Berkeley Law
Center for Law, Energy, & the Environment

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December 15, 2023

Matthew Swanson, Chair, and Members of the California Water Commission
*Submitted via email to:* cwc@water.ca.gov

**Re: Comment Letter on Draft White Paper on Drought Strategies**

Dear Chair Swanson and Members of the Commission:

We write to comment on the California Water Commission's draft white paper, "Potential State Strategies for Protecting Communities and Fish and Wildlife in the Event of Drought."

The draft white paper contains useful information on four drought-response strategies: (1) Scale Up Groundwater Recharge, (2) Conduct Watershed-level Planning to Reduce Drought Impacts to Ecosystems, (3) Better Position Communities to Prepare for and Respond to Drought Emergencies, and (4) Support Improved Coordination, Information, and Communication in Drought and Non-drought Years. We agree that California should implement these strategies, and we commend the Commission for highlighting them.

However, **we want to call the Commission's attention to the omission of another strategy we believe is central to fairly and effectively managing drought in California: improving administration of water rights during times of water scarcity**.[1] To protect communities and ecosystems from severe drought impacts, the State Water Resources Control Board must perform a basic regulatory function it has struggled to carry out to date. The Water Board needs to be able to implement the state's water laws, including California's water right priority system, constitutional requirement for reasonable use, and public trust protections. And it needs to do so in a clear, comprehensive, and predictable manner. Yet technical, legal, and political barriers that could be addressed with appropriate state leadership—such as a perceived lack of authority—have impeded the Water Board's attempts to date.[2] As a result, the state has implemented delayed and piecemeal drought responses that lack predictability for water users and often provide inadequate protection for both public and private interests.

[1] On page 13, the draft lists "Continue to . . . improve the Water Board's capacity to administer water rights during drought conditions" as one potential state action. This text appears in the section focused on the strategy "Conduct Watershed-level Planning to Reduce Drought Impacts to Ecosystems" with no additional context or discussion.

[2] On page 11, within a useful discussion about the need to set and implement instream flows to reduce drought impacts to ecosystems, the draft states: "Where there is not enough water to support all the water needs in a watershed, the Water Board can limit water use through a process called curtailment. Curtailments are implemented through regulations and are based on water rights priority." The draft appears to assume the Water Board can straightforwardly implement curtailments to protect instream flows when such flow requirements exist. However, our research shows this assumption is not accurate. See Green Nylen, N., D. Owen, J. Harder, M. Kiparsky, and M. Hanemann, *Managing Water Scarcity: A Framework for Fair and Effective Water Right Curtailment in California* (April 2023), Center for Law, Energy & the Environment, UC Berkeley School of Law, Berkeley, CA, 143 pages, URL: https://www.law.berkeley.edu/curtailments/.

The final white paper needs to actively engage with this subject.

More than a decade of our group's research explains the foundational deficiencies in California's ability to administer state water law during droughts and offers recommendations for addressing them. Our work builds on and complements many years of scholarship by others on similar themes. Collectively, our work: (1) analyzes the Water Board's past drought responses; (2) makes the case that improving California water rights administration is necessary for effective drought response that protects water right holders, communities, and the environment; (3) details the legal basis and regulatory rationale for making systematic improvements; and (4) provides a framework and recommended pathways for actions the Water Board, other state agencies, the Legislature, and the Governor's office can take to address key barriers that stand in the way of effective state drought response.

In aid of your efforts to revise the draft white paper to make it more useful, we have attached a list of reports / white papers, comments, and blog posts we have published on this crucial topic over the past twelve years. The list is organized by publication type and year and provides a link to view or download each publication. Additionally, we have attached the executive summary for our April 2023 report, *Managing Water Scarcity: A Framework for Fair and Effective Water Right Curtailment in California*, which explains current challenges for effectively administering water rights during droughts and offers specific solutions.

If the Commission intends to produce a white paper that reflects the most important measures the state can take to enable drought management that protects communities and ecosystems, it should direct staff to squarely address these issues in the final version, citing our publications and other relevant recommendations for near-term state action.

