Future Proof Water for Silicon Valley

A SPUR White Paper in Partnership with the Silicon Valley Community Foundation

September 14, 2016

About the study

- Supported by the Silicon Valley Community Foundation
- Updating information from *Future-Proof Water*
- 20 interviews, data analysis, synthesis of ‘10 big ideas’
- Now available at SPUR.org

Summary

- The drought has revealed Silicon Valley's dependence on imported water, and raised questions about its future reliability
- Conservation and water reuse are the best water supplies to meet needs in the future, and of growth
- How much will it cost? Who will pay? What should the rules say?

SPUR REPORT 03/2013

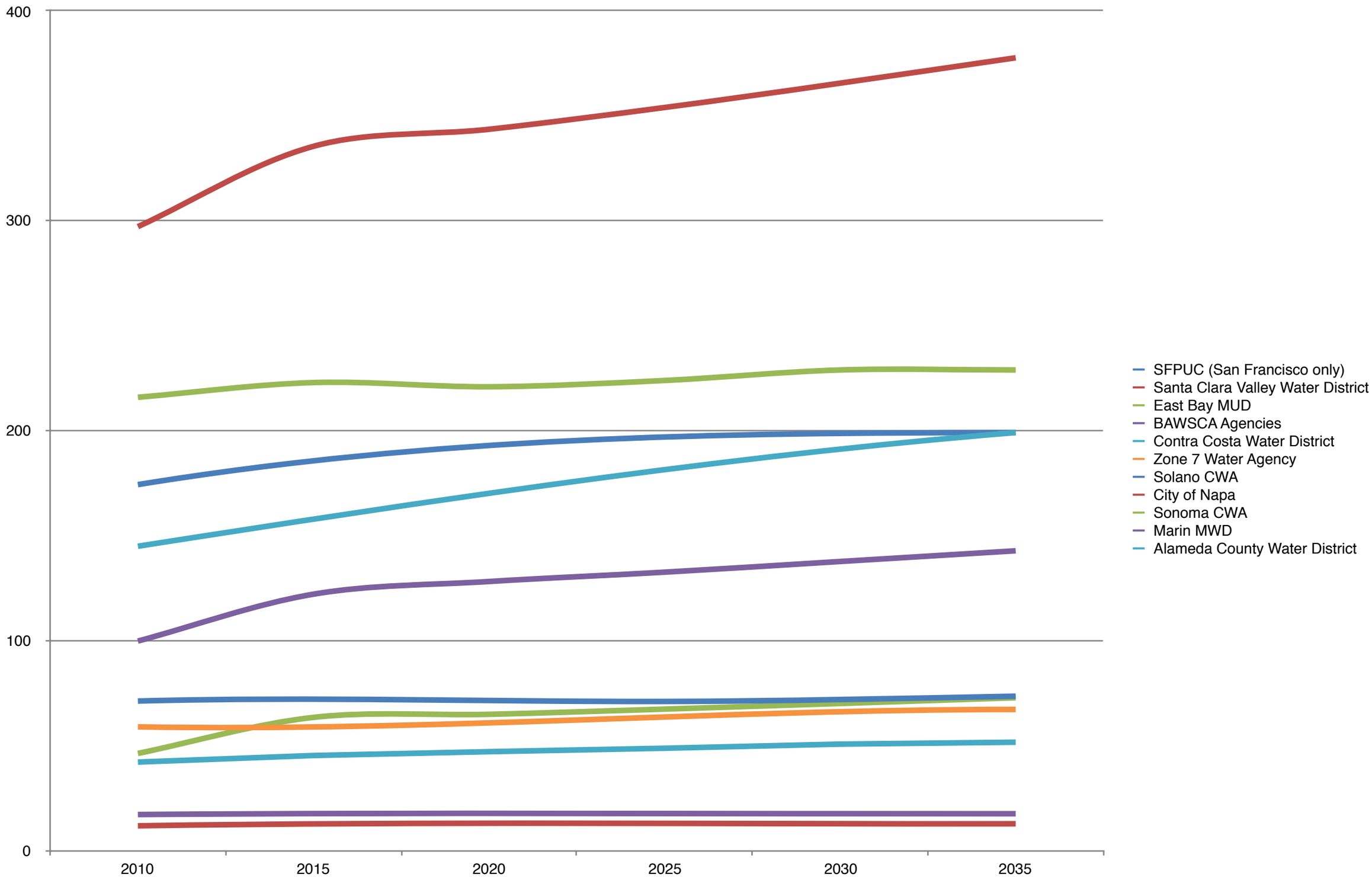
Future-Proof Water

Where the Bay Area Should Get Its Water in the 21st Century

Bay Area urban water agencies

11 water agencies serve 7.1 million people in the metropolitan Bay Area (and beyond)

