# Strengthening California's Drought Resilience

## CUWA Issue Brief – December 2021

**This issue brief provides an understanding of the factors that inform local water shortage contingency plans (WSCPs) and how the state can help strengthen drought preparation and response, such as continuing to allow local flexibility, fund drought resilience efforts, and expand messaging around non-essential water uses.**

## Droughts are becoming more frequent and severe across California. Urban water agencies have been planning for drought and have many tools to prepare and respond.

The **water shortage contingency plan (WSCP)**, which urban water suppliers prepare in conjunction with the **urban water management plan (UWMP)** once every five years, summarizes the actions water suppliers can implement in response to a drought. Legislation following the 2012-2016 drought (AB 1668/SB 606, passed in 2018) includes new requirements, such as a drought risk assessment, new WSCP elements, and an annual water supply and demand assessment. UWMPs and WSCPs summarize for the State the various tools water suppliers leverage to manage through drought and are reflective of local conditions and each agency's long-term investments.

## Each agency's WSCP identifies a set of response actions unique to their service area.

Agencies may activate different shortage levels and response actions based on local conditions. Planned actions may include supply augmentation, demand reduction, or a combination of both. There is no one-size-fits-all approach to drought response.

## AT A GLANCE:

### URBAN DROUGHT PLANNING REQUIREMENTS

California law requires urban water suppliers to submit the following information:

**EVERY 5 YEARS (as part of the UWMP):**

- **Drought risk assessment** that evaluates the reliability of each supply source and compares projected supply and demand over the next five years, assuming drought conditions.
- **Long-term forecast for each water supply source** in different year types, considering climate change and other factors.
- **WSCP** that defines water shortage levels, shortage response actions (e.g., demand reduction, supply augmentation, and/or other measures, as locally appropriate), communication protocols, and more.

**EVERY 1 YEAR:**

- **Annual supply and demand assessment** summarizing anticipated shortage, response actions, compliance and enforcement actions, and communication actions consistent with the adopted WSCP.

# While every water supplier must plan for drought, the path to resilience looks different for everyone.


## Urban water suppliers have many tools to respond:


**Depending on shortage severity and available resources, agencies may implement a mix of response actions as documented in local WSCPs. Long-term investments in water supply reliability help mitigate the need for emergency demand cutbacks by allowing agencies to leverage available tools during drought.**

For example, developing new drought-resilient supplies (e.g., water reuse and desalination) allows agencies to use **diverse local supplies** during dry years. Additionally, existing developed supplies continue to play a key role—for example, water imported through the State Water Project and Central Valley Project enables greater storage, including groundwater banking programs, and **water transfers and exchanges**. Given the variable nature of California's climate, **storage** is a critical part of water management--by optimizing surface water diversions or capturing stormwater when water is plentiful, agencies can store excess water in reservoirs or groundwater basins for use during dry periods. Investments in diverse supplies and storage also enable **shifts in operations**, so agencies can lean more heavily on different supply sources at different times, such as through conjunctive use. Lastly, while long-term water use effieciency mitigates the need for—and in some cases, limits the ability to achieve—further **demand reduction** during drought, prohibiting non-essential uses can further stretch available supplies and storage.

### Collaboration is key for advancing drought resilience.

Working together to secure funding, share resources, expedite regulatory compliance, and align messaging creates new opportunities for projects that promote water supply reliability and resilience.

**For example, the Bay Area Regional Reliability (BARR) partnership among eight water suppliers is driving regional solutions.** The BARR partners developed a regional drought contingency plan that identified drought mitigation measures that benefit multiple agencies, such as the Los Vaqueros Reservoir Expansion Project, and are currently advancing the Shared Water Access Program (SWAP), which included three pilot water transfers in 2021 and will establish a framework for future transfers/exchanges.

**In southern California, the Metropolitan Water District of Southern California (MWD) plays a key role as the largest regional wholesaler, working with its 26 member agencies to achieve supply reliability throughout the region.** MWD has invested in regional storage and conveyance infrastructure (including the largest surface reservoir built in the state since the 1960s) as well as local supplies and water use efficiency programs, including the very successful turf replacement program implemented by LADWP, which replaced more than 51 million square feet of turf and has helped keep demands down.

# Urban agencies have made significant investments to mitigate the need for emergency demand cutbacks.

Collectively, CUWA agencies have made substantial progress in water supply resilience through ratepayer investments in water use efficiency, supplies, and storage. Ratepayers need assurance that state actions will support these investments, which enable agencies to maintain reliability during drought and leverage the various response tools in place.

