

EXECUTIVE DEPARTMENT
STATE OF CALIFORNIA

Executive Order N-10-19

WHEREAS, water is a human right, and is central to California's strength and vitality; and

WHEREAS, we face a range of existing water challenges, including unsafe drinking water across the state, major flood risks that threaten public safety, severely depleted groundwater aquifers, agricultural communities coping with uncertain water supplies, and native fish populations threatened with extinction; and

WHEREAS, climate change is having a profound impact on water and other resources, making the climate warmer and more variable, which reduces mountain snowpack, intensifies drought and wildfires, and drives shorter, more intense wet seasons that worsen flooding; and

WHEREAS, California continues to grow, with our population projected to grow to 50 million over the next several decades and our economic activities expanding as the world's fifth largest economy; and

WHEREAS, the future prosperity of our communities and the health of our environment depend on tackling pressing current water challenges while positioning California to meet broad water needs through the 21st century; and

WHEREAS, many state programs, policies and investments are being implemented, such as the Sustainable Groundwater Management Act and new urban water efficiency standards, that can be built upon to meet these evolving challenges; and

WHEREAS, providing clean, dependable water supplies to communities, agriculture, and industry while restoring and maintaining the health of our watersheds is both necessary and possible; and

WHEREAS, achieving this goal requires a broad portfolio of collaborative strategies between government, sovereign tribes, local communities, water agencies, irrigation districts, environmental conservationists, academia, business and labor leaders, and other stakeholders.

NOW, THEREFORE, I, GAVIN NEWSOM, Governor of the State of California, by virtue of the power and authority vested in me by the Constitution and the statutes of the State of California, do hereby issue this Order to become effectively immediately.

IT IS HEREBY ORDERED THAT:

1. The California Natural Resources Agency, the California Environmental Protection Agency, the California Department of Food and Agriculture, in consultation with the Department of Finance, shall together prepare a water resilience portfolio that meets the needs of California's communities, economy, and environment through the 21st century.

These agencies will reassess priorities contained within the 2016 California Water Action Plan, update projected climate change impacts to our water systems, identify key priorities for the administration's water portfolio moving forward, and identify how to improve integration across state agencies to implement these priorities.

2. These agencies shall first inventory and assess:

- a. Existing demand for water on a statewide and regional basis and available water supply to address this demand.
- b. Existing water quality of our aquifers, rivers, lakes and beaches.
- c. Projected water needs in coming decades for communities, economy and environment.
- d. Anticipated impacts of climate change to our water systems, including growing drought and flood risks, and other challenges to water supply reliability.
- e. Work underway to complete voluntary agreements for the Sacramento and San Joaquin river systems regarding flows and habitat.
- f. Current planning to modernize conveyance through the Bay Delta with a new single tunnel project.
- g. Expansion of the state's drinking water program to ensure all communities have access to clean, safe and affordable drinking water.
- h. Existing water policies, programs, and investments within state government.

3. This water resilience portfolio established by these agencies shall embody the following principles:

- a. Prioritize multi-benefit approaches that meet multiple needs at once.
- b. Utilize natural infrastructure such as forests and floodplains.
- c. Embrace innovation and new technologies.
- d. Encourage regional approaches among water users sharing watersheds.
- e. Incorporate successful approaches from other parts of the world.
- f. Integrate investments, policies and programs across state government.
- g. Strengthen partnerships with local, federal and tribal governments, water agencies and irrigation districts, and other stakeholders.

4. These agencies shall conduct extensive outreach to inform this process,

including to other state agencies, sovereign tribes, federal and local government, local water agencies, agricultural groups, environmental justice and environmental conservation organizations, local and statewide business leaders, academic experts and other stakeholders.

IT IS FURTHER ORDERED that as soon as hereafter possible, this Order shall be filed with the Office of the Secretary of State and that widespread publicity and notice shall be given to this Order.

This Order is not intended to, and does not, create any rights or benefits, substantive or procedural, enforceable at law or in equity, against the State of California, its departments, agencies, or other entities, its officers or employees, or any other person.



IN WITNESS WHEREOF I have hereunto set my hand and caused the Great Seal of the State of California to be affixed this 29th day of April 2019.

A handwritten signature in black ink, appearing to read "Gavin Newsom".
GAVIN NEWSOM

Governor of California

ATTEST:

A handwritten signature in black ink, appearing to read "Alex Zell".

