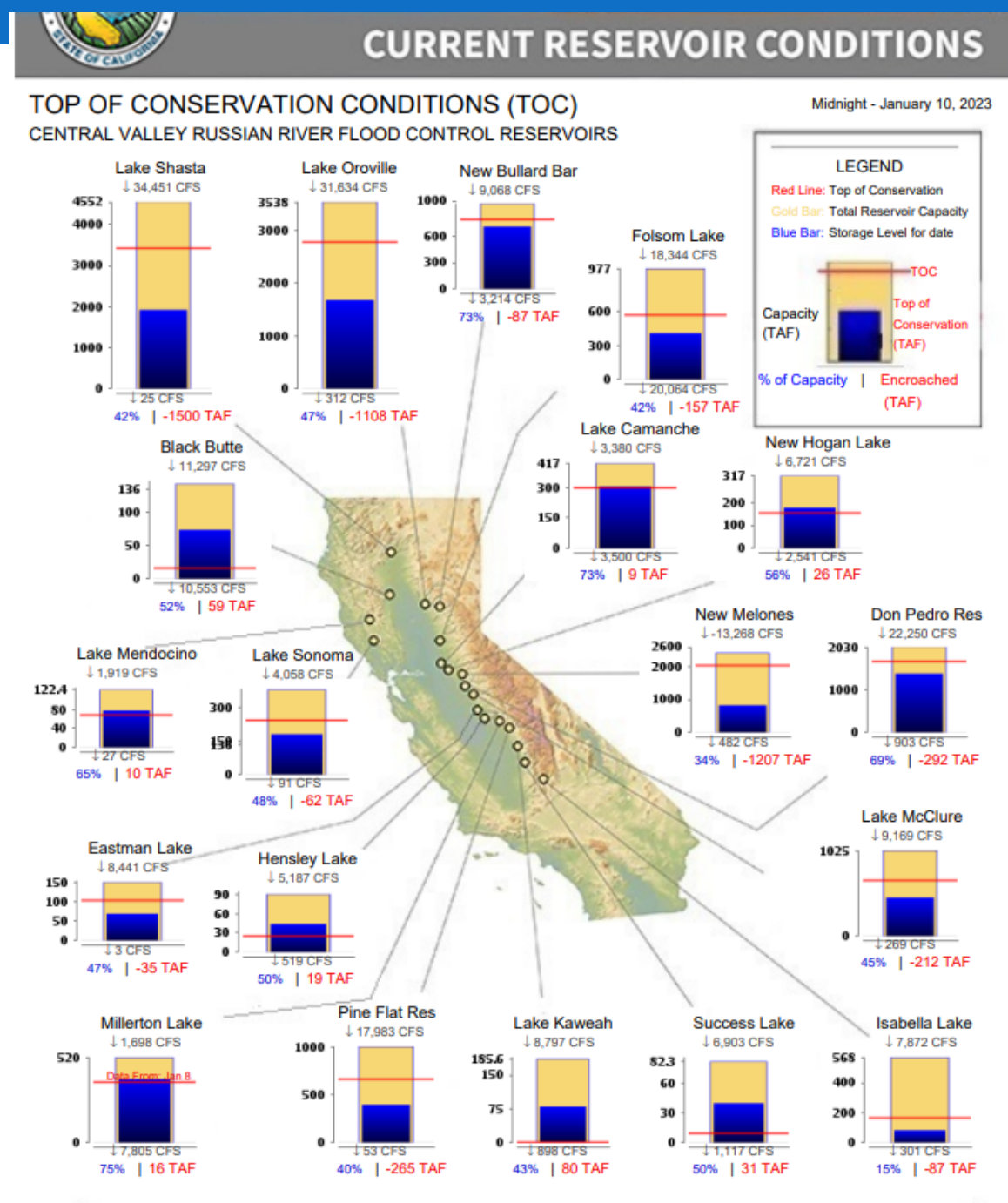
- DWR conserving maximum amounts
- Minimum releases required until reservoir reaches encroachment
- Conservation – space in reservoir available to fill below flood storage limits
- Encroachment – when water levels go higher than flood regulation storage levels
  - Releases increase for flood control management



