



Six-Year Drought: California Droughts of the Past, Present, and Future Expert Panel

Introduction

In support of Water Resilience Portfolio Action 26.3, which tasks the State with developing strategies to protect communities and fish and wildlife in the event of drought lasting at least six years, the California Water Commission will host a panel of experts to explore California droughts of the past, present, and future. The panel will present climate science, water management, and water policy perspectives on the topic of droughts in California.

Dr. John Abatzoglou, Associate Professor at University of California, Merced School of Engineering, will discuss how climate change is exacerbating aridity and adding complexity to California water resource challenges. California's naturally variable precipitation patterns and unique dependency on atmospheric rivers is combining with warming temperatures to increase the intensity of drought and the likelihood of a drought lasting at least six years. Warming temperatures tax water supplies by reducing the amount of precipitation held in mountain snowpack and increasing evaporative water demand. Increased evaporative demand is documented across California over the past several decades. This shifting hydrologic baseline has exacerbated the magnitude of recent droughts. Climate projections clearly point to increasing temperature and evaporative demand, which will make it harder for the state to emerge from drought.

Jeanine Jones, Interstate Resources Manager and Drought Manager at Department of Water Resources, will discuss how climate change is exacerbating impacts observed in recent droughts, as compared to California's historical droughts. Past California droughts provide critical lessons learned for managing for and responding to droughts. Some of these lessons can be applied to the current drought, but the reality of climate change is forcing a larger reckoning as California prepares for the future: there is a need to reframe the conversation about drought from emergency management to transitioning water management to a more arid climate.

Dr. Ellen Hanak, Vice President and Director of the Water Policy Center at Public Policy Institute of California, will discuss droughts impacts, especially to communities and ecosystems, and how to prepare for future droughts. Adapting to California's warming, increasingly volatile climate will require changes in the way we track water use, forecast water availability, manage scarce supplies during drought, and take advantage of opportunities to store more water in wet years. These actions are essential to help all sectors become more resilient; they are especially critical to reduce drought-related impacts to freshwater ecosystems and small communities—sectors that have had the fewest resources for adaptation.

Background

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On July 28, 2020, the California Natural Resources Agency, California Environmental Protection Agency, and the California Department of Food and Agriculture issued the final [Water Resilience Portfolio](#) (portfolio) in response to Governor Newsom’s Executive Order N-10-19, which calls for a “set of actions to meet California water needs through the 21st century.” The portfolio outlines a broad suite of actions designed to move the state toward water resilience. The portfolio includes Action 26.3: Develop strategies to protect communities and fish and wildlife in the event of drought lasting at least six years. Action 26.3 is assigned to the California Natural Resources Agency and the California Environmental Protection Agency; the State Water Resources Control Board, Department of Water Resources, Department of Fish and Wildlife, and Department of Food and Agriculture represent these agencies. Action 26.3 is embedded in a section of the portfolio that is focused on preparation for a changing climate, which includes actions designed to help regions prepare for inevitable drought.

In a letter dated December 14, 2021, the Secretaries for Natural Resources, Environmental Protection, and Food and Agriculture requested that the Commission assist with this action by educating itself about potential long-term strategies for managing sustained drought and delivering a proposed set of investments and policies that would better position the state to manage severely constrained water supplies for at least six consecutive years. The Commission proposes to accomplish this work by leading a thorough and inclusive public dialog, similar to the Commission’s recent efforts to assess a state role in financing climate-resilient conveyance and in supporting locally driven, in-basin groundwater trading programs that protect natural resources, small- and medium-sized farms, and disadvantaged communities. The Commission will coordinate with state agencies to develop a framework to advance its work without disrupting immediate drought response efforts. At the end of this process, the Commission will produce a paper that describes a set of strategies to protect communities and fish and wildlife in the event of long-term drought.

The Commission’s work on long-term drought will implement Goal One of the Strategic Plan, which calls on the Commission to “serve as a primary public forum for the discussion of improving water management policy to assist regions in achieving climate resiliency ... including those actions of the Water Resilience Portfolio assigned to the Commission.”

Meeting Overview

For this agenda item, the Commission will be joined by members of the California State Board of Food and Agriculture. Commissioners and Board members will hear from the panelists noted above, take questions from the public, and then engage in a discussion with the panelists.

This is an informational item.

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