

Water Operations

March 23, 2022

COMMITTEE ON ENERGY AND THE ENVIRONMENT



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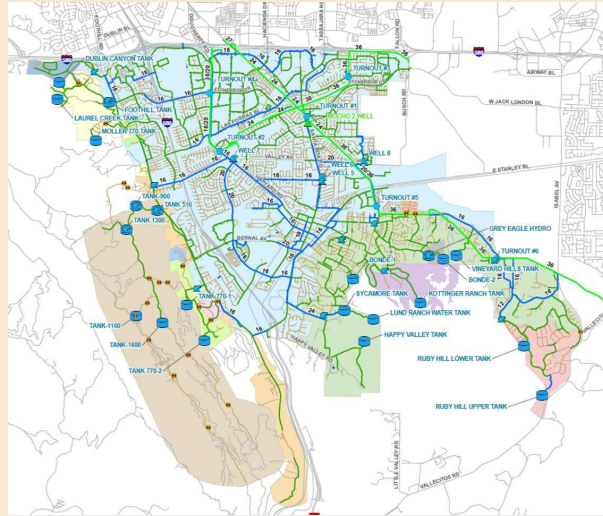
Overview

- Water Utility
- Water Supply
- PFAS Project
- Questions



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Water Utility: System

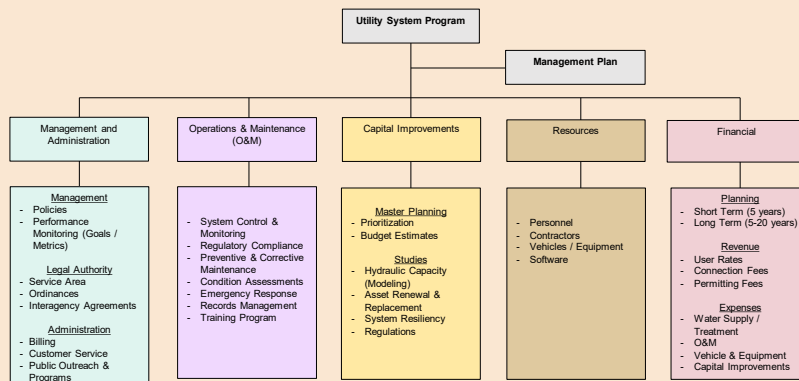


- 22,000 Customer Accounts
- Annual Water Supply ~ 4,500 million gallons
- 300 miles of piping (average age ~ 35)
- 14 pump stations & 20 reservoirs
- Annual Operating Budget ~ \$29 million
- Water purchases ~ \$18 million
- O&M ~ \$11 million



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Water Utility: Management



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Water Supply: Context

- Only two sources of water
 - Local Rainfall
 - Imported State Water Project Water (or other water purchases)
- The 80/20 rule
 - The City produces 20% of its water supply from 3 wells
 - Zone 7 produces 20% from local groundwater and imports 80%
- Zone 7's Role
 - Regional Water Supplier
 - Regional Water Supply Planning
 - Groundwater Management Agency



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Water Supply: Overview

- First six months of Water Year 2021 ranks as the fourth driest of record
- Statewide, the snowpack is 63% of average for this date
- Water supplies are adequate assuming conservation targets are met
- Stage 2 Water Shortage with Mandatory 15% Conservation Target
- Water conservation during the fall exceeded the 15% reduction target



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Tri-Valley Water Supplies

- Most of the region’s water supply served by Zone 7 and the retailers is imported, not local
- Currently, about 70% of the supply comes from the State Water Project (SWP) via the Delta
- Recycled water for irrigation supplies about 10%
- Zone 7 stores excess imported surface water in the local groundwater basin, remote groundwater banks in Kern County, and in San Luis Reservoir
- Zone 7 provides about 80% of the supplies served to the region

Sources of Supplies

Source	Percentage
State Water Project (Zone 7)	70%
Arroyo Valle (Zone 7)	10%
Groundwater Quotas (Retailers)	11%
Recycled Water (DSRSD/Livermore/Pleasanton)	9%

■ State Water Project (Zone 7)
 ■ Arroyo Valle (Zone 7)
 ■ Groundwater Quotas (Retailers)
 ■ Recycled Water (DSRSD/Livermore/Pleasanton)

