

## Sonoma RCD Hosts Top NRCS Conservationist

April 17, 2018



The Sonoma RCD recently had the honor of hosting the USDA Natural Resources Conservation Service (NRCS) State Conservationist (acting), Ray Dotson, at the Indian Springs Ranch in Kenwood. He was joined by the NRCS State Conservation Agronomist, Hudson Minshew, our District Conservationist, Jennifer Walser, and several others. While Mr. Dotson's regular post is State Conservationist for Nevada, he is currently acting in that role for California while our State Conservationist Carlos Suarez works on hurricane recovery efforts in his native Puerto Rico.

The visit was prompted by NRCS state office interest in both local fire recovery efforts and the RCD's vineyard tillage management study project, funded by an NRCS Conservation Innovation Grant. This opportunity allowed us to share the array of soil and water conservation projects that we have pursued with Indian Springs Ranch, a 27 acre vineyard on the western slopes of northern Sonoma Valley. Sonoma RCD worked with the ranch's owner John MacLeod in 2015 to develop one of our initial vineyard LandSmart Plans®, and to conduct an irrigation system evaluation at the ranch. Recommendations from the irrigation evaluation and LandSmart plan led in turn to securing grant funding from the State Coastal Conservancy (SCC) to implement the highest priority practices. Unfortunately, in October 2017 parts of the ranch were affected by the Nuns fire. The SCC grant allowed the RCD to act quickly with John to address fire impacts and seed multiple acres of exposed hillside with native grasses, and place straw wattles and other erosion control measures on the hill in early winter. Additional grant funding from the State Water Board has provided support to remove old eroding culverts at the ranch. Further culvert and stream crossing upgrades are planned for this year.

In addition to fire recovery projects, John has also worked with the RCD to install new irrigation equipment in a couple of his vineyard blocks, and integrate three Tule Technology stations. Tule measures actual on site evapotranspiration and provides weekly recommendations on how

much to irrigate and when to hold off. John estimates that he used roughly 30% less water in his zin block as a result of the irrigation upgrades and Tule services. With the grant, John also installed water meters at his well and pond, to track actual water use now and in the future.

The tour group visited each implemented project and engaged with the landowner in a robust discussion on his soil protection and efficient water management efforts, impacts of the fire to his land, and best management practices for fire recovery. The tour ended at the tillage study project site, where we got to take a deeper dive into the nuances of the project. This project, which acting State Conservationist Dotson cited as unique in his experience with NRCS, will help answer key questions about the effects of different tillage management approaches on water infiltration and availability in north coast vineyards. The project involves comparing the effects of no tillage, alternate tractor row tillage, and all tractor row tillage on available soil moisture and key soil health properties.

At the study site, JT Jaeger of Advanced Viticulture explained how the nine soil moisture probes in the study plots will provide valuable information on the soil moisture content of the different tillage treatments. He compared this to their standard use, providing growers information on when to initiate irrigation and when to wait for maximum crop quality and water use efficiency. Josh Beniston, lead scientist for the project, provided information on the sites soils, and explained how we came up with the study design for the project that involves 3 repetitions of the 3 tillage treatments. He also explained the soil testing procedure and parameters for the beginning and ending of the project, sharing insight on how the project will help growers make key decisions in the future which will benefit their crops while conserving water. Toward the conclusion of the project, the RCD will host a field demonstration day where local growers can tour the site, learn more about findings of the project, and discuss how those findings may be relevant to the management of their own vineyards.

The decades-long partnership between NRCS and the RCDs matches federal conservation resources with local expertise and relationships. The technical staff of both NRCS and the RCDs work closely together to meet the needs of our local agricultural community and maximize our impact on the ground. We at the RCD are grateful for this partnership, and for the opportunity to share our local work with state-level leaders at NRCS.

