

# ANNUAL REPORT

## SPRING 2024



American Avocets using the habitat provided by the Dunningan Area Recharge Program. Photo: Carolyn Cole, LA Times

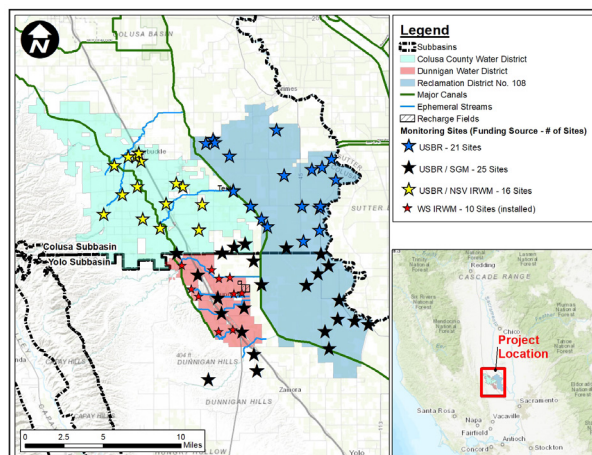
### Dunningan Area Recharge Project

By William Vanderwaal and Jordon Navarrot (DWD) and Ryan Fulton (Larry Walker Associates)

The Dunningan Area Recharge Program (Program), led by the Dunningan Water District (DWD), was selected by the CC for DWR’s 2021 Urban and Multibenefit Drought Relief Funding in Spring 2022. The Program addresses declining groundwater levels that threaten agricultural and residential water supply and land subsidence. Recharge areas include Buckeye, Dunningan, and Bird Creeks, Azevedo Drain, and 500 acres of fallowed farmland to provide habitat for migratory shorebirds.

Since October 2022, the Program has installed ten monitoring wells and five rain gauges and recharged a total of approximately 4,200 acre-feet through diverting water into ephemeral streams and onto fallowed fields. This inundation resulted in excess surface water infiltrating the groundwater table raising groundwater elevations and providing habitat for migratory shorebirds.

The Program leveraged the DWR funding by partnering with The Nature Conservancy, which purchased water for recharge, reimbursed landowner field preparations, and assessed shorebird habitat benefits. DWD in partnership with Reclamation District No. 108 and Colusa County Water District have been conditionally approved to receive a USBR WaterSMART Grant to expand their monitoring network into neighboring districts and groundwater only areas as feasible.



Proposed groundwater monitoring locations in and around the Dunningan Water District jurisdiction.

This Water SMART Grant is being paired with the Program component of the Yolo GSA SGMA grant which will further expand monitoring of groundwater levels, stream gauges and recharge areas in partnership with landowners.

DWD is working with DWR’s Flood Diversion Recharge Enhancement Initiative Program to install pumps to divert water into ephemeral streams and to bypass Funks Reservoir in the winter when the downstream portion of the Tehama-Colusa Canal is typically shutdown which will expand the operational window in the winter when recharge can occur.

#### COORDINATING COMMITTEE (CC)



#### Lake County Watershed Protection District

Angela DePalma-Dow  
William Fox



#### Napa County Flood Control and Water Conservation District

Chris Silke  
Rick Thomasser



#### Yolo Subbasin Groundwater Agency

Sarah Leicht  
Sabrina Snyder  
Elisa Sabatini



#### Solano County Water Agency

Chris Lee  
Drew Gantner  
Max Stevenson



A mussel sniffing dog works at a Lake Berryessa boat launch. These canines conducted 373 inspections in 2023.

## Aquatic Invasive Species Awareness & Prevention

By Drew Gantner & Angela DePalma-Dow

Objective 7 in the Westside IRWM Plan is to Prevent colonization by quagga/zebra mussels and eliminate/prevent spread of New Zealand mud snail. This objective has high importance and urgency for the Coordinating Committee (CC) and supports Goals 6, 9, 10, and 13 in the Plan.

Lake and Solano Counties are at the forefront of implementing this objective. At the January CC meeting, Drew Gantner, Supervising Water Resource Specialist for Solano County Water Agency (SCWA) provided an update on the 2023 SCWA Aquatic Invasive Species (AIS) Program. The goal of the program is to prevent a mussel infestation in Lake Berryessa and the Solano Project and to accomplish this, each watercraft is inspected before launching in Lake Berryessa. Concurrently, boaters are educated about the harmful effects of AIS and how they can prevent harm by cleaning, draining and drying watercraft between outings.

The target mussels are the Eurasian zebra (*Dreissena polymorpha*) and quagga (*D. bugensis*) mussels, which have a rapid rate of reproduction and few natural predators. These pests can cause ecological, recreational, and economic impacts on affected waterways, including out-competing native species, damaging marinas and boats, fouling beaches with sharp shells, which leads to decreased tourism, and fouling water supply infrastructure.