Secretary of State



2020 WATER RESILIENCE PORTFOLIO

In Response to the Executive Order N-10-19

3. Help regions secure groundwater supplies by supporting the transition to sustainable use.

- 3.1** Continue implementation of SGMA, including reviewing Groundwater Sustainability Plans submitted in January 2020 and 2022 and assuring basin-wide alignment across the state's more than 250 new groundwater sustainability agencies. Support local implementation however possible, and where basin managers are unable or unwilling to implement the law, exercise appropriate enforcement.
- 3.2** Create a state interagency team to work with stakeholders to identify tools and strategies to address the economic, environmental, and social effects of changing land use and agricultural production as local water managers implement sustainable groundwater management.
- 3.3** Provide targeted support to local planning efforts to address potential land-use changes in regions implementing SGMA.
- 3.4** Explore ways to further streamline groundwater recharge and banking efforts that do not exacerbate water quality issues, and provide technical assistance to facilitate the redirection of water during periods of extended high flows to allow water to sink into aquifers, including on agricultural land. Ensure diversions are protective of native fish and wildlife.
- 3.5** Make funding available for groundwater recharge and storage projects with multiple benefits.

3.8 Explore streamlined permitting for low-hazard dams that are not across a stream channel or watercourse and are used principally for agricultural and groundwater recharge purposes.

3.9 Help regions prevent contamination of groundwater basins, including through seawater intrusion, and remediate contaminated groundwater basins that will enable large-scale water recycling and conjunctive use.

4. Support local and regional agencies to recycle or reuse at least 2.5 million acre-feet a year in the next decade.

- 4.1** Increase financial capacity to support recycling, reuse, and wastewater projects through the Clean Water State Revolving Fund and other state and local funding mechanisms.
- 4.2** Continue work on raw water augmentation regulations and treated drinking water augmentation regulations to allow purified recycled water to be moved directly into drinking water distribution systems. Following the steps outlined in AB 574 of 2017, continue research underway that is identified in the direct potable reuse criteria feasibility report to the Legislature and convene an expert panel to review the proposed criteria to assure they are adequately protective of public health.
- 4.3** Implement 2018 legislation (SB 966) that requires creation of risk-based water quality standards for onsite collection and non-potable reuse of water in apartment, commercial, and mixed-use buildings.

categories	action number	2023 status	2021 status	see the Progress Report Key for number definitions									
Maintain and Diversify Water Supplies	6.2	4	3	13.1	2		19.5	3		25.7	3		
	7.1	3	2	13.2	3		20.1	3	2	25.8	3		
	7.2	3	2	13.3	3		20.2	3	1	25.9	3		
	8.1	3		13.4	3		20.3	3		25.10	2	1	
	8.2	3		13.5	2		21.1	3		26.1	4		
	8.3	3		13.6	3	2	21.2	4	3	26.2	4		
	8.4	2		13.7	3	2	21.3	3		26.3	3	1	
	8.5	2		14.1	3		21.4	3		26.4	3		
	8.6	4		14.2	3		22.1	3		27.1	3		
	8.7	3	1	14.3	3		22.2	3		27.3	3		
Protect and Enhance Natural Systems	8.8	3		15.1	3		22.3	3	2	27.3	3		
	8.9	3		15.2	3		22.4	4		27.4	3		
	8.10	3		15.3	3		22.5	3	2	Executing This Portfolio			
	9.1	3		15.4	3	2	22.6	3					
	9.2	2		16.1	3		22.7	3		28.1	4		
	9.3	3		16.2	3		22.8	3	2	28.2	3		
	9.4	3	2	16.3	3		22.9	4	3	29.1	2		
	9.5	3	2	17.1	3		23.1	4	2	29.2	1		
	10.1	3		17.2	4	1	23.2	4	3	29.3	3		
	10.2	3		17.3	4	3	24.1	3		29.4	3		
Build Connections	10.3	3		18.1	3		24.2	1		29.5	3		
	10.4	2		18.2	3	2	24.3	1		30.1	3		
	10.5	3		18.3	3		24.4	1		30.2	3		
	11.1	3		18.4	4		Be Prepared			30.3	3		
	11.2	3		18.5	3					30.4	3	2	
	11.3	3		Build Connections			25.1	3		30.5	3		
	12.1	3					25.2	2		31.1	4	3	
	12.2	3		19.1	3		25.3	3	2	31.2	3	2	
				19.2	3		25.4	3		32.1	4		
				19.3	3	2	25.5	3		32.2	1		
				19.4	4		25.6	3					

The Budget includes a total of \$5.1 billion over four years to support immediate drought response and long-term water resilience, which includes \$2.1 billion that will be allocated in the summer pending additional discussions with the Legislature. Current investments include:

- **Immediate Drought Support**—\$727.7 million (\$718.7 million General Fund, \$7 million bond funds, \$2 million special funds) to meet current and anticipated future water supply needs while building regional capacity to endure dry conditions. These investments will fund emergency drought relief projects that help secure and expand water supplies; small supplier and rural community drought contingency planning and preparedness projects; and local water resilience capacity building



CLIMATE CHANGE

that includes outreach to disadvantaged communities. In addition, funding will support the repair and enhancement of the state's water data infrastructure; the state cost-share of a federal desalination research hub; equipment; resources to help address drought impacts on state wildlife areas; and address the increased need for species monitoring and project permitting.