Sincerely,


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Attachments:

- List of Our Relevant Publications
- Executive Summary for our April 2023 "Managing Water Scarcity" report

# List of Our Relevant Publications

## Reports / White Papers:

### *2023*

Green Nylen, N., D. Owen, J. Harder, M. Kiparsky, and M. Hanemann, **Managing Water Scarcity: A Framework for Fair and Effective Water Right Curtailment in California** (April 2023), Center for Law, Energy & the Environment, UC Berkeley School of Law, Berkeley, CA, 143 pages, *available at* https://www.law.berkeley.edu/curtailments/.

→ **Executive Summary**, 10 pages, attached.

### *2022*

Lee, C., J. Harder, R. Frank, B. Thompson, T. Doduc, H. Doremus, and C. Pannu, **Updating California Water Laws to Address Drought and Climate Change** (Feb. 3, 2022), *available at* https://www.pcl.org/media/2022/02/Updating-California-Water-Laws-to-Address-with-Drought-and-Climate-Change.pdf.

### *2018*

Green Nylen, N., M. Kiparsky, D. Owen, H. Doremus, and M. Hanemann, **Addressing Institutional Vulnerabilities in California's Drought Water Allocation, Part 2: Improving Water Rights Administration and Oversight for Future Droughts** (August 2018), California's Fourth Climate Change Assessment, California Natural Resources Agency, Publication number: CCCA4-CNRA-2018-010, 67 pages, *available at* https://www.law.berkeley.edu/research/clee/research/wheeler/drought-water-allocation/.

Green Nylen, N., M. Kiparsky, D. Owen, H. Doremus, and M. Hanemann, **Addressing Institutional Vulnerabilities in California's Drought Water Allocation, Part 1: Water Rights Administration and Oversight During Major Statewide Droughts, 1976–2016** (August 2018), California's Fourth Climate Change Assessment, California Natural Resources Agency, Publication number: CCCA4-CNRA-2018-009, 172 pages, *available at* https://www.law.berkeley.edu/research/clee/research/wheeler/drought-water-allocation/.

### *2012*

Hanemann, M., D. Lambe, and D. Farber, **Climate Vulnerability and Adaptation Study for California: Legal Analysis of Barriers to Adaptation for California's Water Sector** (July 2012), California Energy Commission, Publication number: CEC-500-2012-019, 71 pages, *available at* https://www.law.berkeley.edu/files/ccelp/CEC(1).pdf.

## Comments:

### *2019*

Kiparsky, M., N. Green Nylen, K. Miller, H. Doremus, and D. Owen, **Comment to Governor Gavin Newsom, Re: Developing an Effective Water Resilience Portfolio** (Sept. 17, 2019), *available at* https://www.law.berkeley.edu/wp-content/uploads/2019/09/CLEE-Water-Resilience-Portfolio-Comments-2019-09-17.pdf.

*2017*

Cantor, A., M. Kiparsky, N. Green Nylen, H. Doremus, R. Bales, G. E. Fogg, A. Fisher, J. Viers, D. Sedlak, J. Stokes-Draut, D. Owen, and L. Bernacchi, **Comment to the State Water Resources Control Board, Re: Climate Change Resolution** (Mar. 3, 2017). available at https://www.waterboards.ca.gov/board_info/agendas/2017/mar/comments_item7/alida_cantor.pdf.

*2014*

Green Nylen, N., **Comment to the State Water Resources Control Board, Re: Dry Year Report** (Oct. 15, 2014), available at https://www.law.berkeley.edu/wp-content/uploads/2023/10/GreenNylen_2014_WheelerInstCommentLetterDrought.pdf.

## Blog Posts:

*2023*

Green Nylen, N., D. Owen, J. Harder, M. Kiparsky, and M. Hanemann, "**To Manage Water Scarcity, California Needs a Framework for Fair and Effective Water Right Curtailment**," *Legal Planet* (April 24, 2023), https://legal-planet.org/2023/04/24/managing-water-scarcity/.

*2019*

Green Nylen, N., "**Making Key Policy Decisions in Advance of Droughts: Part 6 in a Series on Improving California Water Rights Administration and Oversight for Future Droughts**," *Legal Planet* (May 24, 2019), https://legal-planet.org/2019/05/24/making-key-policy-decisions-in-advance-of-droughts/.

