

## Tenmile Creek Water Conservation Projects Takes Shape

The rains of late December have replenished stream flow and are helping to recharge groundwater, but recurring cycles of drought create long term insecurity for water supply in the Tenmile Creek watershed. As a result, the Eel River Recovery Project (ERRP) is working on water conservation strategies to augment domestic and agricultural water supply that also help protect stream flow that fish and wildlife rely on. Since 2018, the group has been funded by California State Coastal Conservancy (SCC) Prop 1 grants to scope the community and to spark action by residents to achieve conservation objectives.

*The Tenmile Creek Watershed Conservation and Restoration Action Plan* was created under a pilot grant from SCC. It identified Streeter Creek, which joins Tenmile Creek at the Black Oak Ranch, as a target for water conservation because of its strong steelhead population. Studies had found that the major source of Streeter Creek's flow depletion was elevated evapotranspiration from over-stocked forests in the watershed, but also that there were major water conservation opportunities on the Black Oak Ranch. Irene's Garden Produce Farm and Camp Winnarainbow are located there and use Streeter Creek water for agricultural and domestic water supply. The farm is a major supplier of organic produce in Mendocino County and the camp hosts disadvantaged youth, including from inner cities, to learn about nature and art in the summer.

SCC is funding planning and permitting for additional water storage to support these important institutions, and also so they can forbear from water withdrawal from late spring through fall to help steelhead juvenile survival. The combined water supply solution is a pond for the farm and augmented water storage for the camp, but the innovative design of the project will allow more than half the water to be supplied by catching rainwater.

Stillwater Sciences took the lead on design of a 4 million gallon off-stream pond that will be constructed in the field next to the farm. In a "normal" 60-inch rainfall year, two thirds of the volume of the pond would be filled by rainwater and the balance of supply will come from a seasonal creek adjacent to the pond that has little known use by fish. Since the pond will be dug to the level of groundwater, a sump pump is expected to contribute to water supply to fill the pond. Only in the driest of years, when these three sources of water are insufficient to fill the pond, would water from Streeter creek be used. In addition to supplying water for the farm, some pond water will be shunted across Streeter Creek to the Camp Winnarainbow site for keeping dust down and grassy recreation areas watered.

Anna Birkas of Village Ecosystems led the planning efforts for camp water storage and arrived at a design of ten 80,000 gallon stainless steel tanks that are also designed to catch rainfall. Depending on precipitation, rainfall catchment will constitute 140,000 to 520,000 gallons of the 800,000 gallon water storage capacity, with about half the volume coming from this source in an average water year. Rainwater catchment will also target a roofed event space at the camp that will catch 32,000 to 105,000 gallons that will be pumped up hill to the storage tanks. The balance of camp water will come from Streeter Creek at the point of diversion with a long-standing water right, which will be redesigned. In exchange for receiving augmented water storage, Black Oak Ranch will agree to forbear from water withdrawal from May through November.



**Black Oak Ranch agency field trip at Streeter Creek diversion with (r to l): Matt McCarthy, Matt Clifford, Joe Scriven, Julia Petreshen, Anna Birkas, Joel Monschke, Britney Newby, Irene Engber, Martin Mitchell, Evan Engber, Bob Barsotti and Monty Larson. 9/13/22.**

A significant part of the ERRP effort under the current SCC Prop 1 grant is related to project permitting. With regard to the Black Oak Ranch water conservation efforts, agencies appear highly supportive because of the innovative conservation measures and benefit to at-risk steelhead trout. It seems likely that an expedited process is open through a new State Water Resources Control Board state-wide restoration project permitting process. Following this path would provide coverage under the California Environmental Quality Act as part of a recently completed Programmatic Environmental Impact Report (PEIR) for the new process. The California Department of Fish and Wildlife (CDFW) will issue permits for points of diversion as a Responsible Agency with a restricted role if the SWRCB acts as Lead Agency under the PEIR. However, CDFW and the National Marine Fisheries Service (NMFS) will need to permit fish rescue and relocation of steelhead juvenile when the Streeter Creek point of diversion is upgraded, and both agencies will have to approve the forbearance agreement that will bind Black Oak Ranch to a restricted season of water withdrawal. A source of funding for implementation has been identified and a proposal for project implementation will be filed shortly after permits are issued.

Also as part of the current SCC Prop 1 grant, ERRP is scoping landowners on the west side of the Tenmile Creek watershed in the Cahto, Mill and Little Case Creek watersheds to see if they want to work towards augmented water storage in exchange for forbearance during seasonal low flow periods. Cheyenne Clarke is serving as outreach coordinator on this project and can be reached at [ERRPoutreach@gmail.com](mailto:ERRPoutreach@gmail.com) or those interested can call 707 223-7200 for more information.