# Statewide Reservoir Conditions

- Larger reservoirs still have a lot of room
- Smaller reservoirs are reaching encroachment point
- 84% of historical average statewide

Source: California Data Exchange Center-Reservoirs  
<https://cdec.water.ca.gov/reportapp/javareports?name=floodcontrol.pdf>



# Water Operating Plan in a Nutshell

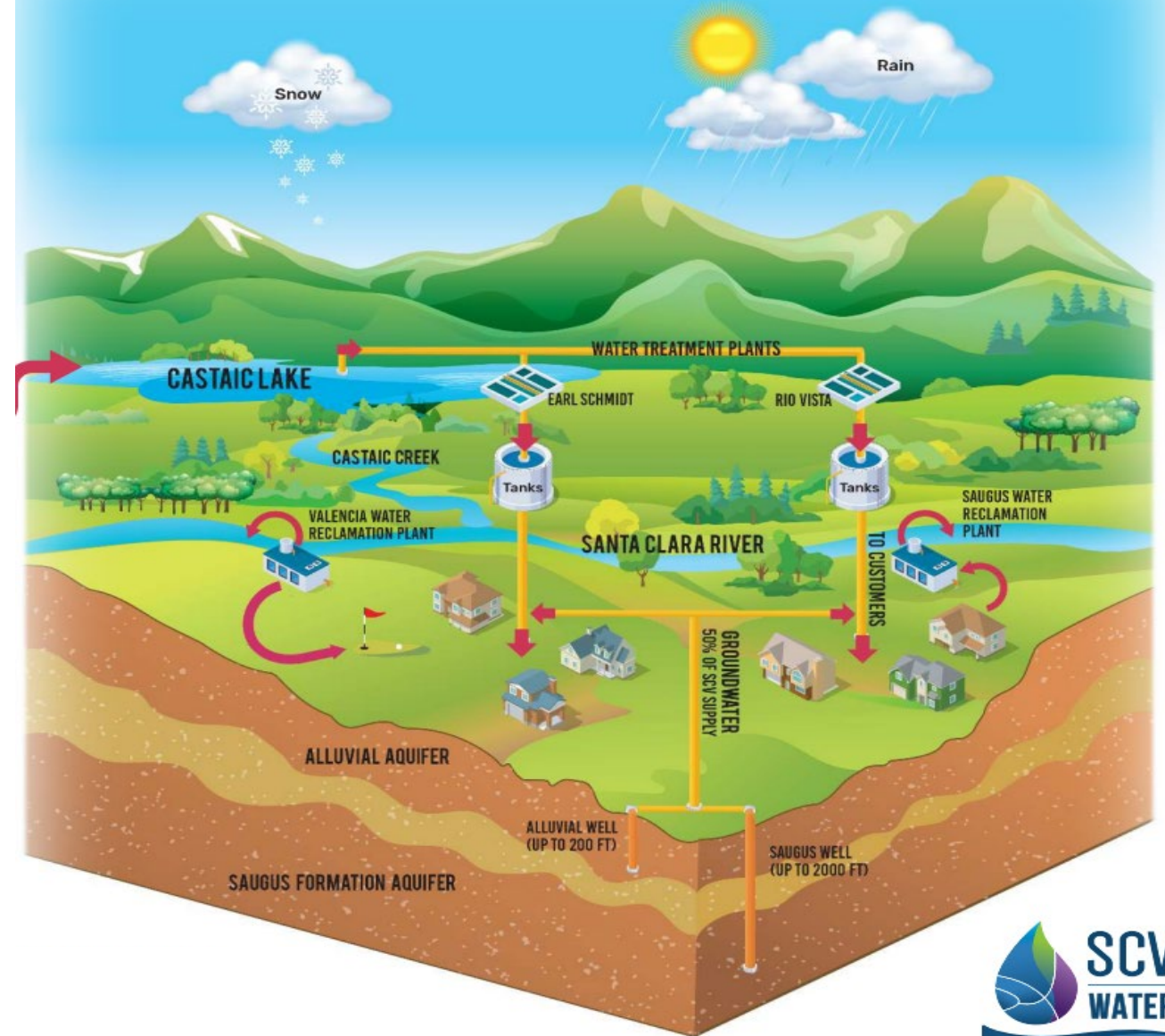
## SCV Water Supply Portfolio

### Imported Supplies

- State Water Project
- Water Banking Programs
- Water Transfers
- Water Exchanges
- Water Purchases
- Emergency Flex Storage

