Advancing California's Water Supply Strategy

Supplemental information to support CUWA's February 2023 issue brief

CALIFORNIA URBAN WATER AGENCIES

CUWA agencies collectively serve two-thirds of the state's population and are committed to providing reliable water supply.

Who is CUWA?

*California Urban Water Agencies (CUWA) is a non-profit corporation representing the collective voice of **11** major urban water agencies that serve **two-thirds** of the state's population and power the bulk of the state's **$3 trillion** economy.*

CUWA agencies are committed to providing reliable water supplies for the state's current and future urban water needs in a cost-effective manner for the public, the environment, and the economy.

Retail Agencies:
- Alameda County Water District (ACWD)
- East Bay Municipal Utility District (EBMUD)
- City of Fresno
- Los Angeles Department of Water and Power (LADWP)

Retail/Wholesale Agencies:
- Contra Costa Water District (CCWD)
- City of San Diego
- San Francisco Public Utilities Commission (SFPUC)

Wholesale Agencies:
- Metropolitan Water District of Southern California (MWDSC)
- Santa Clara Valley Water District (Valley Water)
- San Diego County Water Authority (SDCWA)
- Zone 7 Water Agency (Zone 7)

CALIFORNIA URBAN WATER AGENCIES

Contents

Our climate is changing, and we must adapt.

Hotter and drier conditions could diminish California's water supply.

Flooding and storms underscore the need for more storage capacity.

*The impacts of climate change are significant: increased temperature and reduced runoff alone could lead to a **10% shortage in water supply** by 2040.*

Source: *California's Water Supply Strategy: Adapting to a Hotter, Drier Future.* California Department of Water Resources (DWR), 2022.
Photo Credit: *Western Water*, Water Education Foundation, 2019 and 2023.

The State published a focused *Water Supply Strategy* to set priorities for water supply management and climate change adaptation. t

Key Actions in ***CA's Water Supply Strategy***:

Create **storage** space for up to 4 million acre-feet (MAF) of water.

Free up 500,000 acre-feet per year through **water use efficiency (WUE)**.

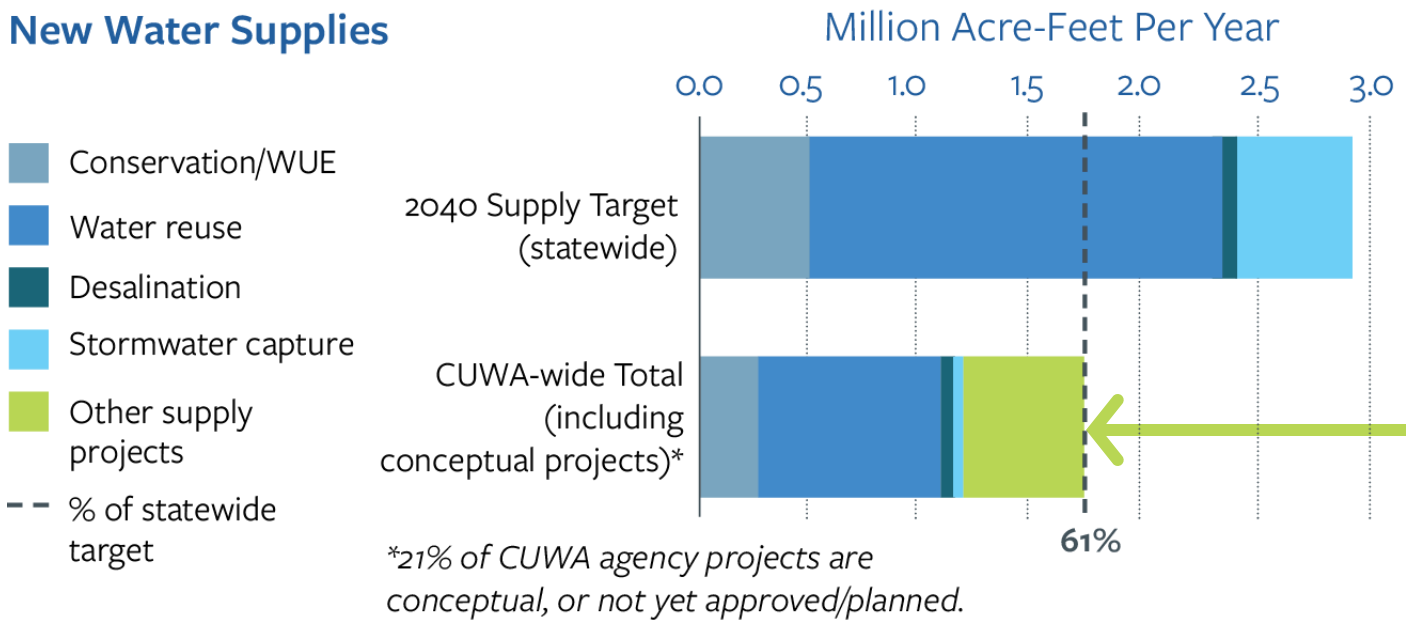
Recycle at least 800,000 acre-feet of water per year by 2030.