- **Drinking Water, Wastewater, and Water Supply Reliability**—\$1.4 billion General Fund and special funds over five years to expand and protect water supplies by protecting drinking water and wastewater infrastructure, supporting local water recycling and groundwater supply projects, and modernizing water rights data infrastructure.
- **Flood Management**—\$365.2 million from various fund sources across four years to leverage \$1.8 billion in federal funds for the American River Common Features flood control project, the maintenance and strengthening of levees, the support of emergency flood response activities in the Sacramento-San Joaquin Delta, and the support of collaborative flood risk management.





AUG 2022 CALIFORNIA'S WATER SUPPLY STRATEGY Adapting to a Hotter, Drier Future



CALIFORNIA'S WATER SUPPLY STRATEGY Adapting to a Hotter, Drier Future

This document outlines California's strategy and priority actions to adapt and protect water supplies in an era of rising temperatures.

Over the next 20 years, California could lose 10 percent¹ of its water supplies.

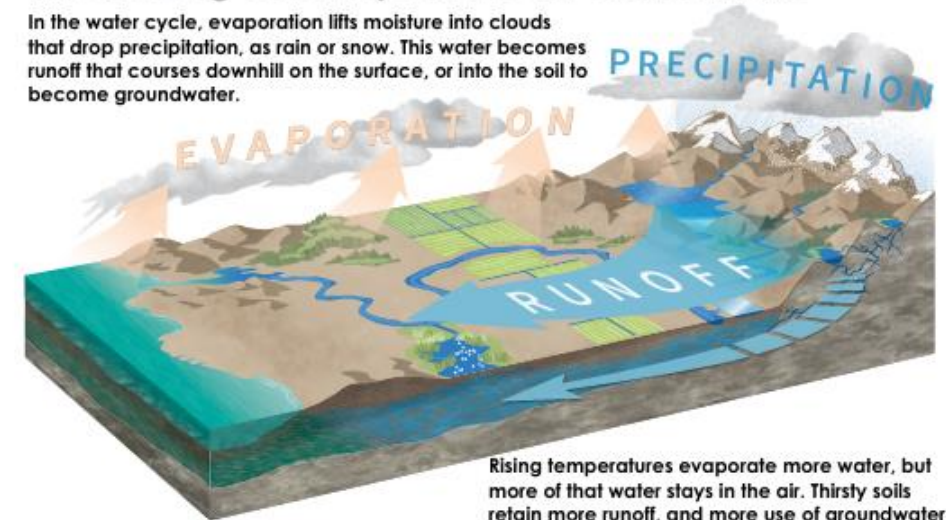
Our climate has changed, and the West continues to get hotter and drier. As it does, we will see on average less snowfall, more evaporation, and greater consumption of water by vegetation, soil, and the atmosphere itself.



In previous droughts the ratio of precipitation to evaporation to runoff has been similar. However, as temperatures rise, evaporation increases, with the consequence of a fall in runoff. As average temperatures continue to increase, the increase in evaporation will continue, with a concurrent drop in runoff.

The coming water cycle: the air claims more

In the water cycle, evaporation lifts moisture into clouds that drop precipitation, as rain or snow. This water becomes runoff that courses downhill on the surface, or into the soil to become groundwater.



Rising temperatures evaporate more water, but more of that water stays in the air. Thirsty soils retain more runoff, and more use of groundwater requires more water for recharging watertables.

¹ DWR estimates a 10% reduction in water supply by 2040. This is a planning scenario that considers increased temperatures and decreased runoff due to a thirstier atmosphere, plants, and soils. According to the California Water Plan Update, California's managed water supply ranges from 60-90 MAF per year so the effect of a drier climate results in a disappearance of about 6-9 MAF of water supply.

