

Responding to Drought and Planning for Future Water Supply Resiliency

Public Works Officers Institute

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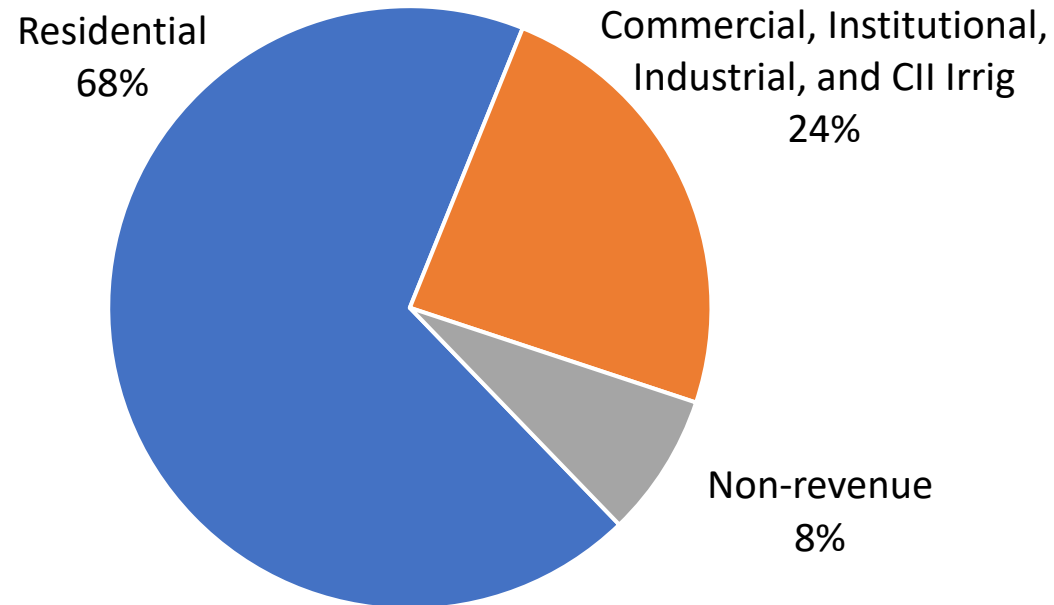
Santa Rosa Water

- Annual budget - \$160 million
- Provide water and sewer service to 54,000 accounts in Santa Rosa, serving a population of 175,000+
- Provide regional wastewater treatment for 230,000+ customers
- Maintain over 1,200 miles of water and sewer pipe
- Treat and beneficially reuse 7 billion gallons of recycled water per year
- Employ 270+ highly trained and skilled staff

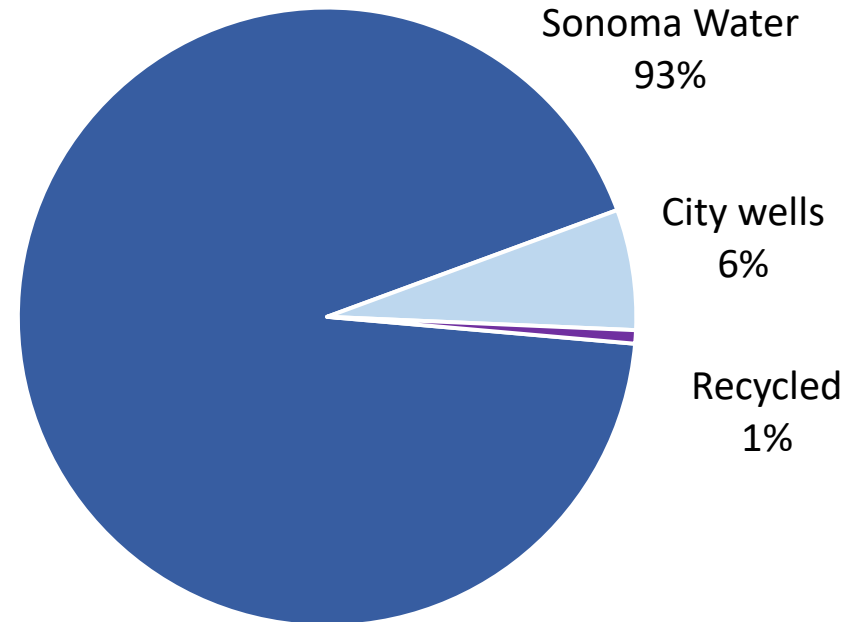
2020 Water Use in Santa Rosa

6.3 billion gallons (19,387 acre-feet)