Create **new water** supplies through stormwater capture and desalination.

Total **Supply** and **Storage** Targets:
Year 2030: **5 MAF**
Year 2040: **7 MAF**

Through a broad mix of projects, CUWA agencies could achieve nearly two-thirds+ of the overall new supply target.

+CUWA agencies collectively serve two-thirds of the state's population.



**21% of CUWA agency projects are conceptual, or not yet approved/planned.*

Other Projects Include:

- Groundwater Expansion
- Treatment Plant Improvements
- New Conveyance
- Supply Transfers

These projects tend to be relatively cost-effective (compared to supplies requiring advanced treatment) and contribute a significant amount of new supply by leveraging more surface water when available and enabling greater use of groundwater in dry years.

Each service area has specific needs, resources, and limitations that drive agencies' water supply decisions.

Diverting surface water when available reduces flooding and enhances water supply reliability in dry years.

The City of Fresno, which was solely reliant on groundwater until 2004, has since expanded recycled water as well as their **conjunctive use program** (by diverting surface water when available), which enables greater recharge and storage while maintaining groundwater sustainability.

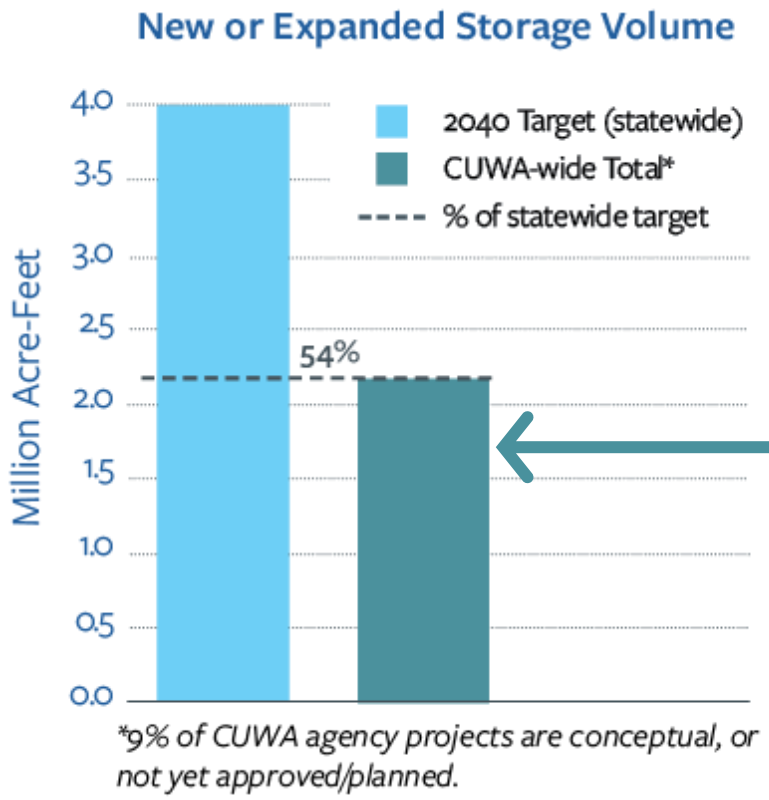
Current Limitations

The Friant-Kern Canal has limited capacity, restricting the amount of surface water that can be delivered to the Central Valley. During big storm events, there is extra water available that cannot be diverted.

Opportunity

Repairing the conveyance system would create more opportunity to capture flood flows, enhance groundwater recharge, and benefit communities in the Central Valley while leveraging existing resources.

Storage plays a key role in water supply resilience and flood control.



CUWA agencies are leading or participating in projects that make up **more than half of the State's goal of 4 million acre-feet** of new storage capacity.

Projects include a mix of groundwater storage and reservoir projects, including three projects supported by Proposition 1:

- Sites Reservoir
- Los Vaqueros Reservoir Expansion
- Pacheco Reservoir Expansion

*CUWA agencies are participating in 3 of the 7 storage projects supported by Proposition 1, which are collectively estimated to receive $2.7 billion in State funding and increase storage by approximately **1.7 MAF**.*

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Investments in dam safety are critical for retaining and/or regaining existing reservoirs' storage capacity while protecting the public.