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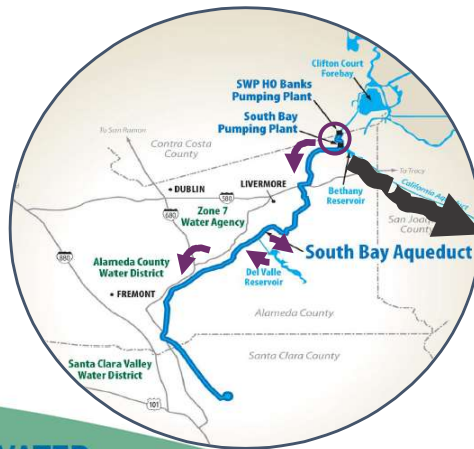
State Water Project (SWP) System



- SWP System
 - Delivers the year's "Table A" allocation
 - Other SWP water
 - Other water, when capacity is available
- 29 SWP Contractors:
 - 23 Mostly Municipal & Industrial
 - 6 Mostly Agricultural
- Water Supply Contracts
 - 4,200,000 AF in Table A amounts
 - Zone 7: 2% of the SWP



Conveyance of Imported Water

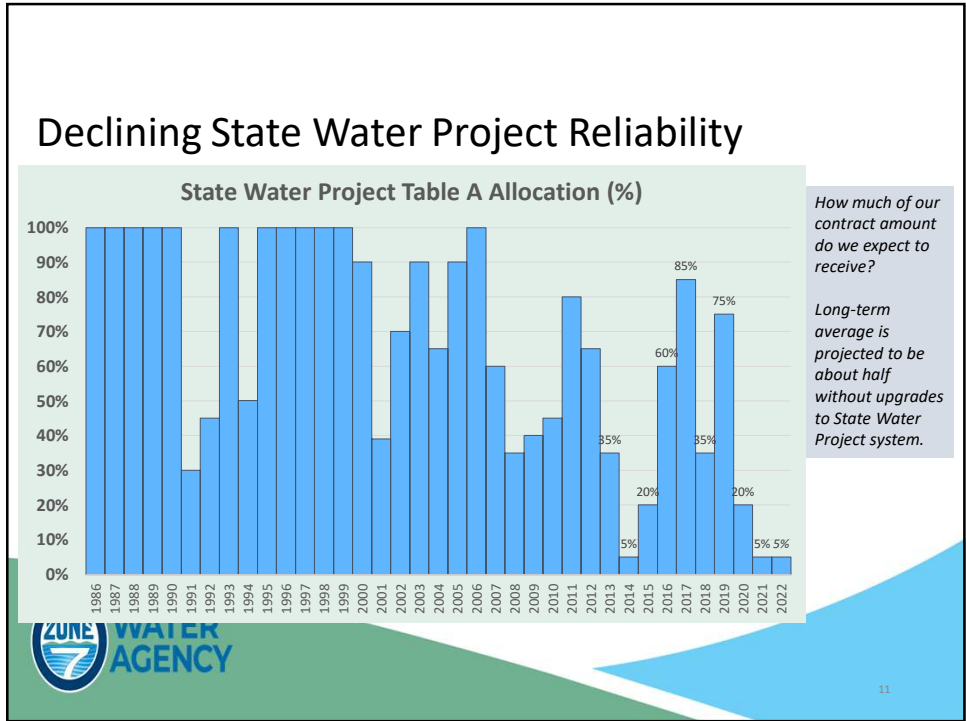


The California Aqueduct conveys water to SWP contractors in central and southern California.