WATER USE



WATER SOURCES



Sonoma Water – Regional Water Supply Wholesaler

- Contracts with nine municipalities and water utilities in Sonoma and Marin Counties
- Russian River has no connection to Bay-Delta
- Lake Sonoma holds 3-4 years of water supply for contractors when normal conditions exist
- In 2021/2022, Lake Sonoma fell to historically low levels, necessitating delivery cutbacks



Drought 2021-23 Summary

- 2019-20 & 2020-21 were two of the driest water years for the region in 128 years of record keeping
- 2021 & 2022 Sonoma Water Russian River Supply Shortages
 - Santa Rosa Water has received contract allocations reducing deliveries
- Since July 2021, Santa Rosa has instituted stage 3 of the Water Shortage Contingency Plan
 - Up to 20% reduction in water use
 - Corresponding restrictions on water use



Credit: Press Democrat, April 2021

Existing Drought Playbook

- ✓ Institute Water Shortage Contingency Plan
- ✓ Customer Outreach and Education
- ✓ Dedicate/Increase staffing resources to implement response
- ✓ Incentivize short- and long-term customer investment in water use efficiency
- ✓ Enforce Prohibitions and Restrictions
- ✓ Plan for revenue or operational impacts



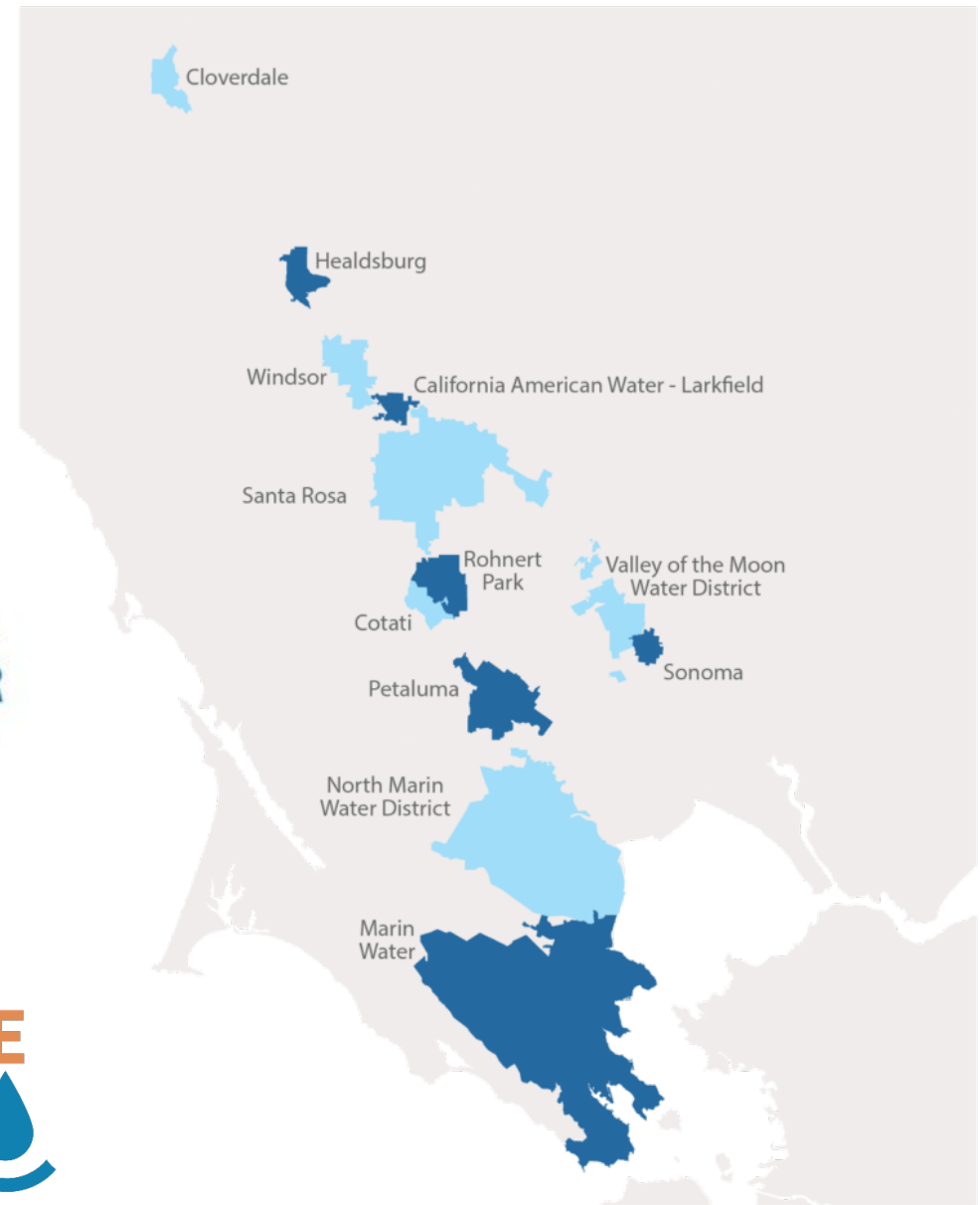
Drought Response Success: Outreach and Education