Green Nylen, N., "**Developing a Decision-Support Framework for Curtailment: Part 5 in a Series on Improving California Water Rights Administration and Oversight for Future Droughts**," *Legal Planet* (May 13, 2019), https://legal-planet.org/2019/05/13/developing-a-decision-support-framework-for-curtailment/.

Green Nylen, N., "**A Contingency-Based Framework to Support Drought Decision Making: Part 4 in a Series on Improving California Water Rights Administration and Oversight for Future Droughts**," *Legal Planet* (Apr. 8, 2019), https://legal-planet.org/2019/04/08/a-contingency-based-framework-to-support-drought-decision-making/.

Green Nylen, N., "**Actions to Improve California Water Rights Administration and Oversight for Future Droughts: Part 3 in a Series on Improving California Water Rights Administration and Oversight for Future Droughts**," *Legal Planet* (Mar. 29, 2019), https://legal-planet.org/2019/03/29/actions-to-improve-california-water-rights-administration-and-oversight-for-future-droughts/.

Green Nylen, N., "**Water Rights Administration and Oversight During Past California Droughts: Part 2 in a Series on Improving California Water Rights Administration and Oversight for Future Droughts**," *Legal Planet* (Mar. 15, 2019), http://legal-planet.org/2019/03/15/water-rights-administration-and-oversight-during-past-california-droughts/.

Green Nylen, N., "**Why It's Important to Prepare for Drought During a Deluge: Part 1 in a Series on Improving California Water Rights Administration and Oversight for Future Droughts**," *Legal Planet* (Mar. 7, 2019), http://legal-planet.org/2019/03/07/why-its-important-to-prepare-for-drought-during-a-deluge/.

Berkeley Law | Center for Law, Energy, & the Environment

# *Managing* WATER SCARCITY

## A Framework for Fair and Effective Water Right Curtailment in California

APRIL 2023

EXECUTIVE SUMMARY

CLIMATE & ENERGY

WATER

OCEANS

LAND USE

# EXECUTIVE SUMMARY

Droughts are becoming more frequent and intense in California. Many California watersheds experience seasonal water scarcity nearly every year. To protect water rights, human health and safety, and the environment from serious harm, California's State Water Resources Control Board (SWRCB) needs to be able to routinely curtail unlawful water uses. But it has struggled to carry out this basic function, running into resource constraints and technical, legal, and political barriers. This report describes the legal context for and history of curtailments in California. It also recommends actions the SWRCB and State Legislature can take to build a framework for fair and effective curtailment in California.

Imagine if a city managed traffic the way California manages water allocation during droughts: Every morning, traffic jams form, snarling streets across the city. Collisions, property damage, and injuries are routine. But the city lacks permanent traffic lights. Instead, it puts up lights in a neighborhood only after the mayor declares a specific traffic emergency, and takes them down as soon as the traffic starts to ease. The city does not empower its traffic regulators to remove reckless drivers from the road. Writing a ticket can take weeks or months, and the penalties for unsafe driving are nominal, even for serious violations that cause severe harm to others. The city's traffic regulators are experienced and sophisticated, and by the end of each day—after irreparable damage has been done—they have figured out systems to reduce the chaos. But the next day, the city starts from scratch again, constructing its traffic regulation systems anew.

No city would want to manage traffic that way, and, fortunately, no city in California does.

However, this metaphor rings uncomfortably true for one of California's most important resources: water. It may be hard to believe, but California's systems for regulating water diversion and use during times of water scarcity closely track the fictional pattern described above.

During droughts and other times of water scarcity, there is not enough water to satisfy all demands. The water that is available must somehow be allocated among competing human and environmental uses. State and federal laws establish legal requirements and policy priorities that govern water diversion and use, and state law designates the State Water Resources Control Board (SWRCB) as California's primary water regulator, with the explicit legal responsibility to administer and protect the state's water resources.

To fulfill this role, the SWRCB needs to be able to routinely curtail (stop) unlawful water uses, including uses that violate water right priority. Implementing water right curtailments is perhaps the most fundamental administrative function of the SWRCB during times of water scarcity. But the SWRCB has not been able to perform this basic function in a simple, straightforward, and predictable manner even a single time during its history. Instead it has implemented curtailments only rarely, in certain watersheds during certain major statewide droughts, using different approaches each time.

