YOLO COUNTY
FLOOD CONTROL & WATER CONSERVATION DISTRICT

GROUNDWATER RECHARGE AND SUSTAINABLE GROUNDWATER MANAGEMENT IN YOLO COUNTY

June 15, 2016

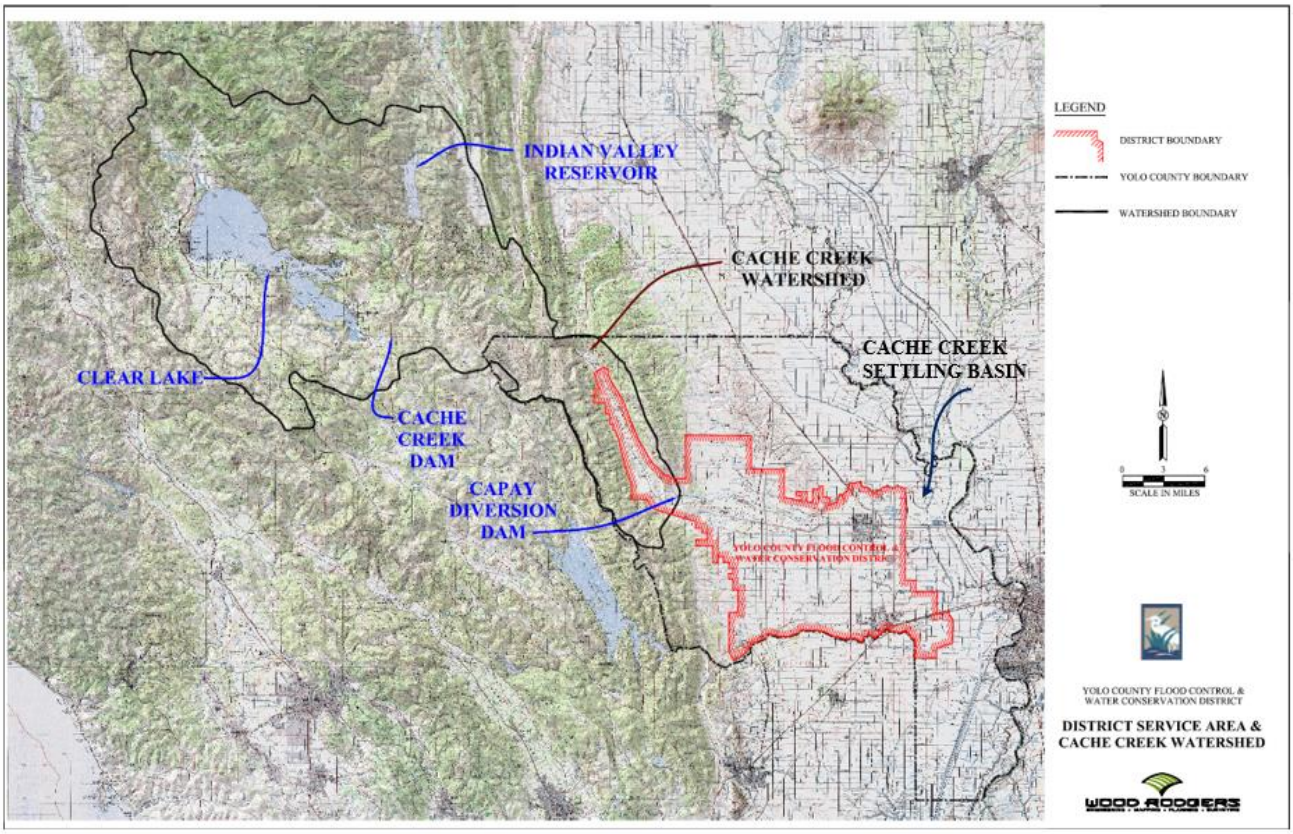
The Yolo County Flood Control and Water Conservation District (District) recharged underground storage in Yolo County this past spring by diverting and percolating 11,000 acre-feet of additional surface water from Cache Creek into its existing unlined canal system. This project is an important element of the District's conjunctive management of surface and groundwater resources and it shows the value and importance of implementing recharge projects for sustainable groundwater management in the Sacramento Valley and throughout California.

This project was facilitated by Governor Brown's Executive Order in November 2015 (B-36-15) "to accelerate approvals for projects that enhance the ability of local agencies to capture high precipitation events…for local storage or recharge" and the State Water Board issuing temporary permits. Consistent with the Governor's Executive Order, this project "demonstrates the feasibility of projects that can use available high water flows to recharge local groundwater while minimizing flooding risks…."

The expedited permitting process provided an excellent opportunity for the District to capitalize on storm water capture for groundwater recharge into underground storage with water that would have otherwise left Yolo County and this region.

More specifically, the District requested a temporary permit for diversion of available high flows on Cache Creek for groundwater recharge within the District's service area. Cache Creek flows easterly from Clear Lake into Yolo County, and it continues through the Capay Valley until it reaches the Capay Diversion Dam, where some flows may be diverted into the District's irrigation system. Cache Creek then continues easterly from the Capay Diversion Dam, until it reaches the Cache Creek Settling Basin, just west of the Yolo Bypass. The Cache Creek Settling Basin is the Cache Creek terminus point.

At the request of the District, the State Water Board approved a temporary permit on February 3, 2016, allowing the District to use its existing 160-mile unlined canal system for the diversion and percolation of surface water from Cache Creek to underground storage. For 39 non-consecutive days, up to 200 cubic feet per second (cfs) of surface flow was diverted from Cache Creek at the existing Capay Diversion Dam structure. This water flowed into the Winters and West Adams Canals, where groundwater was recharged into underground storage through seepage in the unlined canals.



To assure accountability, the District used its supervisory control and data acquisition (SCADA) system to monitor and report water diversions. To avoid potential impacts to downstream users, the District agreed to: 1) maintain a minimum flow at the USGS gauge at Yolo at all times, and 2) only divert flows when the Delta is in Excess (during times of hydraulic continuity between Cache Creek and the Yolo Bypass).

In total, the District diverted approximately 11,000 acre-feet (AF) of Cache Creek flows to underground storage this year. The permit requires the District to quantify extraction and use. Groundwater levels are being monitored using the District's SCADA system and its ongoing groundwater monitoring program. As part of its conjunctive use operations, the District has allowed its customers to pump and use the water stored under the permit prior to exercising their overlying rights to groundwater, thus serving as a benefit to landowners in the area.

For long-term water supply benefits, the District is interested in obtaining a long-term permit that would ensure sustainable groundwater management by increasing conjunctive management opportunities in Yolo County.

For more information, please call Tim O'Halloran, District General Manager, or Kristin Sicke, Assistant General Manager, at 530.662.0265. The District's website is www.ycfcwcd.org.