The Sonoma Marin Saving Water Partnership:

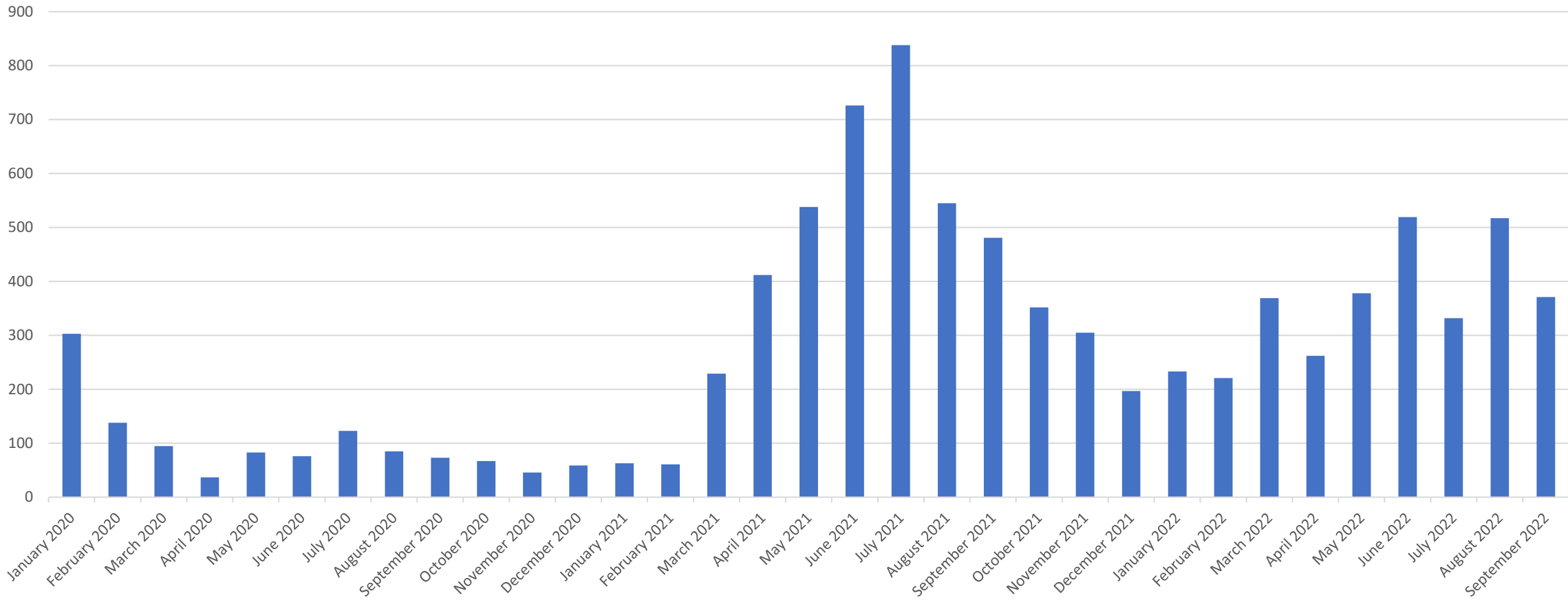
- 13 water suppliers
- Consistent message
- Outreach tool-kits
- Advertisements
- Radio, social media
- Events & Workshops