The SWRCB is caught between a rock and a hard place. In theory, the SWRCB has sufficient constitutional and statutory authority to require and enforce curtailment of all types of water rights. However, due to legal, institutional, and political realities, additional clarification and support from the Legislature is badly needed to ensure the SWRCB can effectively carry out its obligations under state and federal law. Legally, litigation inevitably follows when the agency relies on its authorities in as-yet untested ways as the basis for curtailment. That litigation—and even the threat of it—generates significant costs and uncertainty for the SWRCB itself and for the broader community of water managers and users. Institutionally, the SWRCB has not been provided with the levels of staff and funding resources it needs to adequately protect the state's water resources and ensure that water users are diverting and using water within the scope of valid water rights. And politically, certain water users and their advocates strongly resist changes to the status quo, limiting the SWRCB's ability to act as a practical matter. All of these realities have stonewalled the SWRCB ability to implement regular, effective curtailments, causing irreparable harm to water users, communities, and ecosystems.

Like the traffic regulators in the fictional city, the SWRCB is an experienced agency with skilled and dedicated staff, and the measures it adopts can be sophisticated and creative. But it is working within a reactive and anemic support structure, and it lacks the resources and specific tools it needs to respond quickly, effectively, and transparently to water scarcity.

### WHAT IS CURTAILMENT?

In this report, we use the term "curtailment" to describe water users reducing or stopping their water diversions, whether voluntarily or under order, during times when there is not enough water available to fully support all uses. Curtailment is usually based on water right priority, with more-junior diverters curtailing before more-senior diverters, but other legal requirements and policy priorities also affect the availability of water and, therefore, the need to curtail.

To implement curtailments, the State Water Resources Control Board (SWRCB) takes actions to ensure that curtailments occur when necessary. One of the key ways the SWRCB implements curtailments is by informing water right holders and claimants in critically dry watersheds when they are required to curtail their diversions because water is not available under their priority of water right. Implementing curtailments also involves other actions, such as administering curtailment exceptions and alternative compliance mechanisms.

As this report will explain, the SWRCB is currently using emergency regulations as its primary tool for implementing curtailments. But this tool is not always available when curtailments are needed. Drought emergency rulemaking authority under Water Code section 1058.5 is only available under two narrow sets of circumstances: (1) when a critically dry year follows at least two consecutive below-normal or drier years or (2) when the Governor proclaims a state of emergency due to drought. Because 2021 was only the second consecutive dry year, the SWRCB had to wait for the Governor to declare county-based drought emergencies before embarking on months-long processes to lay the groundwork for curtailments with emergency regulations. As a result, curtailments would have been warranted in each of the critically dry watersheds for which the SWRCB eventually developed emergency regulations months before the SWRCB could issue curtailment orders. **Figure ES** demonstrates this gap in the Shasta River watershed. It shows that, not only were curtailments warranted at least four months before they were implemented in 2021, curtailments were also needed in 2020.

*The SWRCB's primary tool for implementing curtailments, emergency regulations, is not always available when curtailments are needed.*