| DROUGHT MITIGATION INVESTMENTS: | COLLECTIVE PROGRESS: | EXAMPLE APPROACH: |
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| **Long-Term Water Use Efficiency (WUE)** | CUWA retail agencies' collective per capita demand is nearly **40% lower** today than it was in 1990, with some agencies as much as 50% lower. Demands have remained low since the 2012-2016 drought, with agencies seeing little to no rebound, limiting the potential for further demand reduction. | The San Francisco Public Utilities Commission (SFPUC) has emphasized WUE within their retail service area, offering various indoor and outdoor water use consultations, rebates, incentives, and tools. Water use within San Francisco has been on a general decline since the 1970s, despite population growth, and is among the lowest in the state, with current residential per capita water use at 42 gpcd. |
| **Local & Regional Supplies** | CUWA agencies have been developing more diverse local supplies. For example, recycled water deliveries have more than doubled since 2000. By 2045, CUWA agencies estimate nearly **500,000 acre-feet** in new local and regional supplies (such as potable and non-potable reuse, stormwater capture and recharge, and desalination), which will augment or offset existing supplies, improve regional self-reliance, and increase flexiblity (allowing for shifts in operations). | The San Diego County Water Authority (SDCWA) has invested in diverse local supplies as a strategy to mitigate impacts of drought and climate change. In addition to WUE, investments in Colorado River conservation and transfer agreements, the Carlsbad Seawater Desalination Project, and member agency recycled water, groundwater, and purified water projects have well-positioned SDCWA to manage through drought. These investments have improved regional resilience and reduced reliance on the Delta (particularly important during dry years). |
| **Storage** | CUWA agencies collectively operate **more than 50 surface water reservoirs,** with additional storage available in other (e.g., state-owned) facilities. Additionally, CUWA agencies have **extensive groundwater storage**—both in local basins and groundwater banks. Many agencies can address supply shortfalls through withdrawals from storage. | The Los Vaqueros Reservoir Joint Powers Authority, including six of the CUWA member agencies, was formed in 2021 to expand the reservoir to 275,000 acre-feet and construct a new regional intertie to improve Bay Area and Central Valley water supply reliability and enable more water transfers and exchanges while providing ecosystem benefits.<br><br>The City of Fresno has implemented a conjunctive use program that enables greater recharge and storage (by diverting surface water when available) while maintaining groundwater sustainability. |

# Water suppliers base drought strategies on what's best for their community, the environment, and economy.

**Both long-term drought mitigation and short-term response strategies are informed by local community needs and goals while protecting the environment.**

**Affordability & Equity**
Investments in WUE, capital projects, and water supply are made with ratepayers in mind to ensure consistent, affordable, and reliable high-quality water.

**Public Health**
As underscored by the COVID-19 pandemic, water is critical for public health and hygiene. Agencies have limited ability to restrict winter (indoor) water use without impacting basic water needs.

**Ecosystem Health**
Agencies are committed to protecting and enhancing natural ecosystems by advancing water supply and storage projects that provide multiple benefits.

**Population & Land Use**
Water agencies support water efficient growth to address new development needs, such as affordable housing.

**Economic Growth & Recovery**
Water is essential for the economy, and agencies must balance demand restrictions with post-pandemic recovery.

# Recommendations: How the State Can Help

Building on Governor Newsom's October 19, 2021 drought proclamation, state leaders can promote drought resilience by continuing to support the tools local agencies have in place to respond to current conditions and plan for long-term resilience.

## Current Drought Response:

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| **Expand messaging around non-essential water uses.** | Given variation in local conditions, focus state messaging on general drought awareness and call on Californians to avoid non-essential water uses (e.g., irrigation of ornamental turf, washing hardscapes where not needed for health and safety) rather than a percent reduction. |
| **Expedite water transfers and other critical supply projects.** | Prioritize and streamline permitting for urgent water supply projects, such as dam safety improvements, and work collaboratively with project proponents to efficiently move through the permitting process. |
| **Enable access to stored water and other dry-year supplies.** | Support local agencies' access to supplies, such as by facilitating recovery of banked groundwater and enforcing illegal diversions. Be aware of policies and regulations that limit access to supplies, such as curtailments and State Water Project allocations. |
| **Continue to support local flexibility through existing policy frameworks.** | Empower water suppliers to leverage the tools and policies that are already in place (e.g., UWMP, WSCP, long-term WUE requirements) and activate WSCPs as locally appropriate. |
| **Focus on small water suppliers in need of assistance.** | Continue to implement the requirements of SB 552 by helping small water suppliers (not currently required to develop WSCPs) begin planning for drought. |

## Long-Term Drought Resilience:

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| **Help local agencies achieve the next tier of water use savings, where possible.** | Achieving further demand reductions (beyond the "low-hanging fruit") requires considerable resources and investments. Consider a state-run rebate program, funding to support implementation of long-term WUE standards, or new development standards to reduce water use statewide. |
| **Promote investments in new and existing water infrastructure.** | Address aging infrastructure at the state and local level to maintain access to existing supplies. Additionally, streamline permitting and direct funding for new supply, storage, and conveyance projects to enhance local and regional resilience. |
| **Support alternative drought-resilient supplies, such as water reuse and desalination, through funding, regulations, and outreach.** | Make funding available and streamline grant and loan applications to facilitate implementation of new supplies that support drought resilience and climate adaptation. Continue advancing regulations for direct potable reuse and expand public education and outreach to garner support for potable reuse and other alternative water supplies. |
| **Facilitate long-term water transfers and regional water markets.** | Identify willing sellers and buyers and streamline the approval process to increase opportunities for supply trading, including sharing of wastewater resources, and encourage regional approaches. |

## In conclusion, we're all in this together.

**While shortage conditions and response actions vary across the state, we all play a role in making California drought resilient. By working together, state and local agencies can build on existing tools and partnerships to advance drought planning and response efforts while encouraging all Californians to use water wisely.**

### WHO IS CUWA?

Established in 1990, 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.