### Local Supplies

- Groundwater
  - Alluvial
  - Saugus
- Recycled Water





# Operating Plan Scenarios

- Updated frequently
  - Local production
  - SWP Table A allocation
  - Imported deliveries
  - Transfer water availability
  - Conservation program/regulation adjustments
  - Demand adjustments

| 2023 Operating Plan - Initial 2023                 | 2023<br>5% Initial SWP<br>Allocation | 2023<br>15% SWP<br>Allocation | 2023<br>20% SWP<br>Allocation | 2024<br>5% SWP<br>Allocation |
|--|--------------------------------------|-------------------------------|-------------------------------|------------------------------|
| <b>Demand</b>                                      | <b>72,500</b>                        | <b>72,500</b>                 | <b>72,500</b>                 | <b>74,000</b>                |
| Groundwater  | 24,500                               | 24,500                        | 24,500                        | 30,000                       |
| Alluvium   | 14,000                               | 14,000                        | 14,000                        | 16,000                       |
| Saugus   | 10,500                               | 10,500                        | 10,500                        | 14,000                       |
| Recycled Water                                     | 700                                  | 700                           | 700                           | 1,000                        |
| <b>Imported Demand</b>                             | <b>47,300</b>                        | <b>47,300</b>                 | <b>47,300</b>                 | <b>43,000</b>                |
| <b>Imported Supplies</b>                           |                                      |                               |                               |                              |
| SWP Table A  | 4,760                                | 14,280                        | 19,040                        | 4,760                        |
| BVRRB  | 11,000                               | 11,000                        | 11,000                        | 11,000                       |
| <b>Total Available Imported Supplies</b>           | <b>15,760</b>                        | <b>25,280</b>                 | <b>30,040</b>                 | <b>15,760</b>                |
| <i>Excess Imported Supplies (neg = shortfall)</i>  | <i>(31,540)</i>                      | <i>(22,020)</i>               | <i>(17,260)</i>               | <i>(27,240)</i>              |
| <b>Dry Year Water Supplies</b>                     |                                      |                               |                               |                              |
| SWP Carryover Delivered (not always guaranteed)    | 16,000                               | 16,000                        | 16,000                        | 16,000                       |
| Rosedale Banking                                   | 15,000                               | 10,000                        | 5,000                         | 10,000                       |
| Semitropic Enhanced Recovery Unit (Banking)        | 5,000                                | 5,000                         | 5,000                         | 5,000                        |
| Yuba Accord  | 1,000                                | 1,000                         | 1,000                         | 1,000                        |
| Dry Year Water Purchase                            |                                      |                               |                               |                              |
| Conservation Tier 2 estimated 15% demand reduction | 10,875                               | 10,875                        | 10,875                        | 11,100                       |
| Flexible Storage (up to 6,060 AF)                  |                                      |                               |                               |                              |
| <b>Total Imported &amp; Dry Year Supplies</b>      | <b>63,635</b>                        | <b>68,155</b>                 | <b>67,915</b>                 | <b>58,860</b>                |
| 2023 SWP Carryover into 2024 (neg = shortage)      | 16,335                               | 20,855                        | 20,615                        | 15,860                       |

# Wet Year Challenges & Operations

## Challenges

- Hydrological variability
- Surplus Water
  - Article 56 carryover spill
  - Water storage constraints (banking & reservoirs)
- Demand decrease



## SCV Water Operations

- Maximize use of surface water supplies
- Reduce groundwater production (recovery)



## Imported Supplies

- Avoid Article 56 (carryover) spill
- Consider potential Article 21 (State Water Project surplus water) water use opportunities
- Target 10-15 TAF carryover supply for subsequent year