Growth in Bay Area water demand through 2035



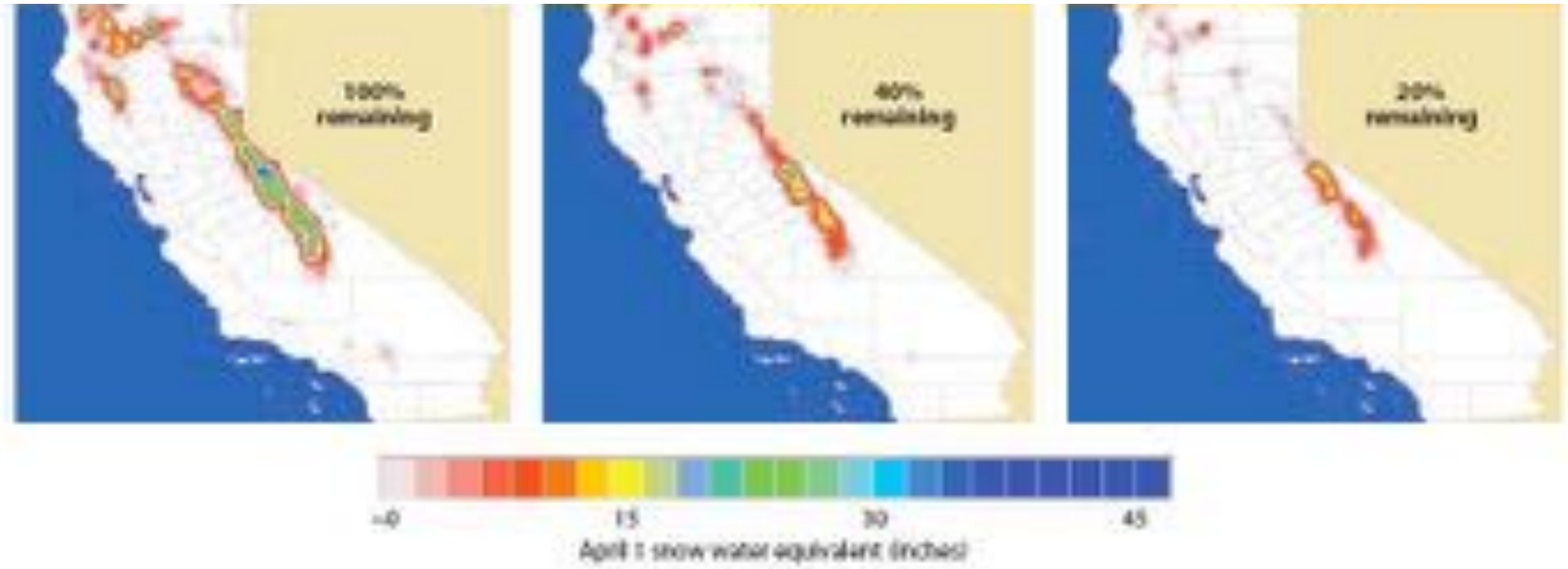
What happens after 2035?