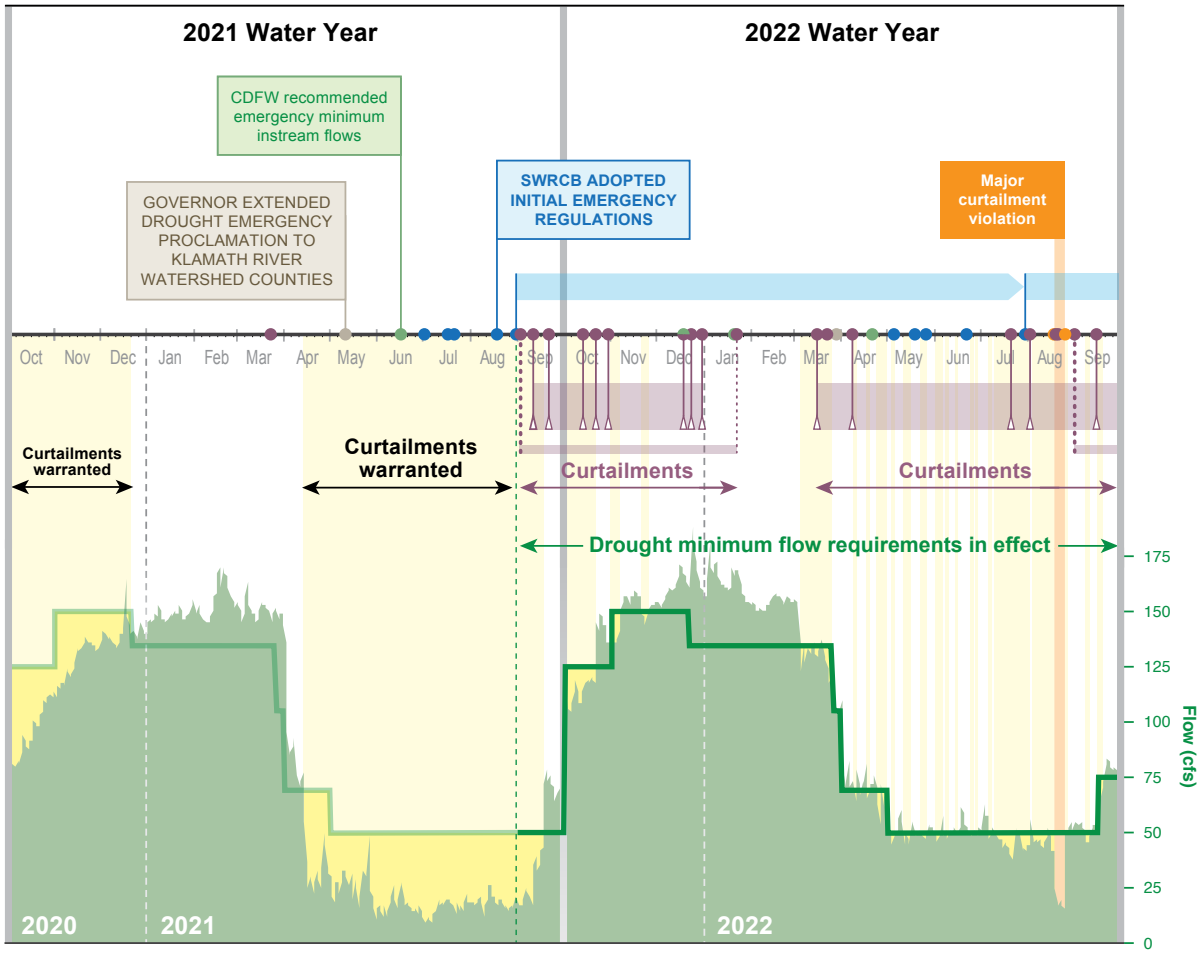


**Figure ES.** *Timeline of curtailment-related actions and flow for the Shasta River watershed from October 2020 through September 2022. In 2021, curtailments would have been warranted beginning in April, but the SWRCB did not adopt emergency regulations requiring maintenance of drought minimum flows until mid-August 2021, finally issuing curtailment orders in early September. Shasta River flows dropped below drought minimum levels at times shown in yellow. A major curtailment violation in August 2022 caused flow to drop by more than half for about a week.*

Emergency regulations are also temporary, lasting up to one year. The SWRCB can readopt them if drought conditions continue. It can also reuse and build on past emergency regulation text during a later drought. However, if water shortage develops quickly after a wetter period, the SWRCB will not be able to adopt timely emergency regulations to support curtailments unless the Governor immediately proclaims a drought emergency as soon as a watershed warrants it.

Another challenge is that the SWRCB's current options for enforcing curtailments are limited and cumbersome, making robust, timely enforcement difficult when it is most needed. Most enforcement mechanisms take weeks, or longer, to implement, and the magnitude of available penalties can be insufficient to deter violations.