STILL
DROUGHT IS HERE
SAVE WATER 



Water Use Efficiency Calls per Month January 2020 - September 2022



Success: Customer Service and Assistance

- COVID Emergency: we needed to evolve our approach
- Zoom Hosted Workshops, DIY home water audits kits, Virtual inspections for rebates
- Automatic Metering Infrastructure became so valuable
- Found new ways to meet customers where they are in community



Santa Rosa overachieves!

SINCE JULY 2021, YOU'VE:

- ✓ Reduced total water use by 18% compared to 2020
- ✓ Saved more than 1.8 Billion gallons of water during this water shortage emergency



Planning for the next drought(s)?

Water Supply Alternatives Plan (2023)

Purpose

Improve water supply reliability to address severe droughts and emergencies and prepare for climate change impacts.

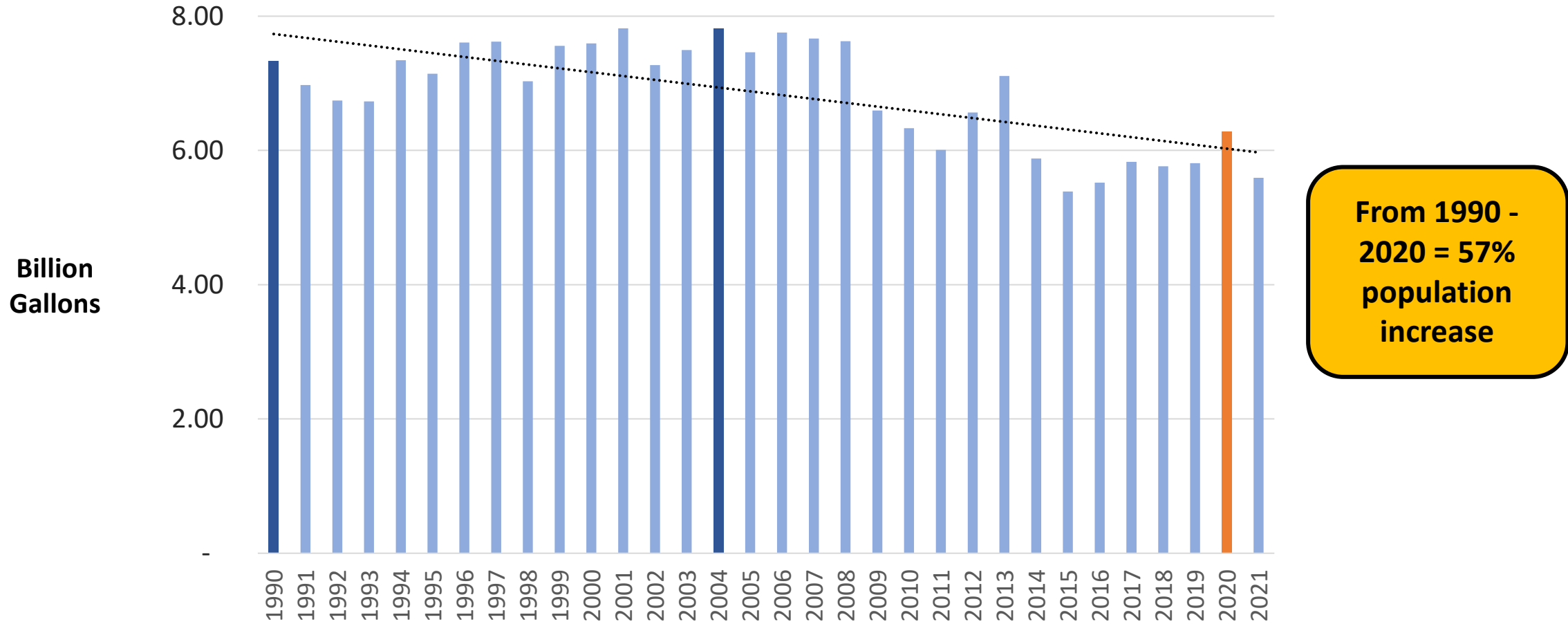
Approach

Evaluate possible new water supply options and develop a plan for increasing resiliency.