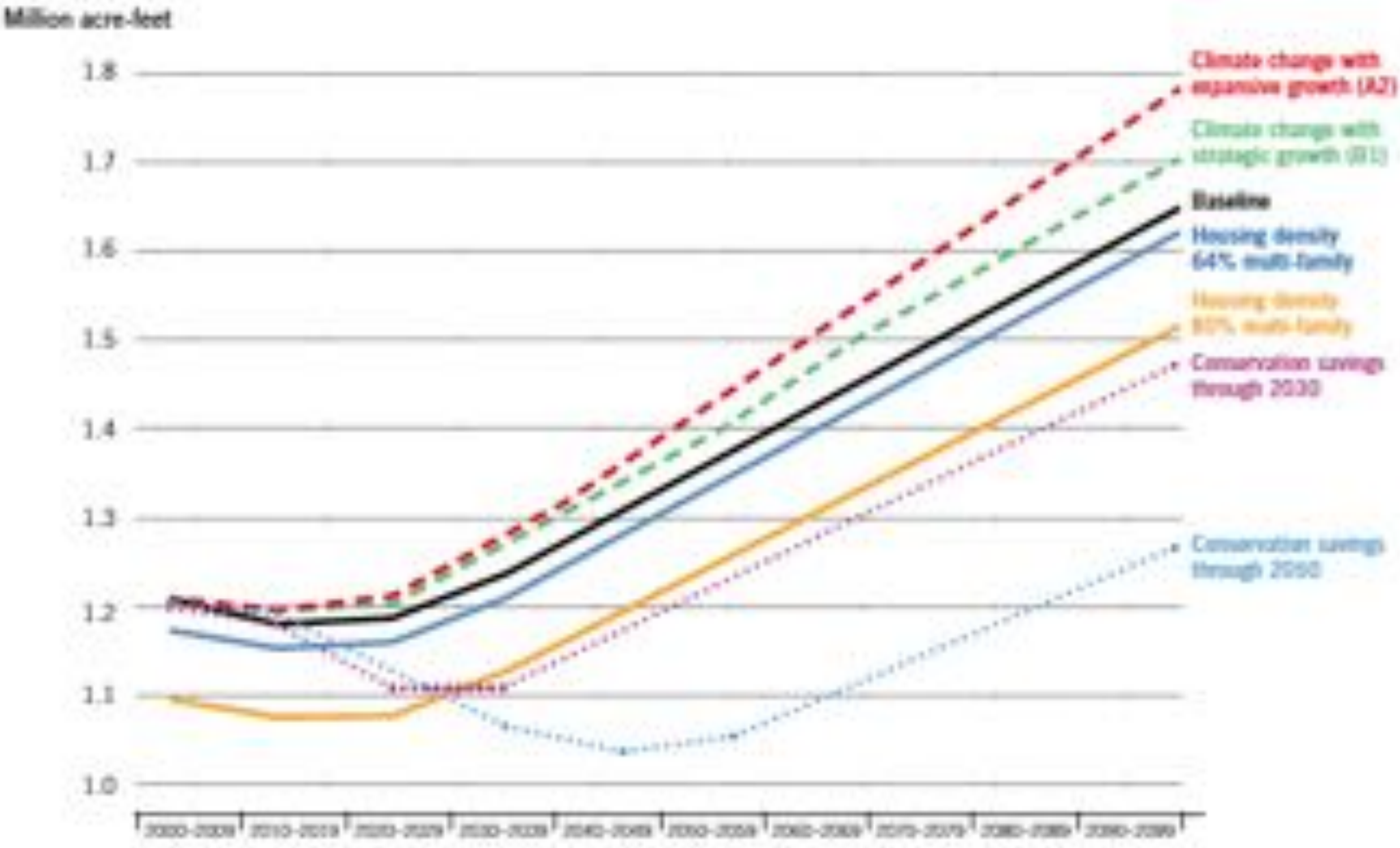
Historical Average
(1961-1990)

2070-2099

Lower Warming Range

Medium Warming Range





Effect of climate change, conservation and housing density on total Bay Area urban water demand, 2000–2099