The City of SAN DIEGO

The City of San Diego's reservoirs are aging and require critical repairs and replacement, including the Lake Hodges Dam.

Opportunity

Expedite permitting to perform necessary repairs that address safety concerns, mitigate potential loss of service, and increase water levels.

Valley Water

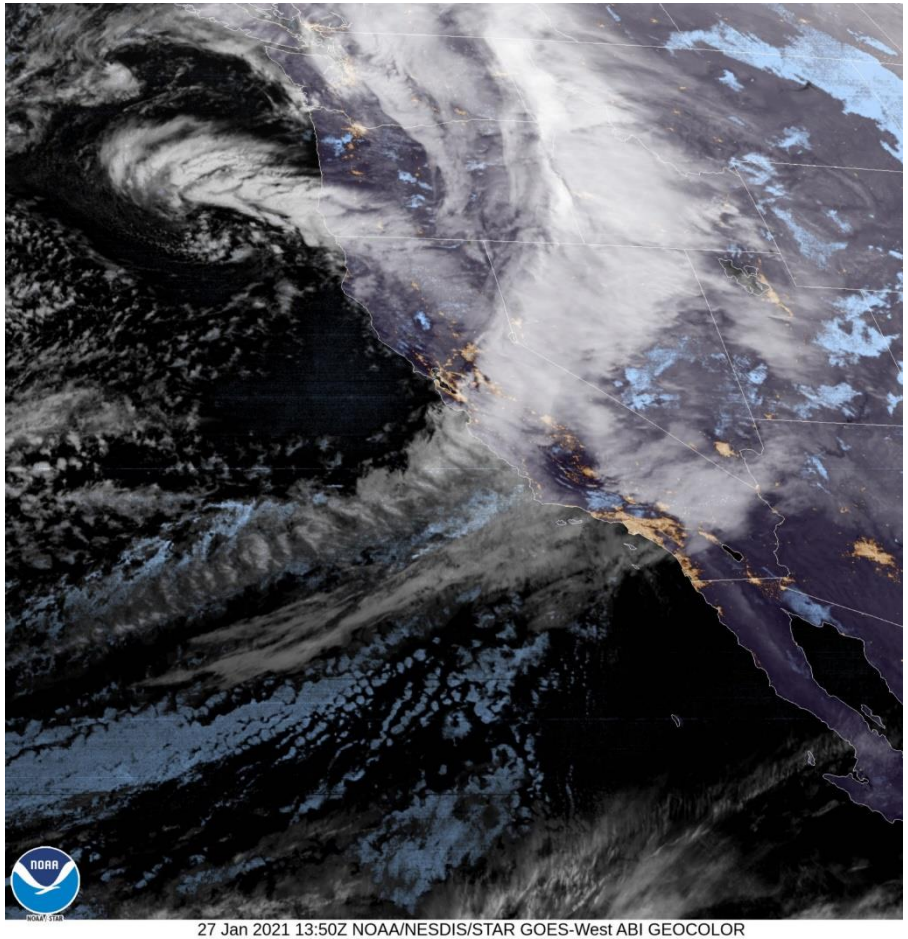
Valley Water had to drain its largest surface water reservoir due to seismic concerns at Anderson Dam. The reservoir is limited to 3% capacity while the necessary retrofits are completed.

Opportunity

Expedite permitting and construction to restore Anderson's storage capacity to 90,000 acre-feet.

Adjusting reservoir operating rules can optimize water supply storage within existing structures.

- Many reservoirs serve multiple purposes: water supply, flood control, ecosystem health, and more.
- **Updates to flood control manuals and rule curves** can enable reservoir operators to adapt to a changing climate with less snow and earlier runoff.
- Though it doesn't apply in all cases, **forecast informed reservoir operations (FIRO)** combines enhanced weather forecasting with flexible operating policies to better inform reservoir releases to reduce flood risk while retaining more water for supply purposes.
- Continued **research, funding, and regulatory support** can help further advance FIRO and updates to other reservoir operating requirements.



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Statewide supply and storage targets cannot be achieved through planned projects alone.

- Several conceptual projects are not yet approved.
- Other local utilities face similar challenges and constraints.
- Unlocking the full potential of these projects requires collaboration to overcome barriers.

Cost

Affordability

Regulations & Permitting

Public Perception

The State plays a key role in helping local agencies overcome barriers to bolster existing and new supply reliability projects.

Provide ongoing funding for new supply and storage projects.

Challenge:

There is no more "low hanging fruit" when it comes to water supplies in California. Future supplies are more complex and expensive, requiring new and creative funding sources and financing strategies.