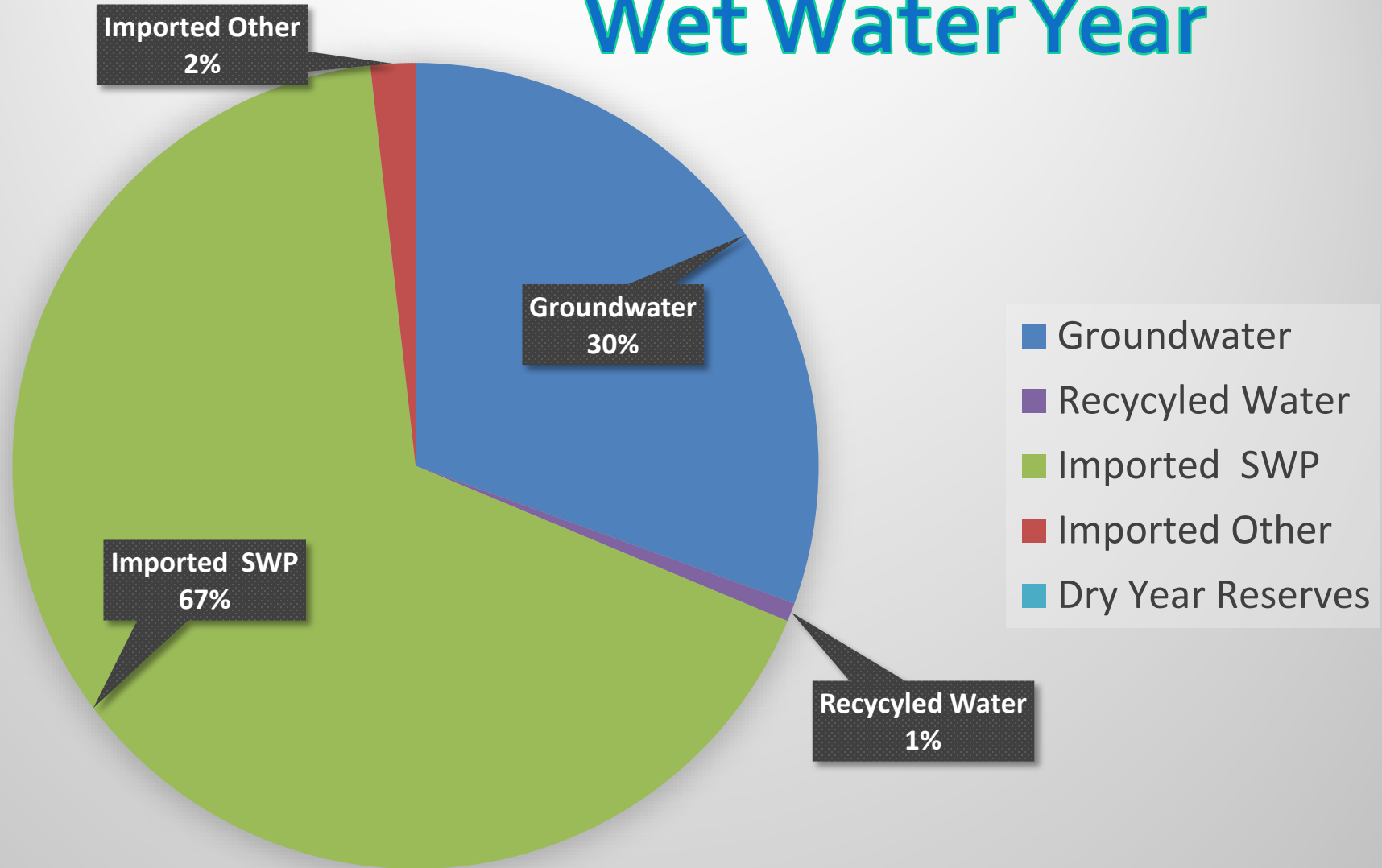
## Surplus Water

- Fill water banking programs
- Consider water sales
- Consider water exchanges



# 2019 Water Supplies Used

## Wet Water Year



# Dry/Critical Year Challenges & Operations

## Challenges



- Hydrological variability
  - First or multi-year drought
  - Surface water constraints
  - Runoff uncertainty
- Water availability
  - Imported
  - Local
  - Reserves
- Demand increase
- State regulations
  - Voluntary
  - Mandatory