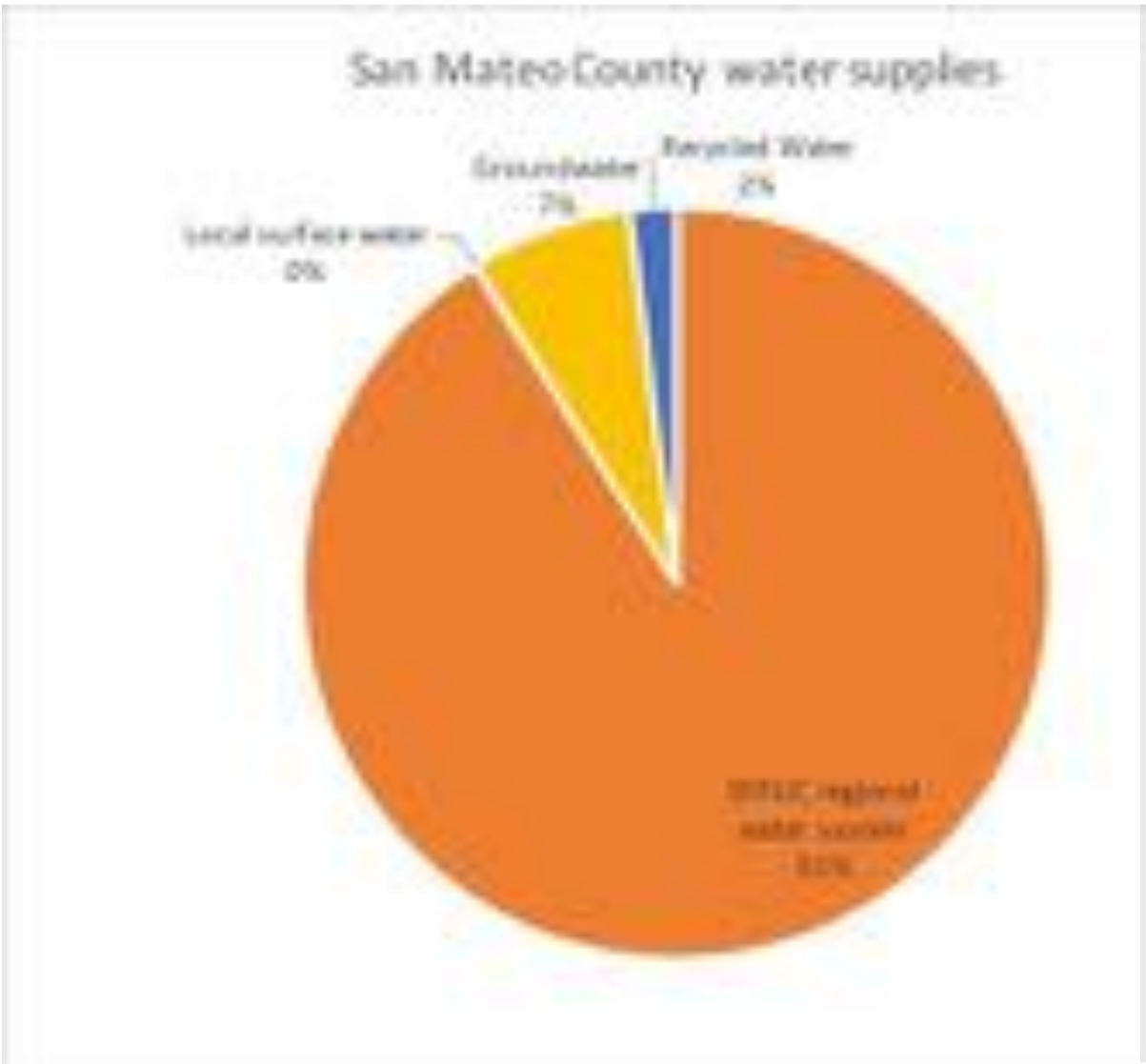
Demand management tools

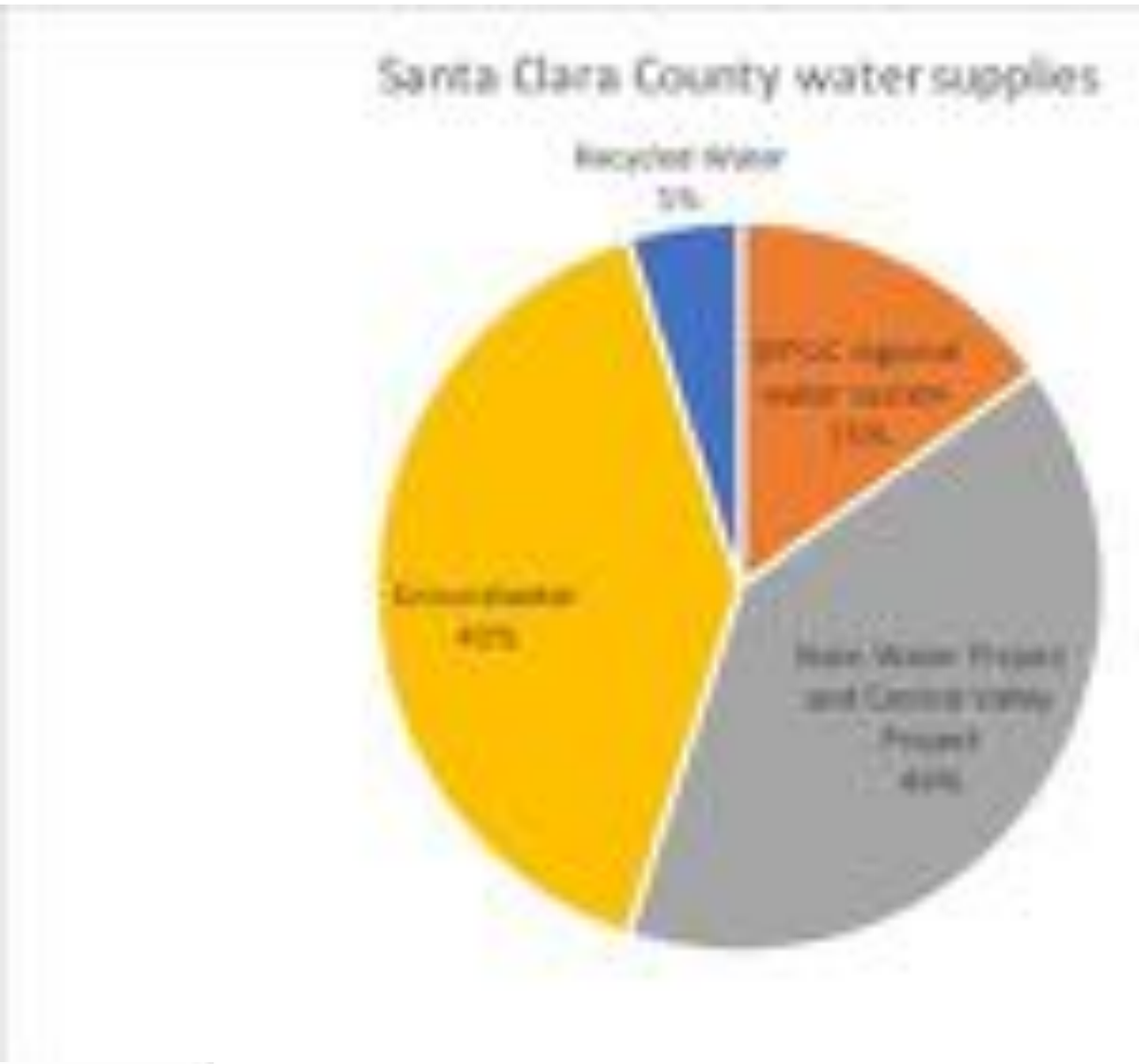
- Conservation and efficiency
- Metering
- Pricing
- Water budgets
- Green building programs
- Compact development
- Retrofit on resale
- Water-neutral development
- Rationing

