

# DRY CREEK ENHANCEMENT PROJECT

PREPARED BY SONOMA COUNTY WATER AGENCY

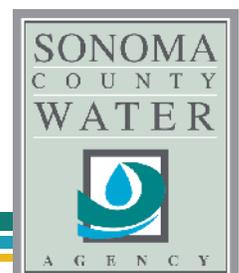
**THE PROBLEM** National Marine Fisheries Service (NMFS) biologists have determined that current flow levels in Dry Creek in the summer are too high for young coho salmon and steelhead. The volume of water currently running through the creek ranges from 110 to 175 cubic feet per second (cfs), which creates high water velocity and makes it difficult for the juvenile fish to thrive. High winter flow releases and disturbance to the stream channel, exacerbated by Warm Springs Dam (owned by the US Army Corps of Engineers and operated by the Sonoma County Water Agency for water supply purposes), have caused widespread streambank erosion. This erosion has degraded habitat and threatens valuable agriculture land.

**THE SOLUTION** The NMFS' biological opinion proposes "reasonable and prudent alternatives," which include enhancing six miles of habitat along Dry Creek over a 12- year period to create low velocity areas for juvenile coho and steelhead.

If the habitat enhancement works as intended, the current water levels could continue to be released from Warm Springs Dam during the summer. A Water Agency's consultant, Inter-Fluve, completed feasibility studies for the mandated habitat enhancement projects. The biological opinion requires the first mile of enhancements to be constructed by 2014 (milestone 1).

## CURRENT STATUS - FIRST MILE PROJECTS

During summer 2013, the Water Agency and the Corps are constructing enhancement projects to meet milestone 1 in the biological opinion by 2014. The Water Agency is working with a group of voluntary landowners on the Dry Creek Habitat Enhancement Demonstration Project to illustrate to regulators, other landowners, and local decision makers how habitat enhancements are constructed, what they will ultimately look like, and how their effectiveness will be evaluated. The Corps completed work on a separate reach of the stream closer to Warm Springs Dam.





By excavating the stream bed to redirect water flow, adding thousands of logs and boulders, and carefully managing stream side vegetation, the habitat enhancements will greatly increase the quantity and quality of low velocity areas available to young salmon and steelhead.

The Water Agency project is located on private land mid-way between Warm Springs Dam and Dry Creek's confluence with the Russian River.

In September 2012, the first phase of the demonstration project was constructed on a property owned by Quivira Winery and Vineyards. This project includes (1) a 300-foot long backwater channel, (2) placement of approximately 15 large wood structures composed of nearly 130 large logs, root wads and 560 tons of boulders, and (3) removal of invasive plant species and replanting with native species.

The Corps project is completed and is located on Federal land immediately below Warm Springs Dam. Together, the Water Agency's and Corps projects will provide slightly more than one mile of improved habitat at a total cost of \$9 million to \$10 million. To meet the next milestone in the biological opinion, the Water Agency and the Corps must construct another two miles of habitat enhancement by 2017.

#### **MORE INFORMATION**

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