## SCV Water Operations

- Maximize use of local supplies
- Utilize dry year reserve supply
- Increase conservation demand reduction programs



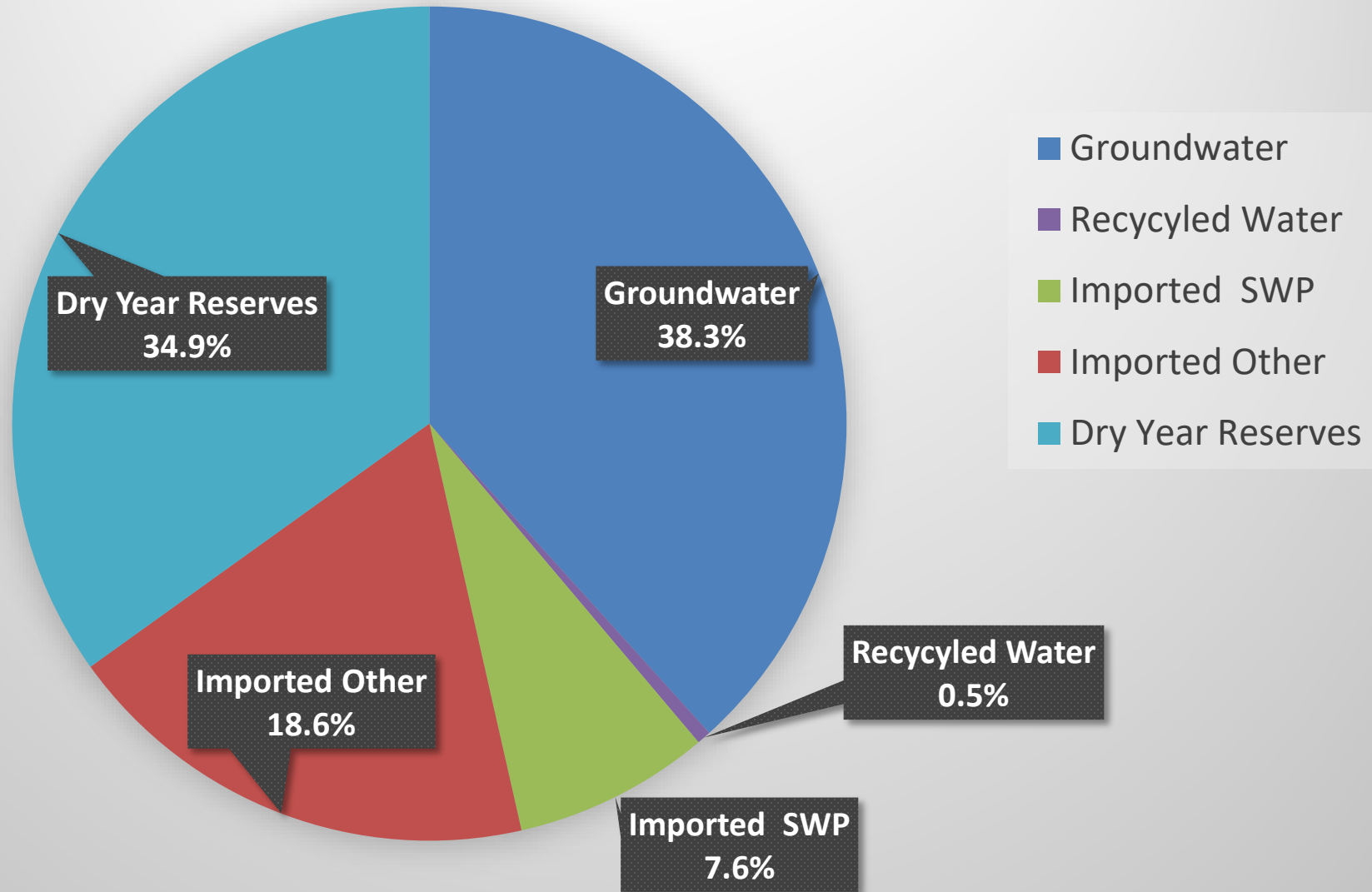
## Dry Year Reserve Options

- Water banking recovery programs
- Water purchase transfer programs
- Water exchange programs
- Utilize flexible water supply in Castaic Lake



