

Sonoma Water

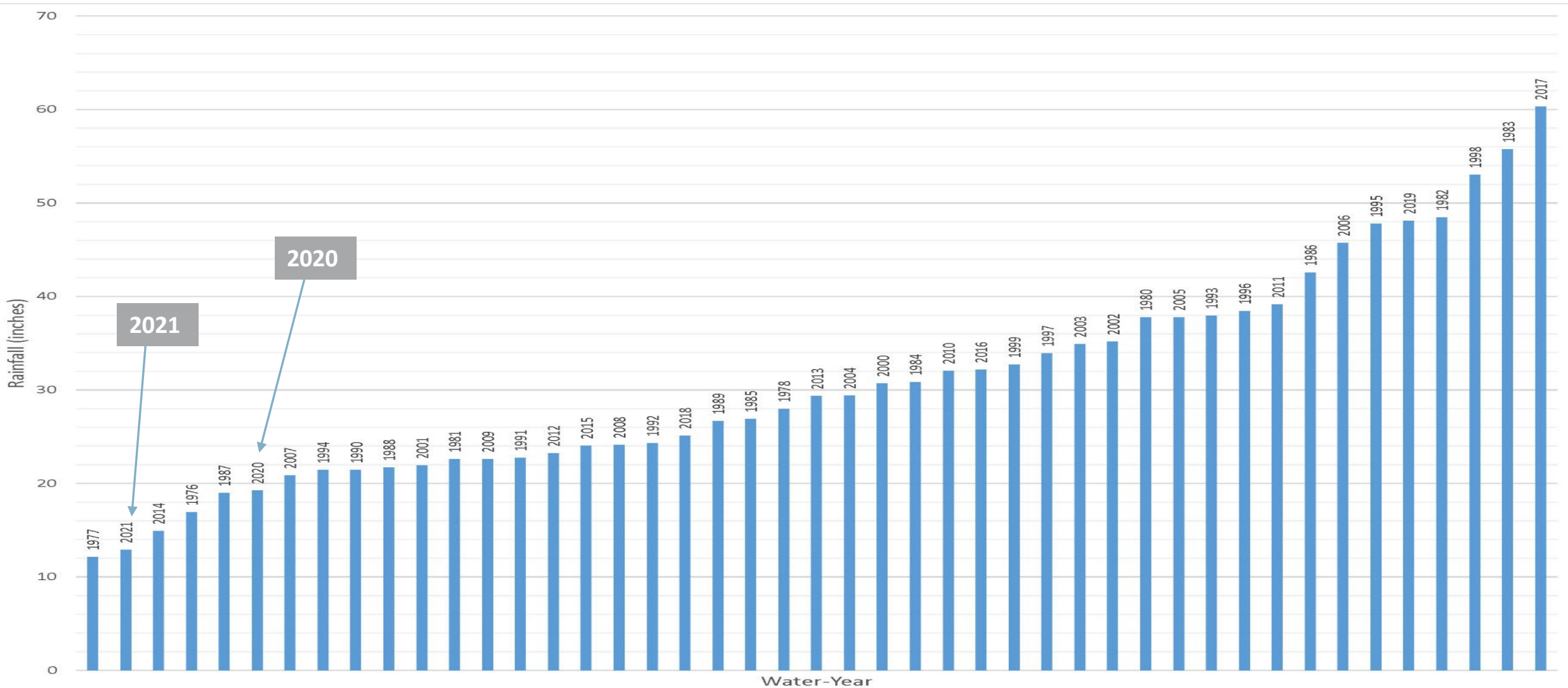
Drought Update: Water Supply Impacts & Regional Water Use Efficiency Programs