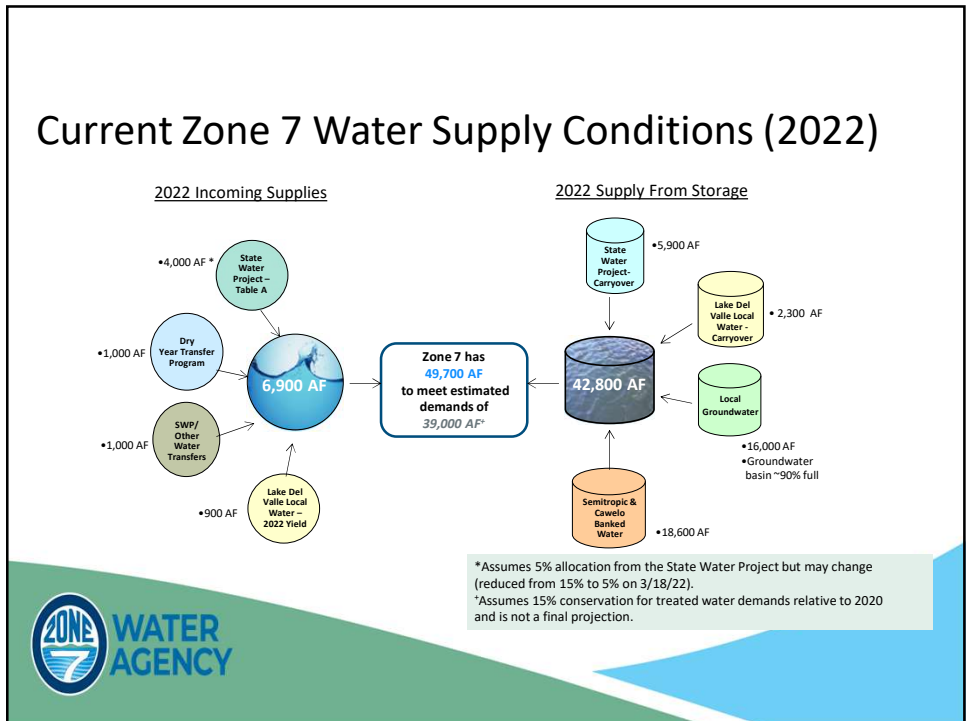
It also conveys excess Zone 7 water to Kern County to "bank" for future use.

All of Zone 7's imported supplies are delivered through the Delta/South Bay Aqueduct System.





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Long-Term Outlook:

Key Findings from 2019 Water Supply Evaluation Update

- Additional water supplies are needed to accommodate reduced reliability of water supplies and growth.
- There are multiple portfolios that can meet the Tri-Valley's needs.
- Multiple, new water supply reliability projects will be needed.
- Significant investments are required.

Potential Water Supply & Storage Alternatives:

Bay Area Regional Desalination Project

Delta Conveyance Project

Los Vaqueros Reservoir Expansion + Transfer Bethany Pipeline

Potable Reuse

Sites Reservoir

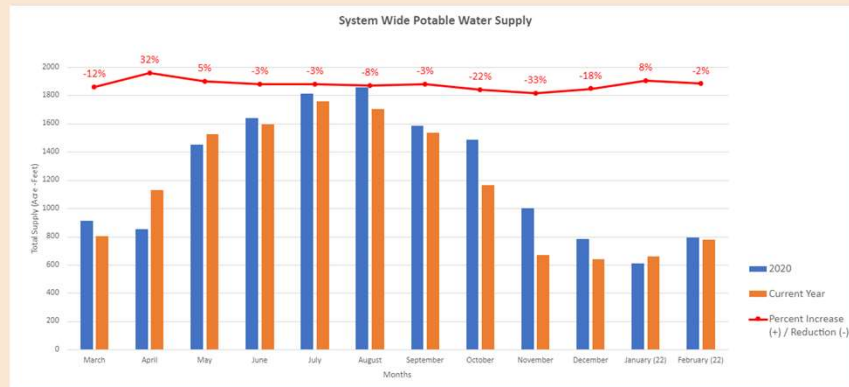
Zone 7 Reliability Infrastructure:
New wells, intertie, Chain of Lakes Pipeline etc.



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Water Supply: Conservation



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PFAS Project

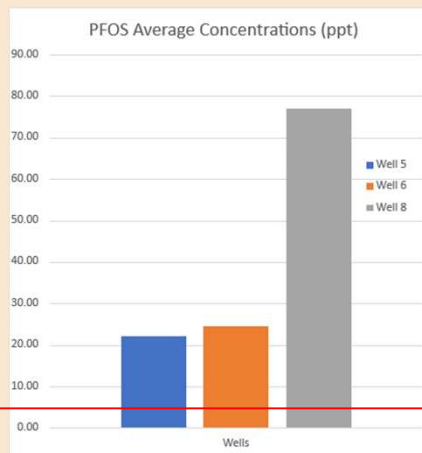
- City owns and operates three groundwater wells: Well 5, 6, and 8.
- Wells represent 20% of City water supply. Remaining purchased from Zone 7.
- Wells are reaching end of useful life and require rehab/replacement.
- PFAS found in Wells 5, 6 and 8
 - Contaminant of emerging concern
 - Well 8 levels exceed advisory levels so shutdown in Spring of 2019.
 - Regulations pending (late 2023 / early 2024)