# Draft Final 2022 Water Usage

## Critically Dry Water Year

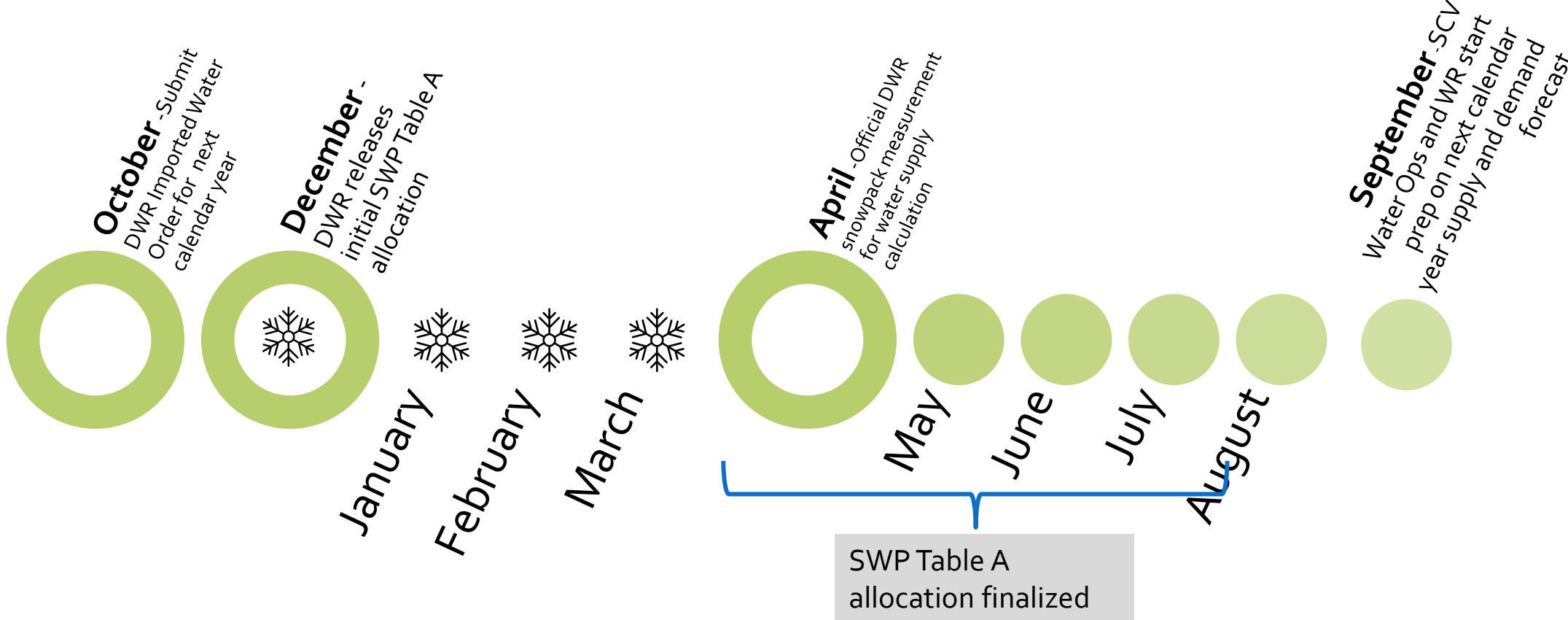


# Constraints and Considerations (Local & Imported Supplies)

| <b>Water Quality</b>           | Changes in levels short term and long term, regulations, treatment needs  |
|--------------------------------|---|
| <b>Delivery Constraints</b>    | (environmental, hydrological, contractual)  |
| <b>Annual</b>                  | Supply availability adjustments per source (imported & local)   |
| <b>Monthly</b>                 | Pumping constraints, competition, conveyance limitations  |
| <b>Seasonal</b>                | Demand fluctuations (summer vs. winter), more water available in winter, more demand in summer  |
| <b>Recovery Constraints</b>    | 1 <sup>st</sup> vs. 2 <sup>nd</sup> priority pumping capacity, equipment failures, groundwater levels decreasing = production capacity decreasing |
| <b>Storage Variability</b>     | Assess storage levels (space, supply, program)  |
| <b>Operational Constraints</b> | Maintenance outages, wet vs. dry year operations  |
| <b>Cost</b>                    | Budget, \$/AF, sale or purchase, recharge or recovery, local vs. import   |
| <b>Risk Assessment</b>         | Carryover spill, long term vs. short term program water availability, current vs. future year conditions  |