Tools for developing new water supplies

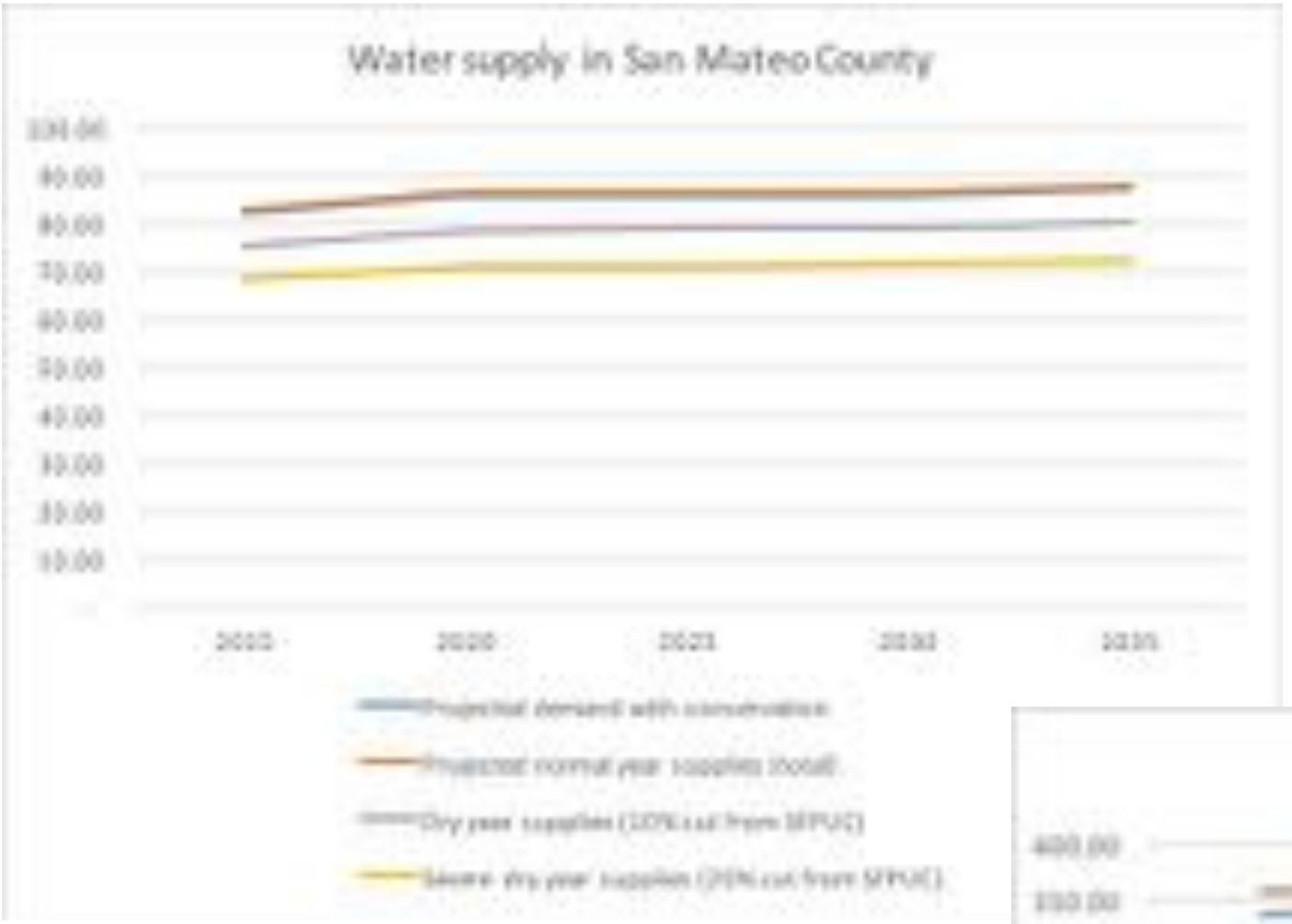
- Banking and transfers
- Conjunctive use
- Onsite reuse and district-scale systems
- Reducing system losses/ leaks
- Recycling
- Desalination
- New groundwater
- New surface water and storage
- Direct and indirect potable reuse