*Limited and cumbersome options for enforcing curtailments allow bad actors to cause irreparable harm while risking only modest financial repercussions.*

These inadequacies allow bad actors to intentionally violate curtailment orders, causing irreparable harm to public trust resources and other water users, while risking only modest financial repercussions. A stark illustration: In 2022, a group of approximately 80 water users under a single 1912 water right diverted more than half of the Shasta River's flow—in direct violation of a curtailment order—for more than a week, as shown in **Figure ES**. The SWRCB could not stop this unlawful diversion, despite dispatching staff to the site to witness the ongoing violation and speak face-to-face with diverters, because the SWRCB lacks the authority to physically shut a diversion down. When SWRCB staff instructed the diverters to immediately turn off their pumps, they refused. Instead, the diverters continued to pump unlawfully for another week, until they decided they had taken enough water to serve their purposes. The SWRCB imposed the maximum penalty for this violation: $4000, equivalent to about $50 per water user within the violating group. This tiny penalty was much less than the value of the water illegally diverted, and it did nothing to redress the irreparable harm the violation inflicted on sensitive fisheries and more-senior water users in the watershed.

*Curtailments are needed on a regular basis, not only in times of crisis.*

This system might be acceptable if times of water shortage were rare, each meriting a unique response. But recurring drought has been a central water management challenge throughout California's history, and climate change is increasing the frequency and intensity of drought across the state. Furthermore, curtailments are not just needed in a few watersheds or only during major statewide droughts. Essentially every year, water demand exceeds supply in some watersheds in California, creating short-term water shortages and contributing to long-term imbalances between water supply, water demand, and environmental water needs. Which watersheds experience water scarcity can change significantly from year to year, and even within a single year. Additionally, some watersheds routinely experience seasonal water scarcity.

*Routine curtailments happen in other western states.*

To effectively manage California's surface water resources, the state needs to implement curtailments on a regular basis, not only in times of extreme crisis. Routine curtailments already happen in other western states. California cannot afford to remain an outlier. It needs routine curtailments supported by predictable and expeditious curtailment procedures and effective enforcement tools. This need will only intensify in the years to come.

This report lays out a framework that would enable the SWRCB to implement more regular and nimble water right curtailments to help our state to adapt to the contemporary realities of a growing population, ongoing environmental crises, and the increasingly frequent and intense droughts (and floods) that are California's new normal. The framework includes the following core elements, some of which the SWRCB can implement on its own, and some of which require, or would benefit from, swift and decisive legislative action.

## 1. ACTIONS THE SWRCB CAN TAKE ON ITS OWN TO ESTABLISH A BASIC FRAMEWORK FOR ROUTINE CURTAILMENTS

### Preparation:

- Adopt standard regulations to lay the groundwork for routine curtailments. These regulations would include both generally applicable provisions and any watershed-specific provisions that are needed (e.g., drought minimum flows, methodologies for analyzing water unavailability) and would address the basis for curtailments, exceptions to curtailment, alternative compliance mechanisms (like voluntary water sharing agreements), reporting obligations, notice requirements, options for seeking changes or review, and enforcement. This basic curtailment framework would be designed to make many key decisions in advance, streamlining in-drought decision-making processes and minimizing the need for emergency rulemaking by specifying contingency measures that allow for situation-specific adjustments.

- Include a due process analysis in the rulemaking record to explain how the regulations, and actions the SWRCB subsequently takes under them, meet state and federal due process requirements.

- Develop best practices for using emergency regulations to support curtailments. Standard regulations have the advantage, once adopted, of being ready to implement immediately when needed. But because they are enacted in advance, they will sometimes be an uneven fit for specific watersheds and times. Therefore, emergency regulations would continue to play an important, but subsidiary role, by enabling rapid in-drought adjustments not possible via regular rulemaking (such as when changed circumstances or new information reveal the need for near-term adjustments to watershed-specific methodologies for analyzing water unavailability or to drought minimum flows). We recommend that the SWRCB develop best practices for efficient and effective use of emergency regulations. These would include preferred timelines and potential triggers to address different contingencies, for example, for coordinating with the Governor's office when a drought proclamation is needed to give the SWRCB timely access to emergency rulemaking authority under the Water Code.

**Implementation:**

- Implement curtailments when needed, as prescribed under the basic curtailment framework, for example, by: analyzing water unavailability; issuing curtailment orders; providing curtailment status updates; administering exceptions to curtailment; addressing proposals for and administering water sharing agreements and other alternative compliance mechanisms; addressing requests for corrections, petitions for reconsideration of curtailment or information orders, and objections related to alternative compliance mechanisms; monitoring compliance; and taking appropriate enforcement action when necessary.