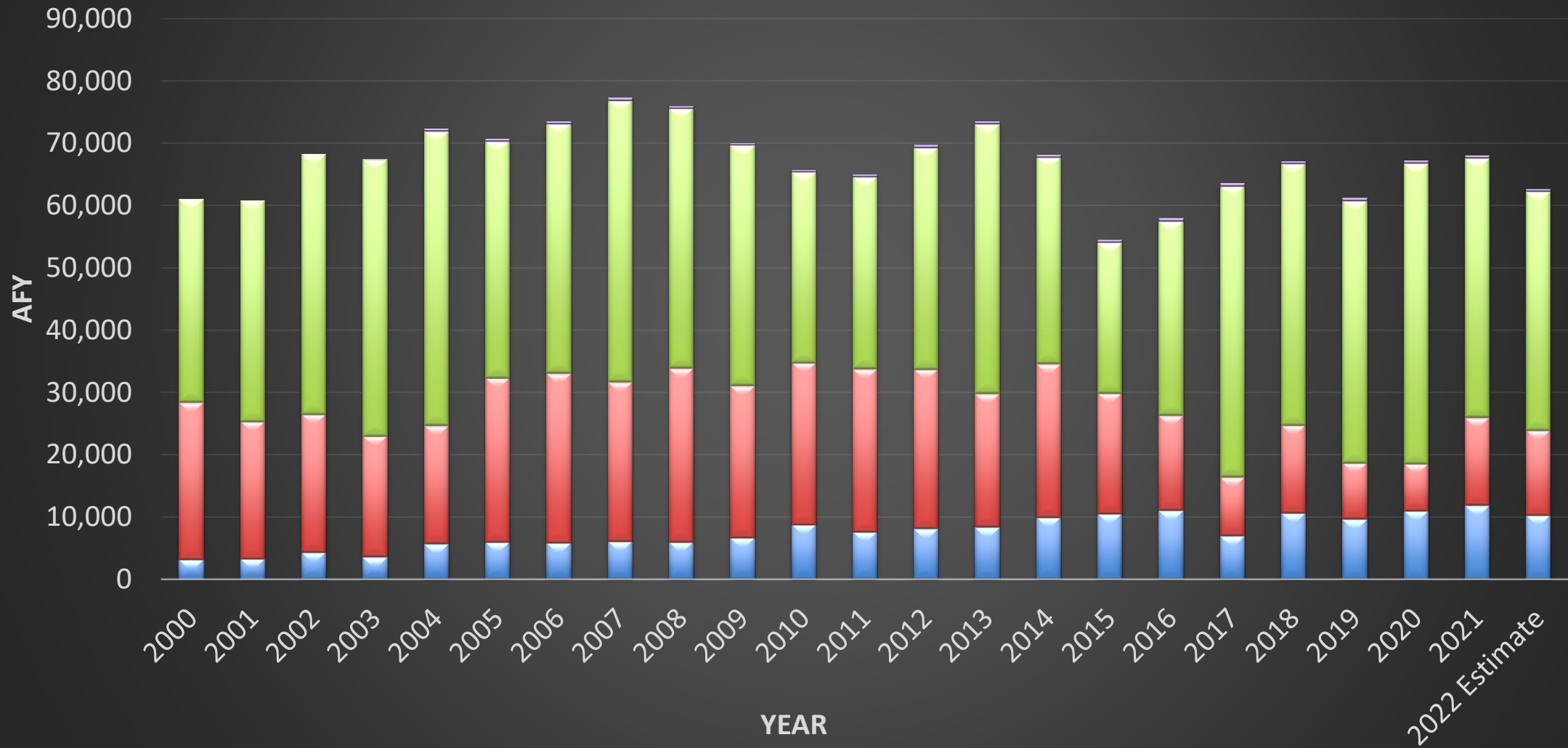
# Water Year SWP Table A Allocation Timeline