For example, while costs aren't yet known for all projects, CUWA agencies estimate a capital cost of **at least $20-30 billion** for their new reuse projects (collectively producing up to 0.8 MAFY).

Recommendations

- **Adjust grant application requirements,** such as simplifying applications and expanding eligibility to support a broader range of projects.
- **Allow flexibility for new financing approaches,** such as public-private partnerships.
- **Promote more regular funding cycles** that sync with agencies' capital planning.

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Example: Creative funding approaches can expand opportunities for new projects.

- The **Carlsbad Desalination Plant** is a drought-proof supply source that came online in 2015, which is a result of a **public-private partnership**.
- A **Water Purchase Agreement** was signed that assigned risks to the private sector while keeping rates as low as possible with pre-defined prices. At the end of the agreement's 30-year term, the Water Authority may purchase the plant for $1.

San Diego County Water Authority

Establish statewide assistance programs with streamlined administration and a sustainable funding source.

Challenge:

As the cost of water rises, so does the affordability challenge, with many customers struggling to keep up with increasing rates. *Proposition 218* further constrains public utilities' ability to address this challenge.

Additionally, customer water use efficiency programs can help ratepayers reduce their water bills, though some measures (e.g., landscape retrofits) are expensive. Equitable programs, like direct installation of water-efficient appliances, can benefit households of all income levels.

Recommendations

- **Establish a statewide low-income rate assistance** program with streamlined administration and a sustainable funding source.
- **Consider a state role in equitable customer water use efficiency programs**, such as providing funding for utilities to implement local programs.

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Example: A long-term federally funded program could provide ongoing assistance.

- The federal **low-income household water assistance program (LIHWAP)** provides a one-time benefit to households struggling with water affordability. A longer-term program is needed to provide ongoing assistance.
- **Simplifying program requirements** would enable the benefit to reach more customers:
  - **Streamline the application process** to minimize the amount of documentation required.
  - **Expand eligibility** to more customers (beyond <60% median household income).
  - **Enhance program advertisement and messaging** to reach customers through multiple channels.

Consider opportunities to improve regulatory certainty and permitting efficiency.

Challenge:

Development of new supplies requires **enabling regulations** (e.g., for direct potable reuse) and **permitting approval**. Several obstacles, such as lack of understanding or clarity in requirements, can cause delays in the permitting process.

Additionally, certain regulatory constructs can impede project construction and operation. Resolving these conflicts can unlock additional projects—for example, exempting PFAS from CERCLA would enable greater brine management options for potable reuse projects.

Recommendations

- **Consider opportunities for permitting efficiency,** such as parallel (vs. sequential) review periods and advance mitigation options.
- **Support critical water supply projects;** communicate priorities across all staff levels and seek alignment across agencies.
- **Identify and resolve regulatory uncertainties** that could impede project construction and operation.

Example: Early coordination and data collection are critical success factors for permitting.

- **SFPUC's Calaveras Dam** recently underwent seismic improvements to restore capacity of Calaveras Reservoir. Early engagement with federal and state regulatory agencies, community/non-profit organizations, and other stakeholders in the watershed to work together and collaboratively generate shared understanding of site-specific technical information in a transparent manner led to broadly-supported and successful permitting.
- **ACWD's Alameda Creek Fish Passage Improvements Program** was recently completed and will allow migratory fish to bypass obstacles on the creek so they can spawn upstream. Early coordination meetings bringing together state and federal permitting agencies (California Department of Fish and Wildlife [CDFW], Regional Water Quality Control Board [RWQCB], and National Marine Fisheries Service [NMFS]), combined with frequent all-hands updates with the RWQCB staff and other stakeholders, helped streamline the process.
- **The Los Vaqueros Reservoir Expansion Project** has achieved several permitting milestones and is nearing construction. Early consultation on the water rights permitting process has helped keep the project on track.

One of ACWD's fish ladders as part of the Fish Passage Improvements Program.
Source: Association of California Water Agencies

CUWA continues to collaborate with State leaders to identify best practices and opportunities to improve permitting efficiencies.

Example: Further opportunities include increased coordination and parallel reviews.