- Employ emergency regulations to make temporary adjustments to the curtailment framework when needed, following the above best practices.

## 2. ACTIONS THE LEGISLATURE CAN TAKE TO UPDATE THE SWRCB'S STATUTORY TOOLSET FOR IMPLEMENTING CURTAILMENTS

**Enable more effective curtailment regulations:**

- Clarify that the SWRCB has broad authority to implement priority-based curtailments for *all* diverters, regardless of their basis of right, including diverters with pre-1914 appropriative rights.

- Extend the SWRCB's emergency rulemaking authority under Water Code section 1058.5 to *all* critically dry years.

- Direct the SWRCB to adopt certain watershed-specific provisions of the curtailment framework by emergency regulation, such as watershed-specific unavailability assessment methodologies and minimum flows.

**Enhance curtailment enforcement options:**

- Clarify that the SWRCB has the authority to bring enforcement action against *any* diverter who violates a curtailment regulation or order.

- Provide stronger penalty options for violation of curtailment regulations and orders issued under them to ensure that penalty structures actually encourage compliance with the water right priority system and the SWRCB's regulations and orders.

- Give the SWRCB the authority to issue interim relief orders to prevent irreparable harm pending completion of enforcement proceedings.

- Give the SWRCB the express authority to physically stop unlawful diversions, as is common in other western states.

## 3. ACTIONS THE SWRCB CAN TAKE, WITH LEGISLATIVE SUPPORT, TO IMPROVE ENGAGEMENT AND INFORMATION FOR FAIR AND EFFECTIVE CURTAILMENTS

- Strengthen the SWRCB's connections with watersheds through regional liaisons and SWRCB-linked "watermasters," modeled after the Delta Watermaster.

- Improve the data that inform curtailments, including by requiring more frequent reporting of water diversion and use and requiring diverters to provide additional information needed to inform fair and effective curtailments.

- Accelerate development and implementation of instream flow requirements to ensure that curtailments protect water quality and public trust uses.

Together, these actions will help the SWRCB meet one of its most important responsibilities: implementing water right curtailments during times of water shortage.

Beyond improving California's drought response, regular and nimble implementation of water right curtailments is a crucial means of adapting California water management—and administration of California's water rights system—to climate change. The actions we recommend here will begin to close the unsustainable gaps between legal requirements and on-the-ground practice, enabling the SWRCB to better protect the water rights of more-senior diverters, to better maintain flows needed to support water quality and environmental water uses, and to more reliably ensure that water is available to meet the basic human health and safety needs of California communities.

# ABOUT THIS SUMMARY

The report this document summarizes is part of a larger project aimed at improving water rights administration in times of water scarcity. The State Water Resources Control Board (SWRCB) funded the project. Input and feedback from SWRCB staff and a range of other stakeholders and experts informed our analysis and recommendations. The project builds on our past research for California's Fourth Climate Change Assessment. In 2018, we published a pair of Assessment reports that analyzed how the SWRCB carried out its water rights responsibilities during past droughts and offered recommendations for improving the agency's future drought response capabilities. We found that the SWRCB developed its drought response strategies on a largely ad hoc basis in the midst of each drought emergency. As a result, its responses were not always timely, effective, or well received. Therefore, we recommended proactively creating a contingency-based framework to support the SWRCB's drought decision making. The goal of this project is to begin to actualize that general recommendation by developing specific recommendations for building a drought decision-support framework and identifying concrete ways to strengthen the SWRCB's ability to respond effectively when water scarcity arises.

To download the full report, visit law.berkeley.edu/curtailments.

## ABOUT THE CENTER FOR LAW, ENERGY & THE ENVIRONMENT

The Center for Law, Energy & the Environment (CLEE) channels the expertise and creativity of the Berkeley Law community into pragmatic policy solutions to environmental and energy challenges. CLEE works with government, business and the nonprofit sector to help solve urgent problems requiring innovative, often interdisciplinary approaches. Drawing on the combined expertise of faculty, staff, and students across the University of California, Berkeley, CLEE strives to translate empirical findings into smart public policy solutions to better environmental and energy governance systems.

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(Sacramento River, October 1, 2015)

To download the full report, visit law.berkeley.edu/curtailments.

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