

DROUGHT AND FLOOD

Climate Resilience Bond – Water Infrastructure Priorities



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Adapting to climate change requires California to urgently and significantly rehabilitate and modify existing water facilities, improve operational flexibility, and make generational investments in new water infrastructure. The State is currently underprepared to manage a water system with a decreasing snowpack, less frequent precipitation, and weather extremes. Additional above- and below-ground storage capacity must be developed to capture precipitation. In addition, new and enhanced conveyance facilities are essential for moving collected and stored water, connecting suppliers with different supply sources, transferring water among water users, and recharging groundwater for multi-beneficial purposes. State investment in water infrastructure is crucial to providing the reliable delivery of water to California residents, businesses, and agriculture. In addition, climate resilience projects have also been shown to stimulate local economies and create jobs.

Dam Safety/Reservoir Operations: (\$623 million)

In California, the average age of the 1,246 dams that fall under the jurisdiction of the state's Division of Safety of Dams is more than 70 years. In 2022, the state rated 112 of those dams as "less than satisfactory" and applied capacity restrictions to many reservoirs, resulting in significantly reduced water storage. Dam safety projects protect public safety, regain lost storage capacity, and fortify facilities for intensified storms due to climate change. In addition, dam enhancements to support Forecast-Informed Reservoir Operations (FIRO) further increase the climate resilience of dams using data from watershed monitoring and weather forecasting, which in turn allows for optimization of water releases from reservoirs to better respond to droughts and floods.

Recycling and Desalination: (\$990 million)

The State has set a target of 1.8 million acre-feet of new recycled water by the year 2040. In order to meet this goal, the State Water Resources Control Board (State Water Board) estimates that the cost to State, local, and federal agencies will total approximately \$27 billion. In addition, the State has set a target of expanding brackish groundwater desalination by 84,000 acre-feet per year by 2040. Both ocean and brackish groundwater and surface water desalination play an important role in local communities' water supply planning process to enhance California's drought resilience.



Eastern Municipal Water District:
French Valley Recycled Water Expansion



Fresno Irrigation District:
Savory Groundwater Recharge Basin



**Western Municipal Water District:
Recycled Water & Groundwater Recharge**



Los Vaqueros Reservoir

Safe Drinking Water/Water Quality: (\$440 million)

ACWA strongly supported the creation of California's Safe and Affordable Drinking Water Fund and recognizes the need to continue to direct resources to disadvantaged communities dealing with water quality issues. In addition, there are a number of communities throughout California dealing with water quality issues, including those caused by perfluoroalkyl and polyfluoroalkyl substances (PFAS) and other contamination that will result in hundreds of millions of dollars in treatment costs to ratepayers.

Groundwater: (\$733 million)

Historic droughts over the last several decades have placed extreme strain on California's groundwater basins. In response to the Sustainable Groundwater Management Act (SGMA), local agencies have proposed more than 340 new recharge projects that, if built, could result in as much as 2.2 million acre-feet of additional stored water in a single wet year by 2030.

Flood Protection: (\$733 million)

Levees, weirs, bypasses, and other flood protection facilities reduce the risk of major flooding. Projects that repair, expand, or replace these facilities are essential to flood management and public safety. As recent atmospheric rivers have shown, California must invest significant resources in coastal and inland flood protection including new infrastructure to capture flood flows and divert them to groundwater recharge facilities.

Regional Water Conveyance: (\$586 million)

New regional water conveyance systems and repairs of existing facilities will be essential to create a more resilient water infrastructure system. The Bureau of Reclamation estimates that repairing arterial canals in the central valley that have been damaged due to subsidence will cost over \$500 million. Many local and regional conveyance upgrades and repairs are needed throughout the State to create access to new water sources or provide emergency backup conveyance.

Regional Watershed Resilience: (\$366 million)

Regional and inter-regional scale watershed resilience projects are essential to maximize investments that increase water infrastructure resilience to climate change. These projects include Integrated Regional Water Management (IRWM) projects and other regional collaborations that focus on managing the region's water resources, setting regional priorities for water infrastructure, improving regional water self-reliance, or reducing reliance on the Sacramento-San Joaquin Delta.

Surface Water Storage: (\$550 million)

As climate change continues to reduce California's snowpack, which serves as a natural storage reservoir, the State must invest in additional water storage infrastructure to capture and store rainfall for utilization during dry periods. The Governor's Water Supply Strategy identifies the need to develop over 4-million-acre feet of new storage facilities with other estimates placing the need much higher.

State Water Project Climate Change Resilience: (\$366 million)

The California State Water Project (SWP) is a multi-purpose water storage and delivery system that delivers water to 27 million Californians and many farms and businesses throughout the state. In order to continue to provide safe and reliable drinking water and to meet the renewable energy goals established for the SWP, California should provide funding to enhance the SWP delivery of water and increase its energy resilience.

Water Conservation: (\$366 million)

From 2013 to 2016, statewide per capita residential water use declined 21 percent and has remained 16 percent below (on average) 2013 levels. Public water agencies continue to invest in water conservation projects and programs that increase conservation efforts, such as turf replacement programs, water loss projects, and other water-use efficiency upgrades. Similarly, there are significant infrastructure projects at agricultural irrigation districts that would yield water savings.



**Mesa Water:
Drought-Resilient Supply Project**



**Contra Costa Water District:
Contra Costa Canal**