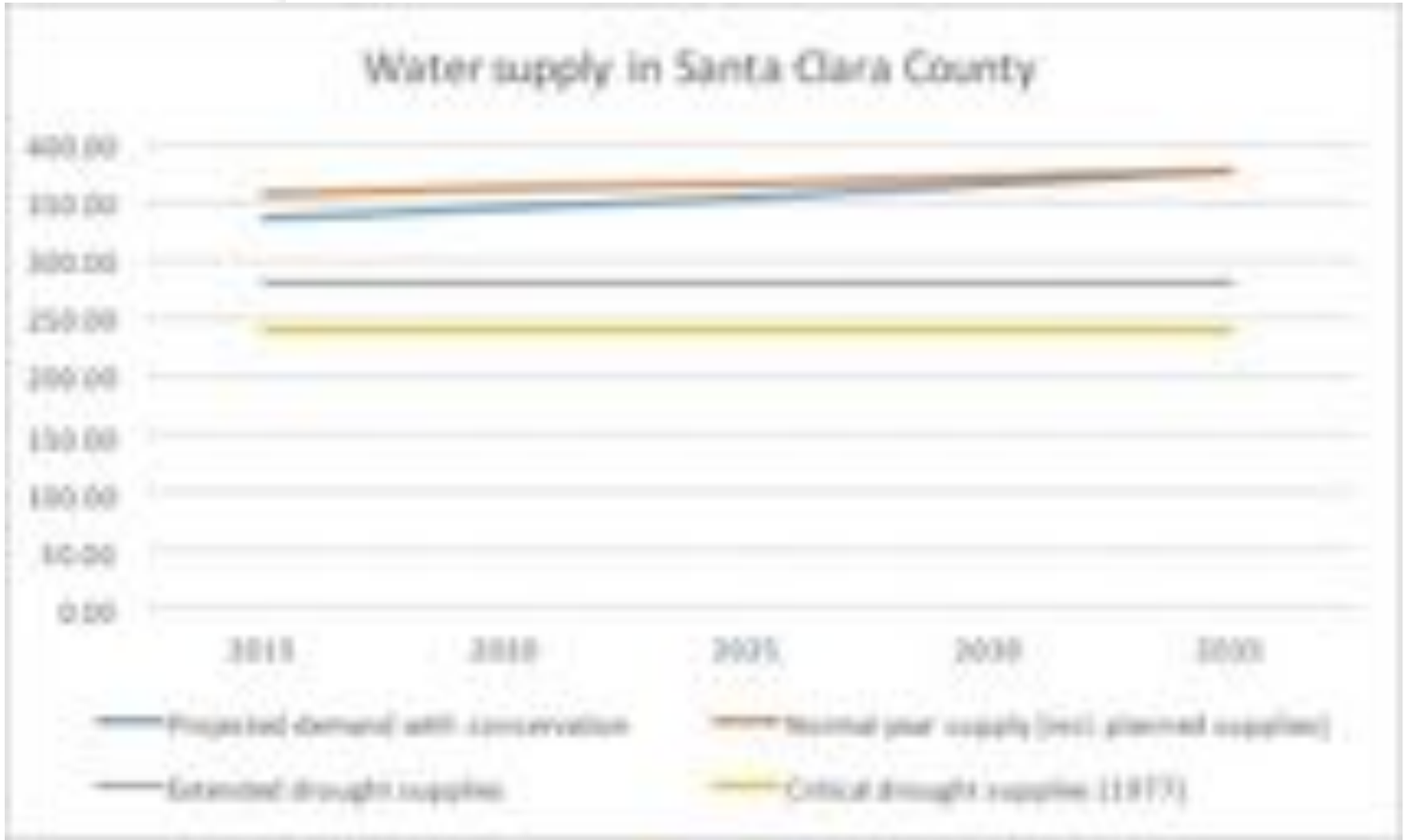
Sources of Silicon Valley water supplies





Water supply and demand





How Silicon Valley weathered the drought (for the most part):

Conservation and reuse

- How much ‘new supply’ do we really need?
- Meet it with reuse/recycling, not new imports
- To scale up, address barriers:
    1. Recycled water currently not permitted for drinking, needs separate conveyance
    2. Cost (higher than other supplies)
    3. Find areas of agreement about scale, treatment levels of systems

10 Ways to Advance Water Sustainability in Silicon Valley

1. Evaluate and address commercial/retail water savings potential and develop conservation programs
2. Eliminate tax liability for lose-your-lawn rebates
3. Advance the conversation around reuse with a regional demand study that includes scenarios of cost, centralization, level of treatment, etc.
4. Understand the potential contribution of stormwater as a supply
5. Do a groundwater study for San Mateo County

10 Ways to Advance Water Sustainability in Silicon Valley (cont.)

6. Support innovation and high-efficiency in new development
7. Help East Palo Alto obtain an ample supply of water to build the housing it wants to
8. Align messaging on drought and other water education information
9. Reform Proposition 218
10. Invest in additional climate change research

Thank you!