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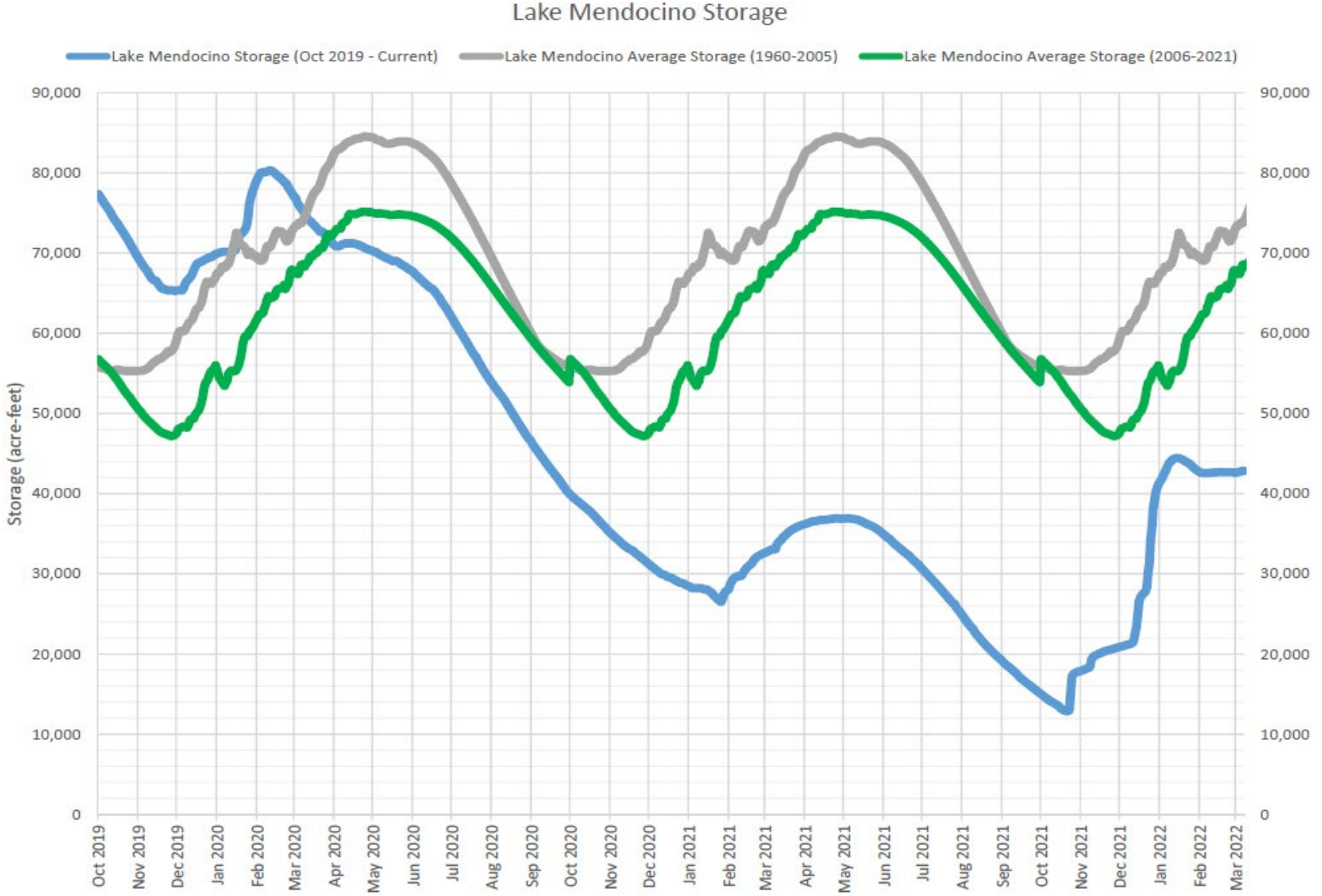
March 10, 2022