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PFAS Project

The PFAS Project will improve drinking water quality



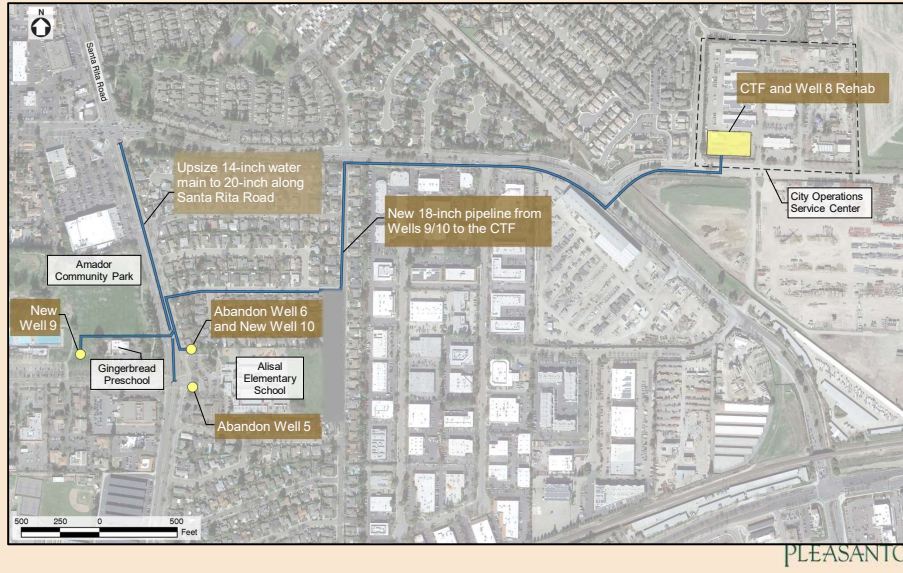
Treatment Goal = 4 ng/L

PFAS Treatment Goal



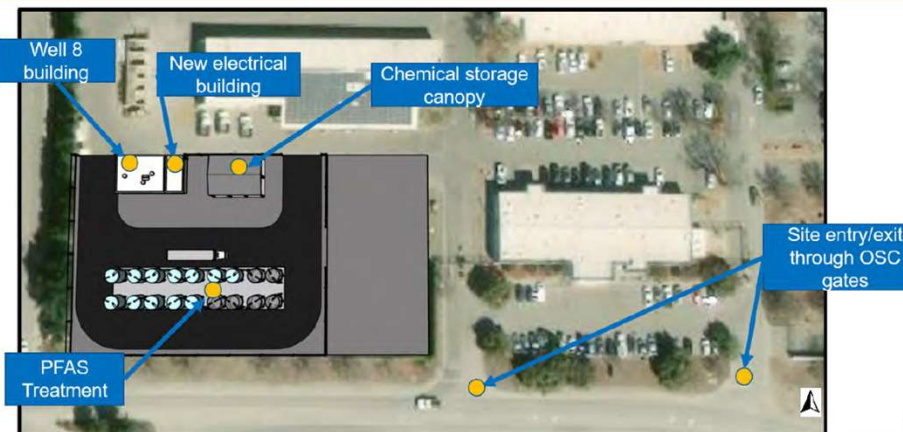
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PFAS Project



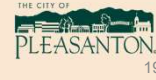
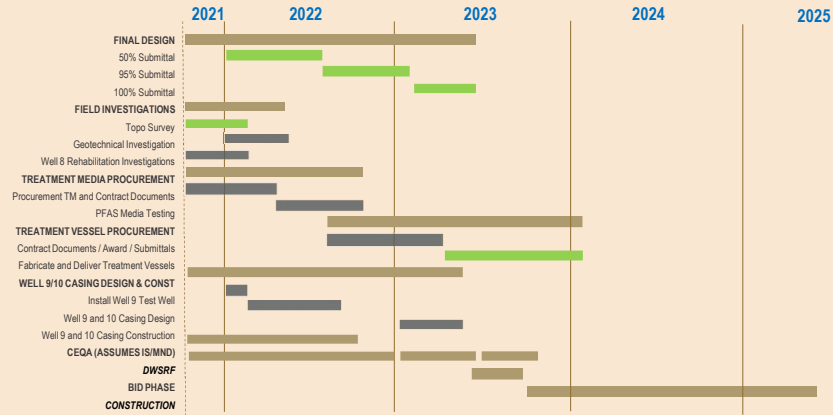
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PFAS Project



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PFAS Project



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Questions



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