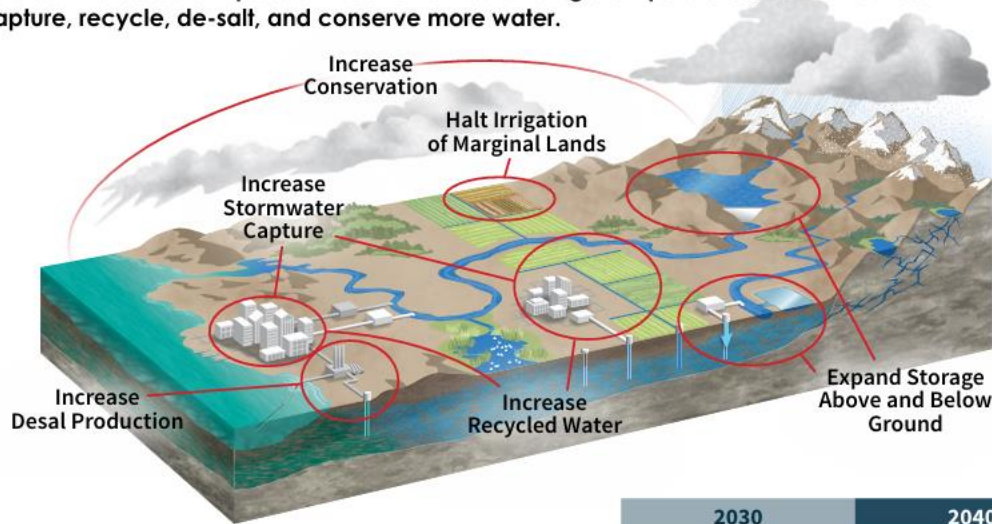
1. Develop New Water Supplies

Investments in wastewater recycling and desalination technology can help drought-proof communities.

1.1 Reuse at least 800,000 acre-feet of water per year by 2030 and 1.8 million acre-feet by 2040, with most of that additional recycling involving direct wastewater discharges that are now going to the ocean.

Closing the evaporative gap

To offset increased evaporation tied to warmer average temperatures, California must capture, recycle, de-salt, and conserve more water.



	2030		2040	
Increase Recycled Water	.8 MAF	About 5 MAF	1.8 MAF	About 7 MAF
Increase Desal Production	28,000 AF		84,000 AF	
Increase Stormwater Capture	.25 MAF		.5 MAF	
Increase Conservation	.5 MAF		.5 MAF	
SUBTOTAL FOR RECYCLED, DESAL, STORMWATER AND CONSERVATION	1.6 MAF		2.9 MAF	
Expand Storage Above and Below Ground*	3.7 MAF		4 MAF	
Total	4.8 MAF		6.9 MAF	

Currently, recycled water offsets about nine percent of the state’s water demand, about 728,000 acre-feet per year. The State Water Resources Control Board (State Water Board) has invested a total of \$1.8 billion in recycled water projects statewide over the last five years that are in various stages of development. Once completed, those projects will generate an additional 124,000 acre-feet of new water supply.

Approximately 1.5 million acre-feet per year of treated wastewater is currently discharged to California’s ocean waters. Not all of this can be recycled, as some water is needed to discharge brine, and wastewater in some places provides critical streamflow for fish and wildlife. But in many places, communities can tap this resource to build water supply resilience.

Current regulations enable communities to use recycled water for drinking via a reservoir or aquifer, and in 2023, the State Water Board will establish direct potable reuse regulations that allow suppliers to distribute recycled water without first putting it into a reservoir or aquifer.

Implementation Steps:

- The State will consider greater investments and leverage federal dollars where possible to build on the \$3.2 billion in financing for water recycling projects that the State Water Board has provided to 94 projects since 2012. At roughly \$15,000 an acre-foot, it would require a state, local, and federal investment of approximately \$10 billion to achieve the 2030 goal and \$27 billion to achieve the 2040 goal of recycling an additional 1.8 million acre-feet of water.
- By January 1, 2024, the State Water Board will work with local water and sanitation agencies to identify recycled water projects that hold the potential to be operational by 2030 and by no later than 2040.
- The State Water Board will formalize a process currently underway by convening a strike team to identify and resolve permitting and funding obstacles.
- The State Water Board will track the permitting and funding status of recycled water projects with a public, digital dashboard.
- The State will support local water sustainability plans that include water recycling, including (but not limited to):
 - Operation NEXT/Hyperion 2035 (City of Los Angeles)
 - Pure Water San Diego (City of San Diego)
 - Integrated Water Resources Plan and Climate Action Plan (Metropolitan Water District of Southern California)



Modernizing Water Policy

The modernization of the California Water Plan 2028 is driven by Senate Bill (SB) 72. SB 72 sets a clear expectation: move statewide water planning from description to direction.

Under SB 72, the Water Plan is being modernized to:



Identify and evaluate effective water management strategies, informed by economic considerations



Quantify urban, agricultural, and environmental water needs at a watershed scale throughout California



Expand engagement across all sectors as DWR develops the Water Plan



Establish clear water supply targets that help align state, regional, and local actions