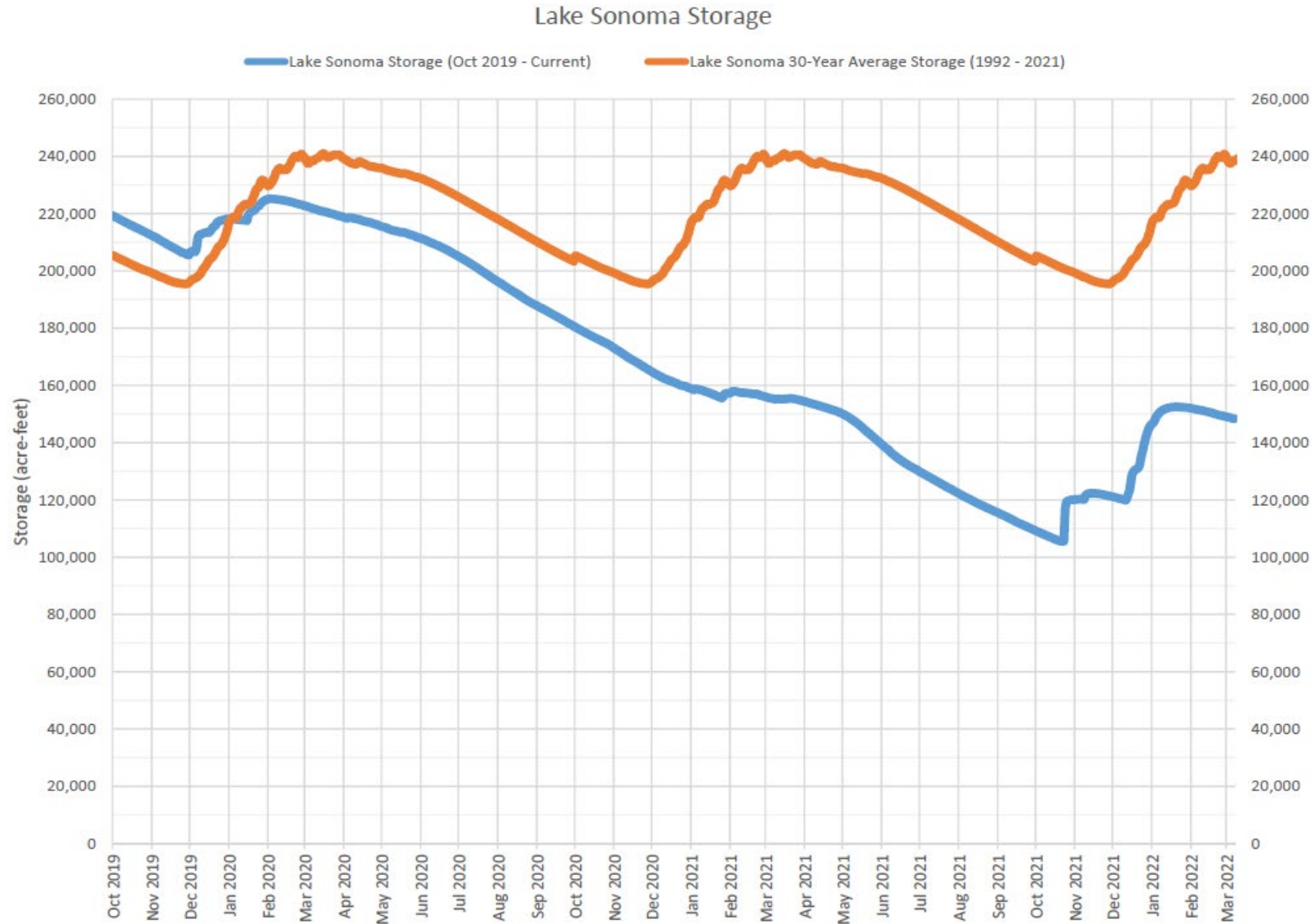
Ranked Cumulative Santa Rosa Rainfall by Water Year 1976 - 2021