Santa Rosa's total water consumption has decreased.

2020 water use was 14% less than 1990
and 20% less than 2004.



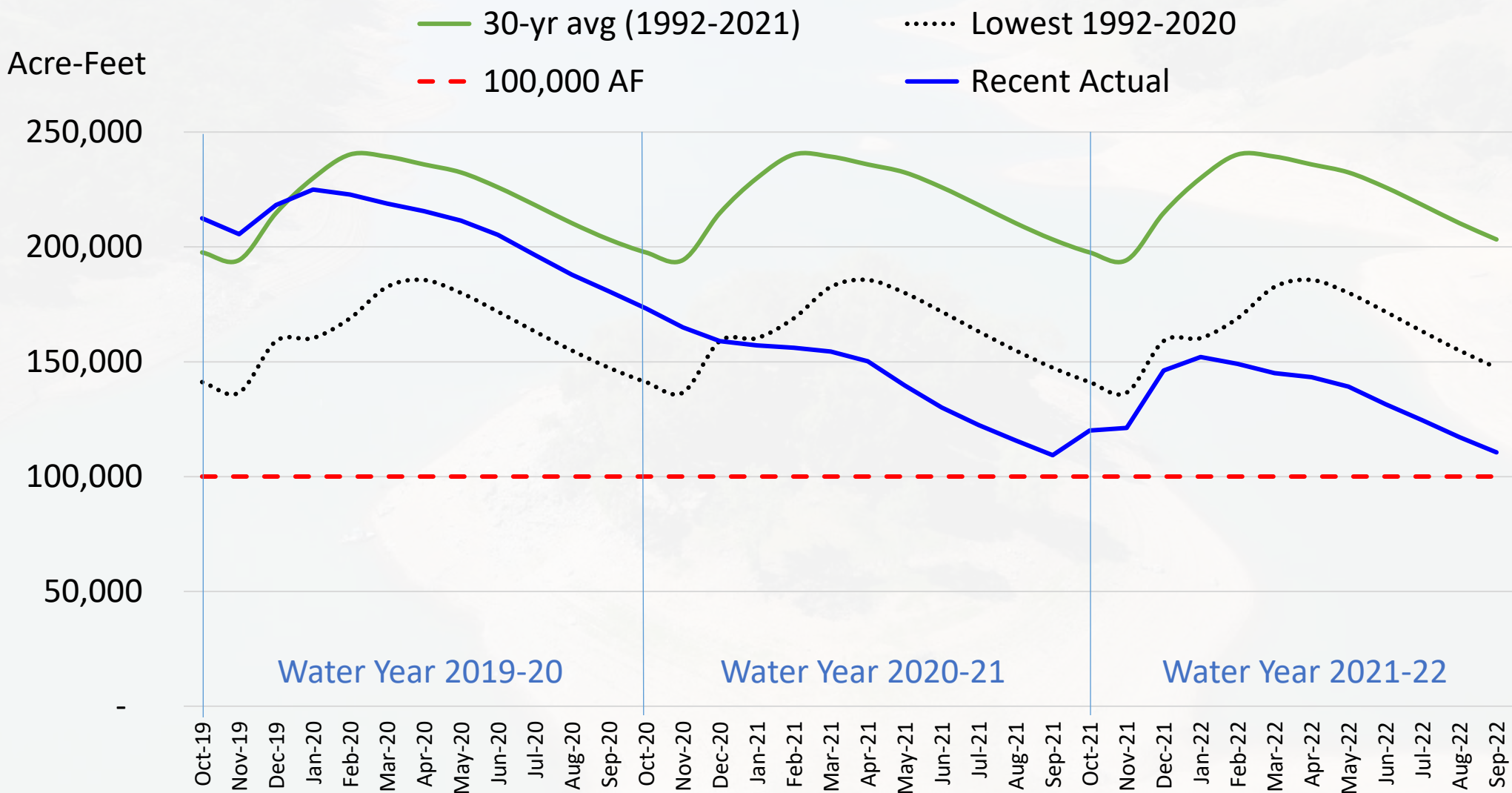
In average rainfall years, water supply meets the needs of our growing community through 2045 and beyond.