WATEREUSE CALIFORNIA
CMUA CALIFORNIA MUNICIPAL UTILITIES ASSOCIATION
CASA
ACWA Association of California Water Agencies
CALIFORNIA URBAN WATER AGENCIES

October 5, 2022

Jing-Tying Chao
Division of Drinking Water
State Water Resources Control Board
1001 I Street,
Sacramento, CA 95814

Subject: Comment Letter – Expert Panel Preliminary Findings and DDW Response

Dear Ms.Chao:

On behalf of the Association of California Water Agencies (ACWA), the California Association of Sanitation Agencies (CASA), the California Municipal Utilities Association (CMUA), the California Urban Water Agencies (CUWA) and WateReuse California (WRCA), we are pleased to offer comments on the June 28, 2022 draft regulations for Direct Potable Reuse (DPR). As you are aware, these much-anticipated regulations have great potential to help California communities develop a safe, sustainable, drought-resistant water supply. As we offer the recommendations below, we also recognize the importance of the regulations providing strong public health protection. We note that all recommendations below are consistent with, or are not in conflict with, recommendations from the AB 574 Expert Panel. Our recommendations for specific changes in the DPR regulations are below.

Expansion of Alternatives Clause

We recommend that the alternatives clause framework used in the groundwater recharge (GWR) and surface water augmentation (SWA) regulations be adapted for DPR as well. This broad alternative clause will allow the regulations to adapt over time. It is simply impossible to look 30 years into the future and guess how technologies or other processes may change and add these hypothetical scenarios into all sections of the DPR regulations. With the DPR regulations incorporating both Raw Water Augmentation and Treated Drinking Water Augmentation scenarios, this clause takes on heightened importance. Once again, the burden will still rest with the project proponent to demonstrate that the alternative proposed is protective of public health.

The following draft language is proposed:

- Continued collaboration between the Division of Drinking Water (DDW) and Division of Water Quality (DWQ) for future **direct potable reuse** permitting and research will result in uniform CEC monitoring across the State.
- Allowing treatment and distribution permits to be secured in parallel would streamline the process for implementing **satellite recycled water facilities** under General Order WQ 2016-0068-DDW.
- Promoting regional **habitat conservation plans** and/or **programmatic permits and mitigation**, where appropriate, would provide broader environmental benefits while reducing burden on permitting agencies.

Reinforce the importance of diverse water supplies and infrastructure investments through statewide messaging.

Challenge:

In some communities, there is a lack of understanding—if not opposition—to new types of water supply, and a lack of awareness of the need for new infrastructure.

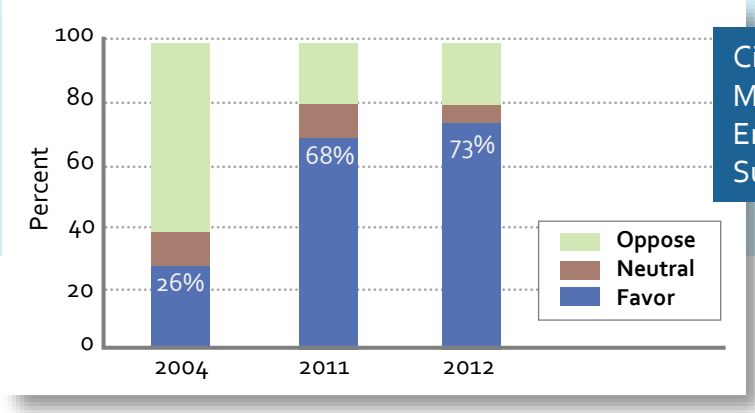
State and local agencies must communicate the need for continued investments in supply reliability, even in wet years.

Recommendations

- **Reinforce the importance of diverse water supplies through statewide messaging,** including the role of existing developed supplies (e.g., imported water) and alternative supplies, such as potable reuse.
- **Educate the public around the need for storage** to better capture flow in wet years for use during dry years.

Example: Broad, statewide messaging can create an atmosphere of support for alternative supplies.

Public engagement over time is important for increased and continued acceptance of alternative supplies, such as water reuse. Proven strategies at the local level include engagement with opinion leaders and elected officials, facility tours, community events, written support, and school outreach.



City of San Diego Multi-Year Engagement Tripled Support

When introducing new water supplies, perceived inequities must be considered. For example, groundwater or purified water may be seen as less desirable or "pristine" than supplies originating as snowmelt (such as SFPUC's Hetch Hetchy supply or EBMUD's Mokelumne supply). While each agency's supply portfolio is unique, broad statewide messaging around the importance of supply diversification and the safety and quality of alternative supplies can reinforce and support more tailored messaging at the local level.

A secure water supply future is an investment in the community and the economy.

All members of the water community—including water suppliers, regulators, NGOs, and the public—share overarching goals: **building reliable water supply for our communities, protecting the environment, and sustaining the economy**.

All stakeholders play a role and must work together to secure funding (for capital projects and ongoing rate assistance), streamline permitting processes, and align messaging. Now is the time to invest in our future, and **only through collaboration can we achieve the objectives of California's water supply strategy**.