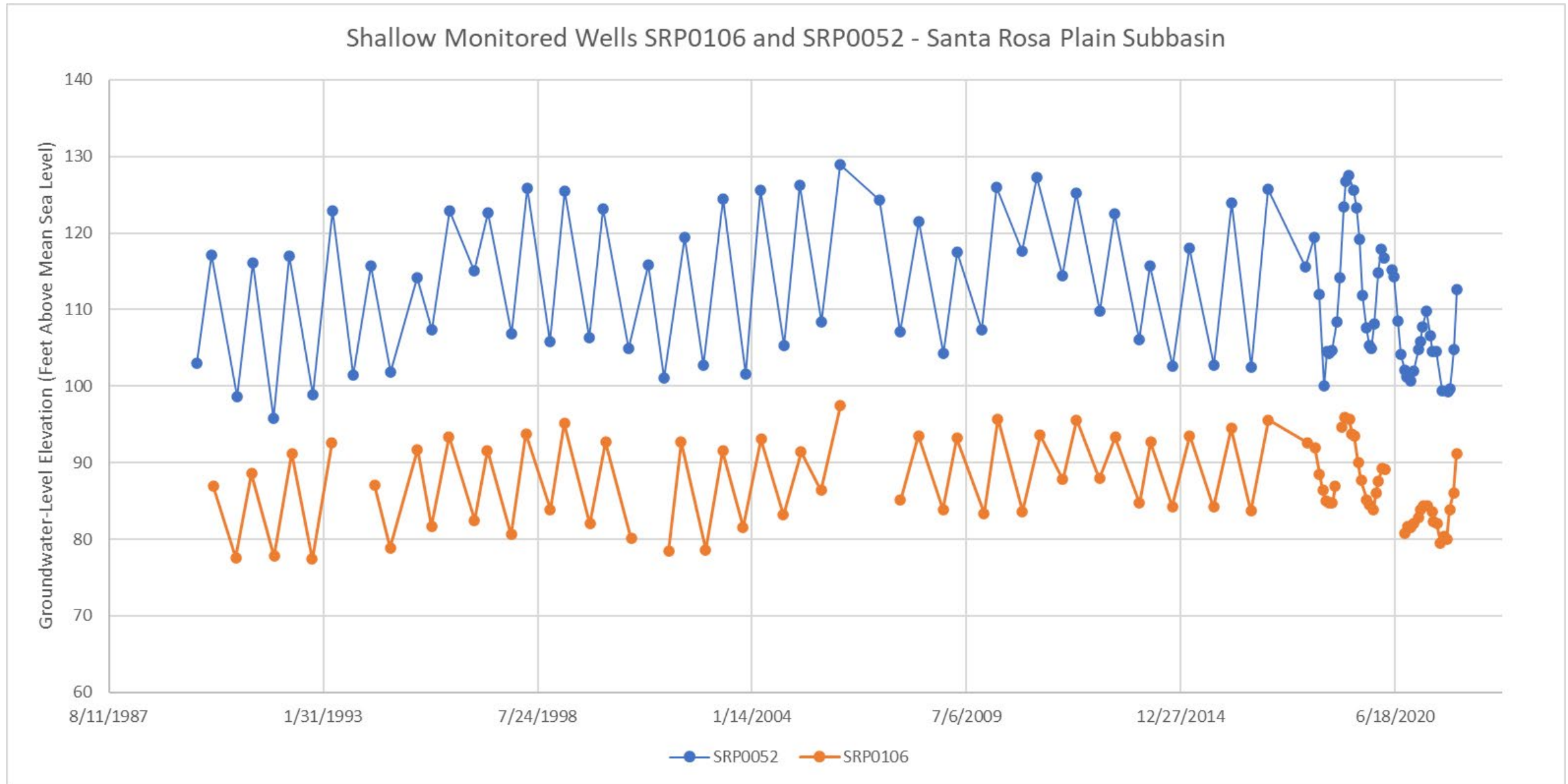
Lake Mendocino Storage (2019 – 2022)



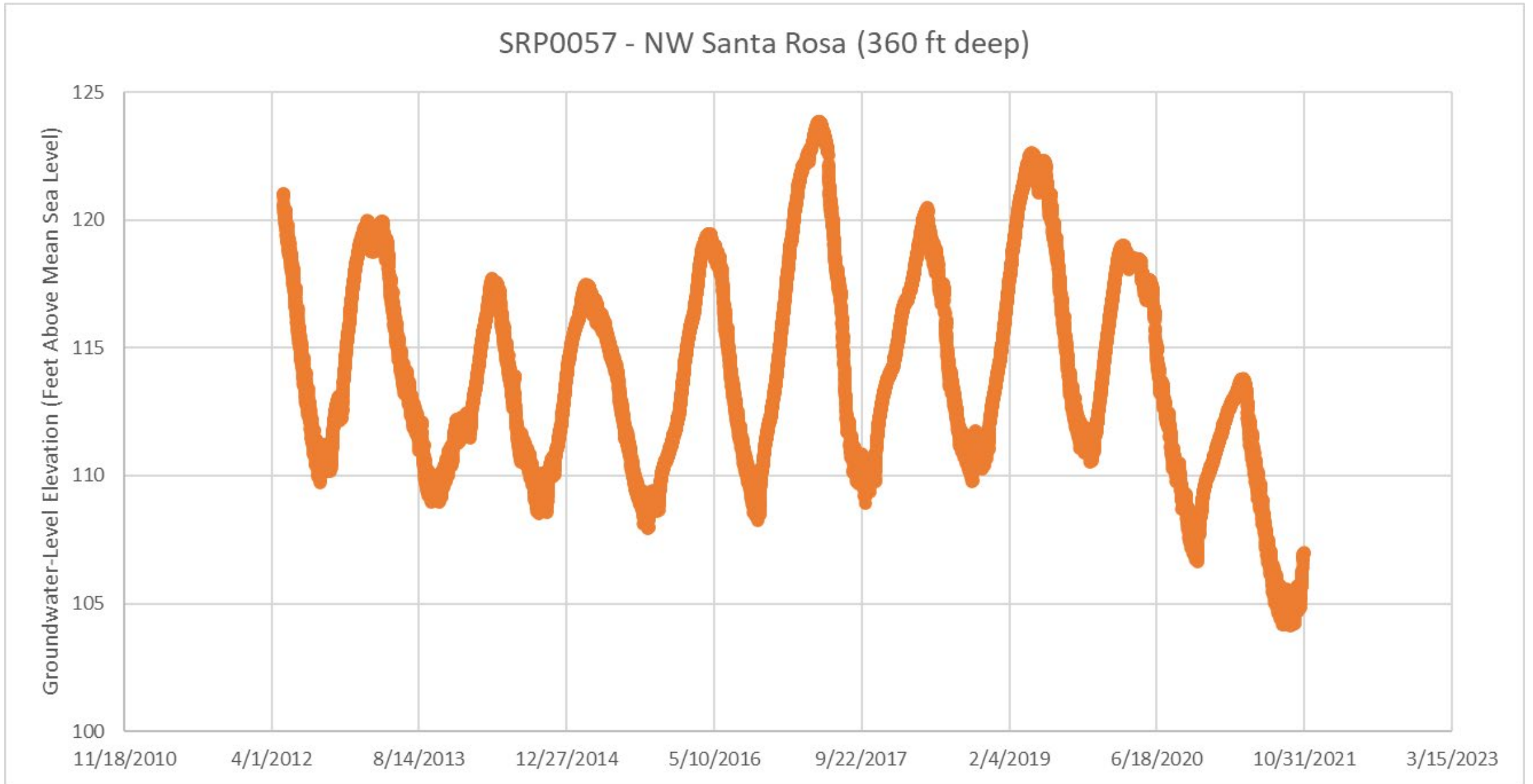
Lake Sonoma Storage (2019 – 2022)



