



# Groundwater Recharge Efforts in Westlands Water District

*Planning Today for Tomorrow*

## What is Groundwater Recharge?

Groundwater recharge is a hydrologic process that entails moving water down from the ground surface or the bottom of a waterway into an underlying aquifer. The recharge process occurs both naturally through precipitation and runoff and intentionally through several different methods.

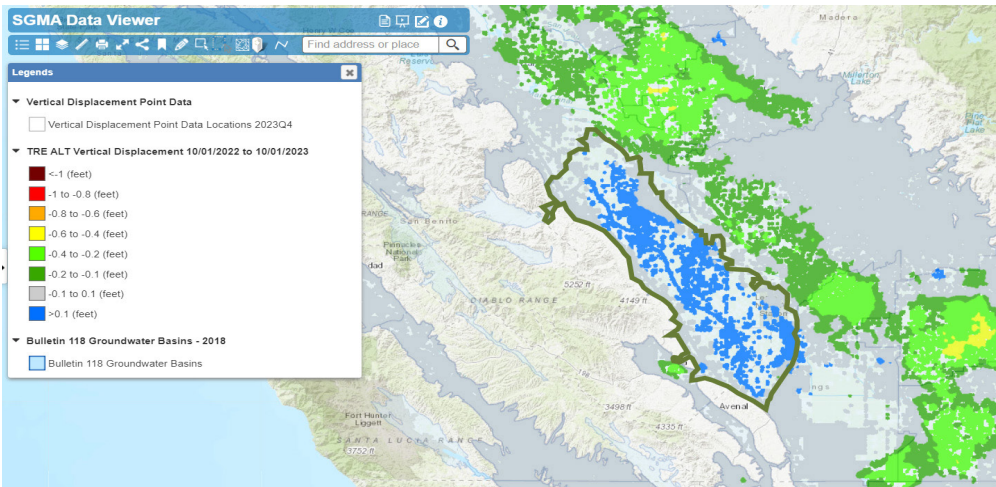
Recharge is increasingly more important in managing our water supply mainly due to climate-driven weather extremes that are intensifying and lengthening drought periods. It's also a critical tool established in the Westside Subbasin Groundwater Sustainability Plan to achieve sustainability and optimize conjunctive use.

## Commitment to Recharge

Sustainability is at the core of Westlands Water District's (District) comprehensive water delivery system and groundwater recharge is a key tool to help store and preserve water. It's also one strategy the District has deployed to meet Sustainable Groundwater Management Act (SGMA) obligations.

Recharge projects are providing a lifeline to hundreds of family-owned farms and residents in the San Joaquin Valley who, after years of drought and minimal water allocations, have identified innovative ways to save water, not just for today but for tomorrow, so they can thrive and sustain our national food supply.

## Westlands Water District's Groundwater Efforts Yield Basin Uplift Throughout Parts of the District



By the Numbers:

**DISTRICT RECHARGE EFFORT**

**~390,000**

ACRE FEET

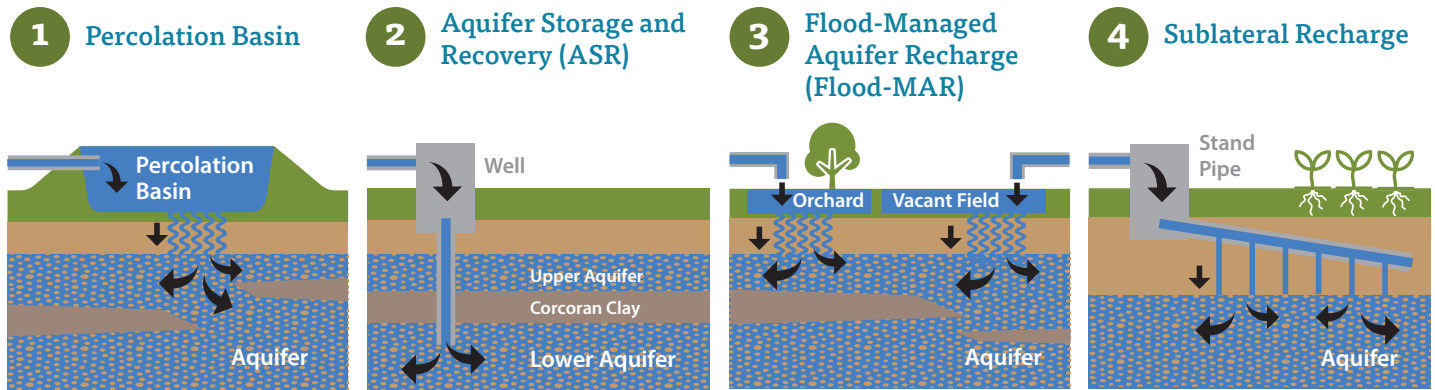
through April 2024

“ We recognize the next drought is not if but when and it is critical we use extra water to prepare for future years when water may be sparse. The District's groundwater recharge efforts will help ensure we meet our Groundwater Sustainability Plan objectives while allowing our farmers the opportunity to save water and plan next year's crop. ”

**Allison Febbo**  
General Manager,  
Westlands Water  
District

# Types of Groundwater Recharge Projects in the District

The District is currently offering groundwater recharge programs and incentives to help landowners refill and replenish aquifers. Project types include percolation basins, Aquifer Storage and Recovery (ASR), Flood-Managed Aquifer Recharge (Flood-MAR), and sublateral recharge.



## APPROVED PROJECTS

1	<b>Percolation Basins</b> are open bermed areas used to recharge surplus surface water to restore aquifers. They are designed to infiltrate surface water through permeable soils into the basin.	127
2	<b>Aquifer Storage and Recovery (ASR)</b> is a technique used to bypass clay lenses and inject filtered water directly into the upper and lower aquifers. Due to the geology and the presence of a Corcoran Clay layer underlying much of the District, recharge through percolation basins is not always feasible. In these instances, ASR can be used to inject water below the Corcoran Clay lens into the lower aquifer.	81
3	<b>Flood-Managed Aquifer Recharge (Flood-MAR)</b> involves flooding over the crops root zone needs. Flood-MAR helps recharges groundwater and gradually restores the upper aquifer and, if the location is suitable, the lower aquifer as well.	396
4	<b>Sublateral Recharge</b> recharges water below the root zone to avoid evaporative losses. Water is pumped into a standpipe and injected below the crops root zone through perforated pipes which then seeps into upper and lower aquifers.	21

Groundwater recharge projects are turned on and off at the discretion of program participants based on various factors, including crop management and rotation, cultivation, water supply and other agricultural conditions.

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