What about years when there is a drought?

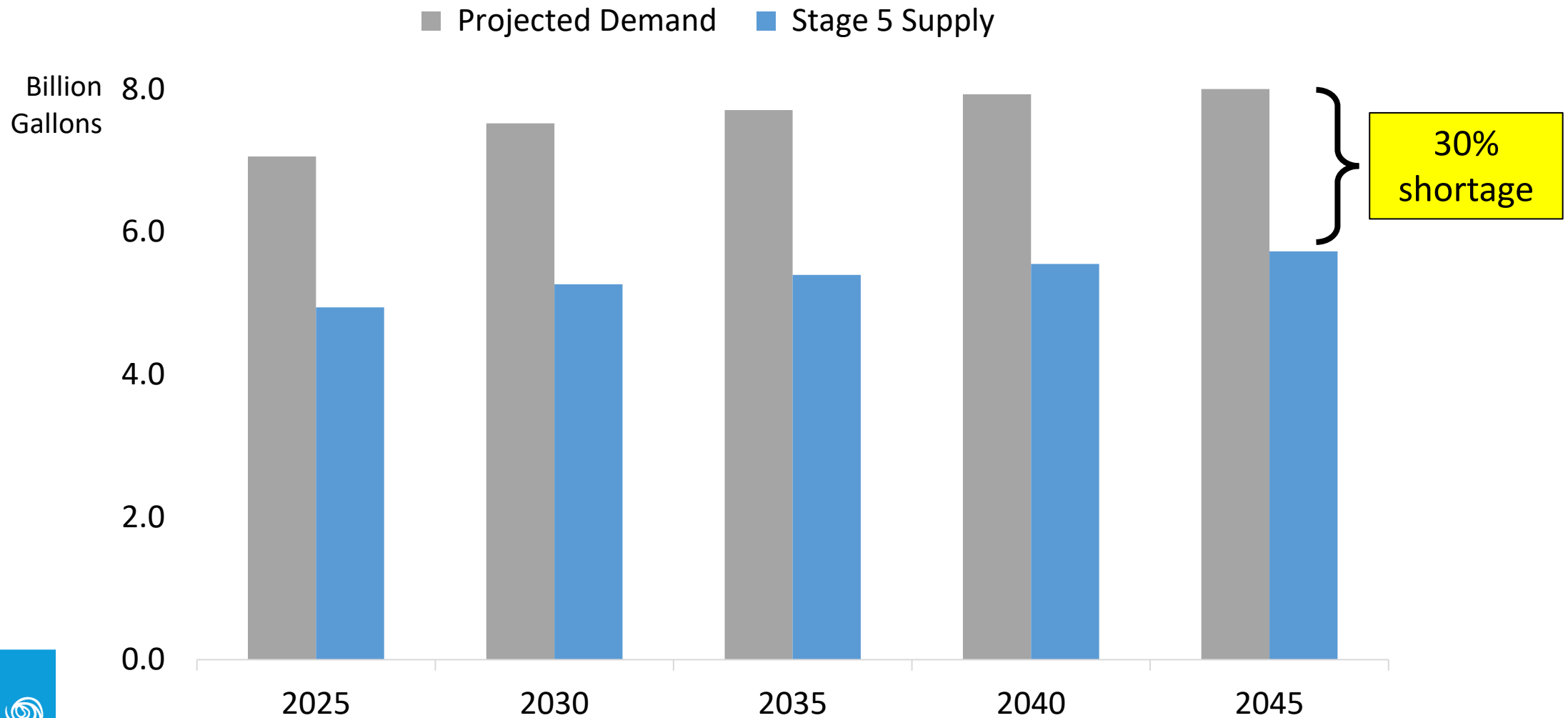


Lake Sonoma

Lake Sonoma Water Supply Storage



Severe shortages (30% or greater) would occur if there was approximately one year or less of water supply in Lake Sonoma.