Santa Rosa Plain – Example Groundwater Levels: Shallow Aquifer



Santa Rosa Plain – Example Groundwater Levels: Deep Aquifer



Some General Points About Droughts in Sonoma County ...

Our Weather:

- Sonoma County is prone to both floods and droughts – “Whiplash Weather” driven by the occurrence or lack of atmospheric rivers
- Recent weather is an example: 2019 flooding, 2020-2022+ drought
- Sonoma County has the highest recurrent FEMA flood damages of any county in 11 Western States
- Unlike most emergencies – Droughts are long-term & we don’t know when a drought will end until its ended
- Climate change is forecasted to increase the severity of both droughts and floods in our region

Drought Impacts:

- Felt differently across the community depending on natural & manmade factors
- Increased temperatures increase impacts of droughts (its not just lack of rainfall)

Responding to Drought Challenges:

- No “silver bullet” – need a portfolio approach
- We have existing tools that we and others implement to address droughts
- Building Resiliency: We are developing new tools in the near future & exploring longer-term solutions too

Sonoma Water Drought Mitigation Measures

(In addition to water conservation)

Russian River Management (Current Tools)

- In-Stream Flows & Reservoir Storage (Temporary Urgency Change Petitions to State Water Resources Control Board)
- Sonoma Water Russian River Diversion Reductions (22.4% in 2021 reduction relative to 2020)
- Natural “Winter” Flow Diversion Program
- Forecast Informed Reservoir Operations

