



Panel on Groundwater Recharge Activities

Introduction

This agenda item features a panel of presentations from staff from the Department of Water Resources (DWR) and local practitioners. The panel will discuss the policy context for groundwater recharge, current on-the-ground recharge activities happening in different areas of the state, and opportunities and challenges associated with groundwater recharge.

Jenny Marr, Supervising Engineer at DWR, will present information about the need for groundwater recharge, the ways in which groundwater can be recharged, the State role in advancing groundwater recharge, the process and information required to do a recharge project, and how DWR is working with partner agencies to expedite recharge projects.

Kristin Sicke, General Manager of the Yolo County Flood Control & Water Conservation District (District), will discuss how her District employs groundwater recharge. The Yolo County Flood Control & Water Conservation District, which encompasses about 200,000 acres, is a conjunctive use irrigation district that was created by the legislature in 1951. During the irrigation season, the District has provided passive recharge to the region since formation; however, over the past eight years, the District has implemented a winter water recharge program. The winter recharge program consists of diverting excess storm flows from Cache Creek into a 160-mile unlined canal system, and retaining and holding that storm water for percolation into the groundwater aquifer. As part of implementing and optimizing this recharge program, the District has made significant investments in infrastructure improvements and many lessons have been learned.

Sarah Woolf, President of Water Wise will share on-the-ground examples of the appropriative water rights process in the San Joaquin Valley, in response to SGMA (Sustainable Groundwater Management Act) Flood-Managed Aquifer Recharge (Flood-MAR) projects, touching on what has and has not worked. She will discuss projects in Fresno, Madera, and Merced Counties, sharing information about her experience with applications to the State for a standard appropriative water right and a temporary 180-day permit, and with operating recharge under the Governor's Executive Order N-4-23.

Aaron Fukuda, General Manager of the Tulare Irrigation District (TID), will discuss groundwater recharge in TID. The Tulare Irrigation District is a very old conjunctive use irrigation district, founded in 1889, that encompasses approximately 65,000 irrigated acres. TID has always been an agency with groundwater recharge activities, however, with the passage of SGMA and continued declines in groundwater in the Kaweah Subbasin, where TID is located, TID has taken action in the last year to enhance its groundwater recharge efforts and move towards groundwater sustainability. In 2022, in the face of the third year of drought conditions, TID, as a member of the Mid-Kaweah Groundwater Sustainability Agency (MKGSA), enacted a Groundwater Emergency Ordinance to allocate groundwater pumping, measured as evapotranspiration (ET), and limit the amount of ET used by growers. Along with this program, the MKGSA and TID implemented developed an online web tool for growers to track their allocations and usage of ET, which is called the Water Dashboard. Despite initial uneasiness in the grower community,

these actions have facilitated record-breaking amounts of recharge in the area this year. TID has also modified recharge operations to increase recharge rates and volumes in response to recent high flows.

Background

Groundwater is a critical component of California's water portfolio, accounting for up to 60 percent of the State's total water supply during dry conditions. Extended and extreme periods of heat and drought driven by climate change have placed a high demand on groundwater resources, and the last three consecutive years of drought have led to declining groundwater levels throughout the state. Groundwater is heavily relied upon by communities, agriculture, and the environment during dry years when there is less precipitation, while during normal and wet years, groundwater basins are replenished through groundwater recharge.

Groundwater recharge supports climate adaptation to both more severe droughts and intense floods and may provide multiple benefits: flood risk reduction, drought preparedness, aquifer replenishment, ecosystem enhancement, and others. Groundwater recharge can occur in two ways – through natural percolation of water into the land surface or by diverting and conveying water to specific areas through managed aquifer recharge projects. Managed aquifer recharge projects can capture high flows water in rivers and streams and move that water to various recharge facilities, such as open or agricultural lands to spread out and percolate into the ground, or specially designed infiltration ponds.

The recent succession of atmospheric rivers has spurred support for groundwater recharge, building on past efforts, and creating a wave of momentum for moving on-the-ground projects forward. Most recently, Governor Gavin Newsom signed an [executive order](#) to enable local water agencies and other water users to capture water from the latest round of storms to recharge state groundwater supplies. This complements the Governor's [Water Supply Strategy](#), which calls for expanding average annual groundwater recharge by at least 500,000 acre-feet.

This agenda item is consistent with Goal One of the Commission's 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" by "gather[ing] information from individuals and organizations actively engaged in water policy and management issues, such as multi-benefit projects, healthy watersheds, green infrastructure, and improving water quality and availability in disadvantaged communities and by "conven[ing] panel discussions or presentations and invit[ing] public comment and discussion at Commission meetings."

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.

Contact

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