Questions the Project Will Address

How much new water supply is appropriate to mitigate the risk of shortages?

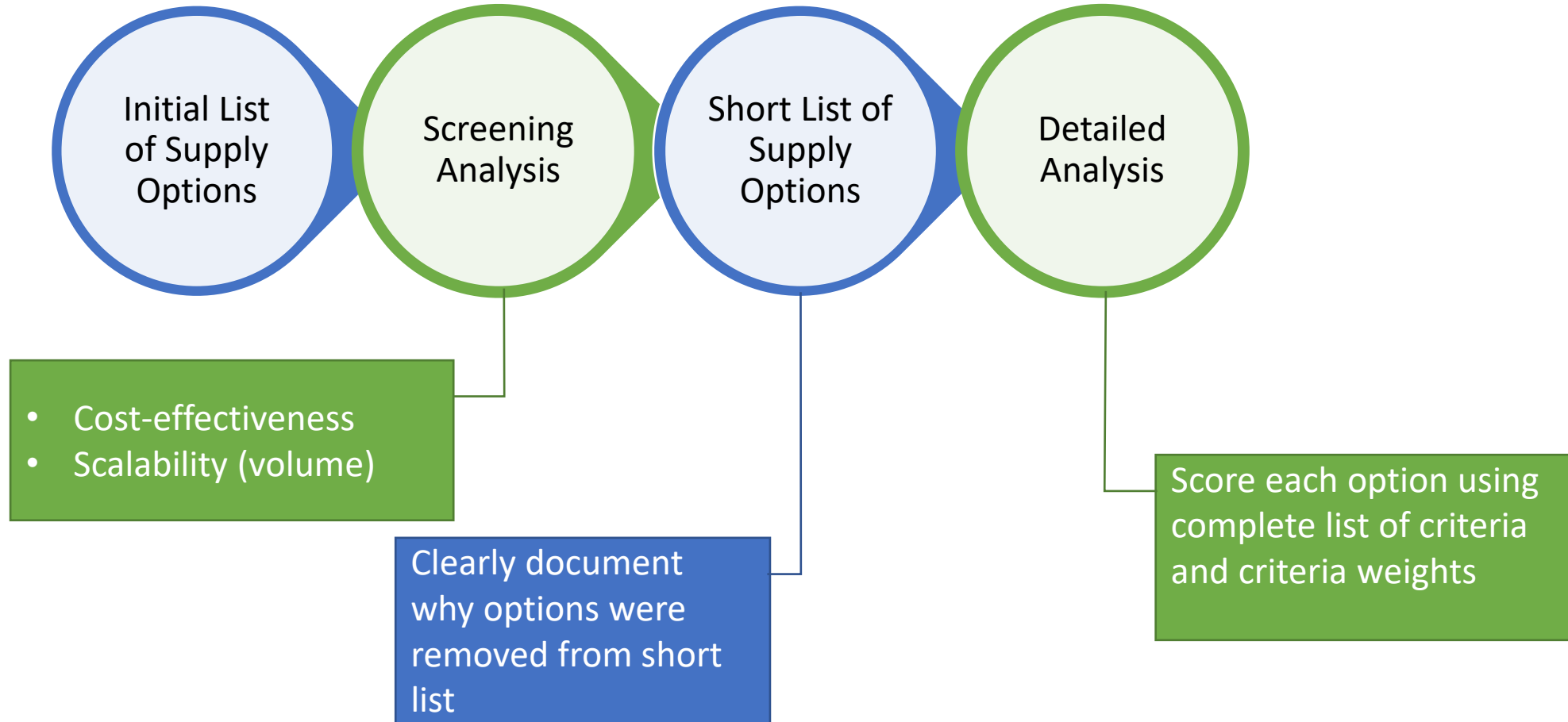
Which supply options should be studied?

What criteria should be used to assess each supply option?

Which mix(es) of options will help us meet the local water supply goals?

What is the most reasonable path forward?

Study Methodology



Things to Ponder – Future Supplies

We have a duty to provide water supplies to support growth and meet economic, human health, and safety needs

- Conservation in light of demand hardening
- Reliability and cost implications
- Scalability and vulnerability to uncertainties
- Equity considerations

Thank you!