Groundwater – Surface Water Conjunctive (Coordinated) Management

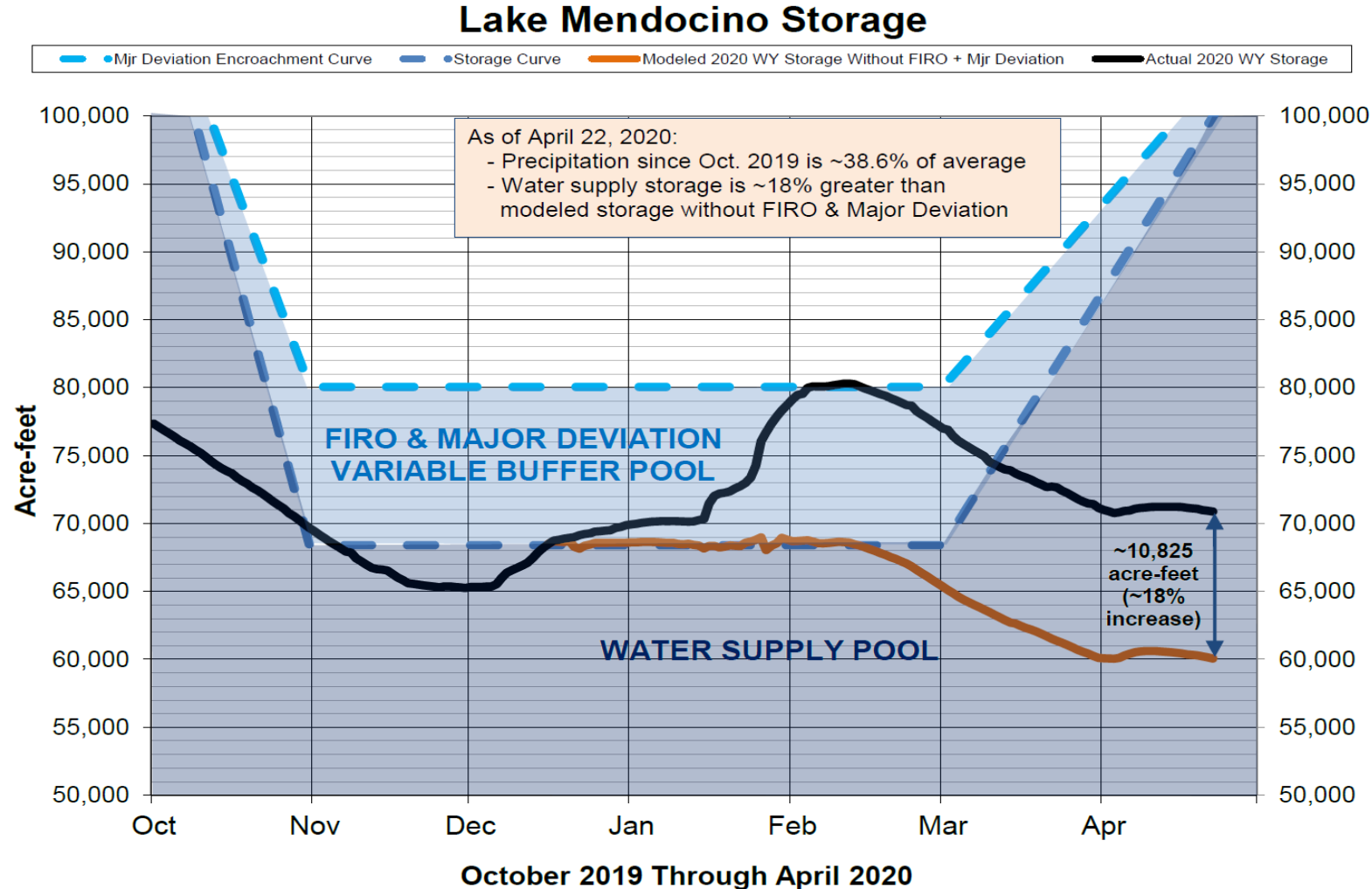
- Aquifer Storage & Recovery: recharge winter Russian River water in groundwater basins (in progress)
- Flood-Managed Aquifer Recharge: recharge flood water into groundwater basins (planning)

Regional Drought Management (Planning Phase)

- Regional Water Supply Resiliency Study - Coordinated drought planning by 10 Sonoma & Marin water supply agencies
- Drought Vulnerability Assessment & Mitigation Plan – Unincorporated Sonoma County areas outside of Sonoma Water’s “footprint”

Forecast Informed Reservoir Operations: Water Supply Benefits Shown 2020

- Innovative approach to reservoir operations developed by Sonoma Water & state/federal partners
- Employs forecast information/tools to guide reservoir releases improving water supply & flood risk management
- Helps address variable weather
- Viability demonstrated for Lk. Mendocino – being implemented
- Viability assessment beginning for Lk. Sonoma



Regional Water Supply Resiliency Study: Water Shortage “Stress Tests”

- 10 agencies: Interconnected infrastructure, reservoirs, groundwater systems over 3 counties
- Remove jurisdictional boundaries & apply water shortage “stress tests” to ID vulnerabilities
- Have modeled “worst-case” for continuation of drought this year and next (i.e., 1976 & 1977)
- Also looking at vulnerability longer duration droughts forecasted in some climate futures
- Agencies coordinating on near- & long-term drought mitigation projects to improve resiliency
- Also planning for seismic & wildfire events



Sonoma Water system serves as backbone of water supply for Sonoma and Marin counties

Retail providers have growing local supplies and demands

Systems are connected, but only loosely integrated, especially in times of shortage

For More
Information ...

Sonoma Water

www.sonomawater.org

Sonoma Marin Saving Water Partnership

www.savingwaterpartnership.org

Sonoma County Sustainable Groundwater Management

www.sonomacountygroundwater.org