



California's Water Supply Strategy: Adapting to Climate Change, One State at a Time

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On August 11, 2022, Governor Gavin Newsom released California's Water Supply Strategy – Adapting to a Hotter, Drier Future. The 19-page plan is designed to help the state adapt to the impacts of climate change on its water supply, including precipitation more likely to fall as rain than snow; precipitation events that are fewer in number, but more severe in magnitude; and an overall reduction of water supply by up to 10% by 2040. A 10% loss in California's water supply would equate to roughly 6-9 million acre-feet (MAF), which is enough water to supply roughly 18-27 million households for a full year. Alternatively, the reduction could lead to cuts in water available to agriculture, which uses roughly 40% of water in the state, or environmental uses, which constitute roughly 50% of water used in the state.

The strategy includes four main themes:

1. Developing new water supplies;
2. Expanding water storage capacity;
3. Reducing demand; and
4. Improving forecasting, data, and management, including water rights modernization.

Developing new water supplies should lead to 1.6 MAF in new water supply by 2030 and 2.9 MAF by 2040, with the majority coming from increasing recycled water. Expanding storage capacity should lead to 3.7 MAF by 2030 and 4 MAF by 2040 in new storage capacity, which the strategy acknowledges does not equate to new water supply.

Developing New Water Supplies

The report details the administration's plans for two initiatives: increasing water recycling and expanding desalination.

Increasing the use of recycled water is Governor Newsom’s primary focus for developing new water supplies. The strategy notes that in 2023, the State Water Resources Control Board (State Water Board) will establish California’s first direct potable reuse regulations, allowing recycled water to be used directly without first having to be injected into a reservoir. Several other implementation steps for this approach, which Nossaman had input in developing, are also very useful in expanding advanced water purification and recycling, including:

- The State Water Board will work with local agencies to identify recycled water projects that hold the potential to be operational by 2030 and no later than 2040;
- The State Water Board will form a “strike team” to identify and resolve permitting and funding obstacles for recycled water projects;
- The State Water Board will track the permitting and funding status of recycled water projects with a public, digital dashboard;
- By October 2022, the State Water Board will prioritize groundwater recharge permits, including those associated with indirect potable reuse; and
- The Department of Water Resources (DWR) will consider allocating additional funding to local agencies for water infrastructure projects with water supply and/or drought resilience benefits.

Notwithstanding the allocation of additional funding, the strategy also estimates \$10 billion is needed to meet the 2030 goal and \$27 billion is needed to achieve the 2040 goal.

This strategy for new supply also includes a focus on desalination. The figures noted above include only brackish desalination – which is desalinating water that is either naturally salty or is salty because it has previously been used – and not desalination of ocean water. The strategy does include support for seawater desalination as well. The implementation steps for both types of desalination projects include greater investment as well as streamlining and expediting of permitting processes. Specifically, the strategy calls for state agencies, including the California Coastal Commission (which recently rejected a controversial desalination proposal), to develop new standards to facilitate approval for siting desalination plants along the coast.

Expanding Water Storage Capacity

This strategy sets a goal of expanding average annual groundwater recharge by 0.5 MAF. It notes that doing so will provide other benefits, such as preventing subsidence and reducing harm to the environment and water users. It notes that local agencies have proposed projects that include up to 2.2 MAF of groundwater recharge by 2030. Those projects may rely on the same water or otherwise overlap, so the strategy takes a conservative estimate of an increase in storage of 0.5 MAF. The strategy stresses its reliance on local agencies for this resource. If local efforts are too fragmented, the state would consider a coordinated state-level approach to disburse rights to high winter flows. Implementation steps, which for this section are what the state will consider, include incentivizing recharge projects, regulatory streamlining, and developing a state-run mechanism that would address equity concerns.

The strategy also will support the seven ongoing Proposition 1 surface storage projects, which are projected to increase storage capacity by 2.77 MAF.

The state, through DWR, is also working with the federal government to complete a seismic upgrade of the San Luis Reservoir that will increase its capacity by 135,000 acre-feet. The strategy also addresses the state’s plan to rehabilitate many of the state’s 112 “less than satisfactory” dams, including 41 that have limited

storage capacity due to their flaws.

Last, the state will support municipal stormwater capture projects with a goal to increase storage by 0.25 MAF by 2030 and 0.5 MAF by 2040.

Reducing Demand

This strategy attempts to reduce demand through improving conservation and stabilizing groundwater supplies.

Governor Newsom is relying in part on two bills enacted in 2018 – Senate Bill 606 and Assembly Bill 1668 – to help reduce demand by increasing water use efficiency once the bills are fully implemented. The strategy adds onto those bills in its implementation steps. One of those steps is developing short-term efficiency-based conservation targets for each urban water supplier based on each supplier’s unique characteristics, supported by targeted DWR and State Water Board grants. Another is for the State Water Board to advance new long-term water use efficiency standards, based on the 2018 bills mentioned above, and to ensure those are in effect by January 1, 2024. A final approach is for DWR to partner with local agencies to transition turf to landscapes that use less water, building upon emergency drought regulations issued earlier this year.

The strategy’s demand reduction approach also includes an acknowledgment that between 500,000 and 1 million irrigated farm and rangeland acres will be fallowed by 2040 due to the state’s transition to sustainable groundwater management. It also includes groundwater management implementation steps of continuing to implement the Sustainable Groundwater Management Act and supporting local plans to reduce groundwater reliance.

Improving Forecasting, Data, and Management, Including Water Rights Modernization

This strategy includes a focus on improving data collection and modernizing forecasts, including installing 430 new stream gages and upgrading/reactivating 200 more.

Governor Newsom’s strategy also addresses implementation of the Delta Conveyance Project – the details of which were just released – as part of improving the flexibility of the state’s water systems to move water throughout the state. This subsection also includes implementation steps on disbursing \$100 million to repair four damaged San Joaquin Valley Canals and developing a joint place use of petition for the federal and state water projects.

The final section is on “water rights modernization.” Governor Newsom asserts a need for accurate and timely water rights data to enable the State Water Board to halt water diversions when stream flows diminish. This strategy proposes pilot projects to collect real time diversion data to be integrated into the Water Board’s water rights data system and the development of tools for broadly implementing a water rights priority system that could be applied even when there is *not* a declared drought emergency. The strategy also calls for considering regulations and legislation to “modernize the water right system” and “clarify senior water rights” – two concepts likely to provoke strong reactions in a state where, historically, “whiskey is for drinking and water is for fighting.”

Next Steps

This strategy includes actions by DWR, the State Water Board, and other agencies that are ongoing or could be initiated today. Additionally, it includes recommendations for the state legislature to support or enable projects that Governor Newsom prioritizes. In particular, this strategy should benefit water recycling projects. If this administration follows through with all, or even a majority, of the proposals in this strategy, it could shape California water policy for the next 20 years.