



Long-term Drought: Expert Panel on Desalination

Introduction

Water Resilience Portfolio Action 26.3 tasks the State with developing strategies to protect communities and fish and wildlife in the event of drought lasting at least six years. As part of its exploration of Action 26.3, the California Water Commission will host a panel of experts who will provide a variety of perspectives on desalination as a response to drought.

Sean Sou, Supervising Engineer, and Toni Pezzetti, Senior Engineering Geologist (Retired Annuitant), both with the Department of Water Resources (DWR), will present information from the draft update of the Desalination Resource Management Strategy for the California Water Plan Update. The presentation will include a status of water desalination in California, its challenges, and what water suppliers and researchers are considering for the future as well as the total volume of desalinated water produced for potable use in California during the 2020 calendar year and projected increase in desalinated water productions in 2030 and 2040. The presenters will also provide an overview of DWR's Desalination Grant Program including the total grant funds that have been awarded to date, number of projects funded by the grant program, and a highlight of the funded construction projects that are in planning, construction, and operations phase. The presentation will include information on DWR's collaboration with the National Alliance for Water Innovation (NAWI) on desalination research and pilot projects as well as DWR's collaboration with the State Water Board and other state agencies on developing siting criteria and identifying potential mitigation sites to streamline permitting of seawater desalination facilities as called out in the Water Supply Strategy.

Peter Fiske, Executive Director at NAWI, will present information from the U.S. Department of Energy's five-year, \$110M Innovation Hub on Desalination and Water Reuse. This collaborative research and development program has already made significant progress in its mission to lower the cost and energy of desalination and water reuse. NAWI is fielding a number of pilots of different treatment technologies in California in 2024. Key to lowering the cost, energy and carbon emissions from water treatment is the need to accelerate the development and deployment of small-scale desalination and water reuse systems. NAWI's research shows that it is possible to design buildings with premise-scale water treatment and reuse systems that could cut net water usage by up to 80%.

Joshua Haggmark, Water Resources Manager for the City of Santa Barbara, will present information on the reactivation of the City of Santa Barbara's Charles E. Meyer Desalination Plant. The plant has now been in operation for 5 years and forms the foundation of the City's complex water supply portfolio. At the heart of the City's water supply portfolio is a strong

commitment to water conservation. The City of Santa Barbara prides itself on being a leader in environmental protection and is taking aggressive steps to mitigate the impacts of a changing climate. In 2020, the City adopted an aggressive goal of carbon neutrality by 2035. In 2022, the City began sourcing its electricity from 100% carbon free sources, which includes the power needed to operate the City's entire water system, including the Charles E. Meyer Desalination Plant.

Sean Bothwell, Executive Director of the California Coastkeeper Alliance, will present the environmental community's concern with ocean desalination and potential solutions to make ocean desalination projects less impactful to marine life and more cost effective for low-income communities.

Background

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 has coordinated with other agencies and developed 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 that agency policy makers can draw on when considering future policy and financial investment.

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

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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

Commissioners 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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