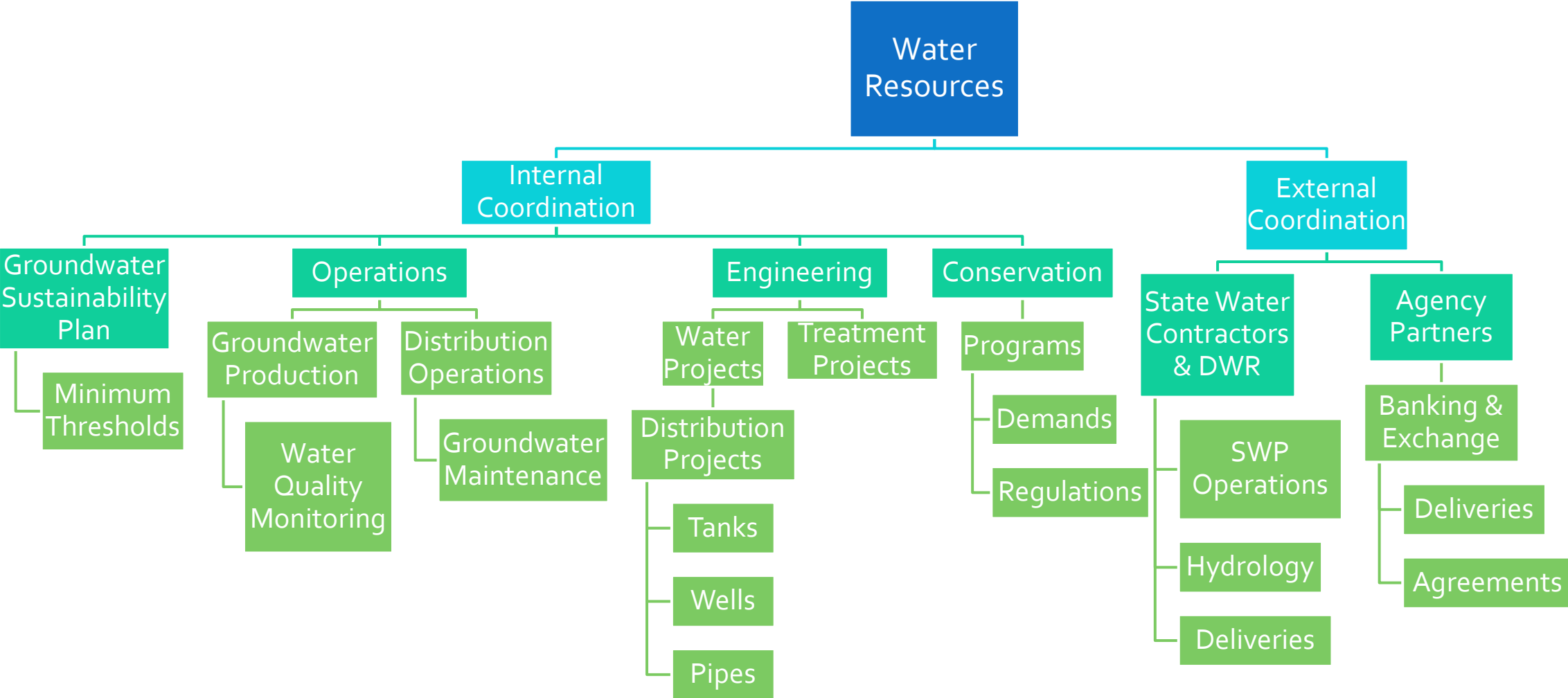
Operating plan adjustments year-round with DWR Delivery Reports and SCV Water operations updates

# Annual SCV Water Supply & Demand

■ Saugus ■ Alluvial ■ Imported ■ RW



# Coordination Efforts





# QUESTIONS

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go with  
the flow