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Both Solano and Lake County prescreen watercraft entering Clearlake and Lake Berryessa using a digital record-keeping system, the Watercraft Inspection and Decontamination Database, which provides real-time boat movement information that alerts inspectors if a boat has traveled from a mussel-infested waterway.

During the 2023 season, SCWA screened 18,010 vessels at six boat launches. Of those, 79 required full inspections and 9 needed decontamination. Between January -May 2023, Lake County screened 7,392 vessels. In 2023, Lake County conducted 47 vessel inspections by human monitors with an additional 373 inspections conducted by Mussel Dogs, which are trained to alert their handlers if they smell invasive mussels. No inspection-triggered decontaminations were conducted in Lake County, although eight preventative decontaminations were performed based on a vessel’s last known destination.



Lake County Watershed Protection District Technician, Corey Husted, and Clear Lake North Shore Mussel Inspection Coordinator, Bob Valdez, inspect a fishing boat for adult invasive mussels and unverified water. Photo: S. Euston, County of Lake



SCWA watercraft inspectors perform a pre-scheduled decontamination on a boat that was transported to Lake Berryessa from an infested lake in Arizona.



Lake Berryessa at the Monticello Dam - the dam's iconic spillway is pictured near Highway 128. Photo: US Bureau of Reclamation.

## Napa County Flood Control & Water Conservation District and Solano County Water Agency Renew Lake Berryessa Contracts

Napa County Flood Control and Water Conservation District (FC&WCD) executed a new, 40-year contract for water from Lake Berryessa with the US Bureau of Reclamation (USBR) in March of this year. Solano County Water Agency (SCWA) renewed two contracts with USBR for (a) Operation, Maintenance, and Rehabilitation (OM&R) of the Solano Project and (b) Water Service Agreement. Both are 25-year agreements.

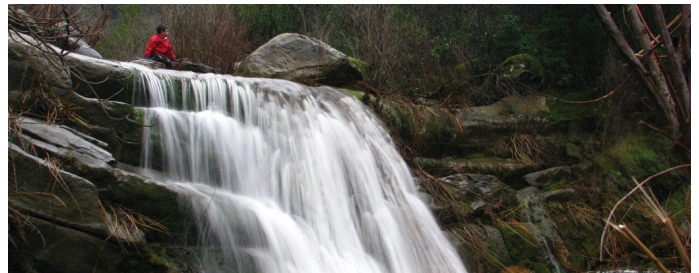
Lake Berryessa was formed when the USBR completed Monticello Dam on Putah Creek in 1957; the project was intended to provide municipal, industrial, and irrigation water supply with the additional benefits of flood control and recreational use. The dam and the lake are part of the Solano Project (Project), which includes the Putah Diversion Dam, Putah South Canal, and Terminal Reservoir. Solano County Water Agency (SCWA) holds a long-term Operation, Maintenance, and Replacement Agreement contract with USBR for the operation of the Project. It contracts the Solano Irrigation District to assist with daily operations. Solano County receives 192 thousand acre-feet for agricultural, industrial, and municipal use. Solano Project member agencies, which includes Vacaville, Fairfield, Vallejo, Suisun City, Solano Irrigation District, Maine Prairie Water District, CA state Prison

Solano, and UC Davis, have water entitlements. Benicia does not have specific entitlements, but has interagency agreements to receive Lake Berryessa water. Napa County has a water service contract with USBR for 1500 acre-feet of water for domestic use around the lake. Napa County FC&WCD is the go-between between the USBR and the county; it subcontracts water use to about 9 subcontractors serving small communities and businesses around the lake.

The recently released SWRCB Bay-Delta Plan Update will severely impact Solano water agencies, with proposed Lake Berryessa water allocation reductions of up to 75% in dry, drought, and multi-drought years. Yolo County Flood Control and Water Conservation District (YFCF&WCD) will also see large impacts on their water supply systems, which will impact Yolo County agriculture. SCWA and YFCF&WCD and many other agencies in the Sacramento and San Joaquin region are working on an alternative plan known as the Healthy Rivers and Landscapes Program, which involves voluntary agreements. For example, SCWA and YFCF&WCD are partnering on improvements to Lower Putah Creek to improve watershed drought resilience.

## Upper Putah Creek Watershed Proposed for Water Supply and Demand Modeling

The State Water Resources Control Board's Division of Water Rights is developing tools to enhance understanding of water supply and demand; the Upper Putah Creek Watershed is one of six in California proposed for the development of [Supply and Demand Assessment](#). The [Napa River](#) was one of the Pilot Watersheds for this program. A series of workshops about the proposed watersheds was conducted during May and June 2024. Written comments on the proposed watersheds are due on June 17, 2024.



Waterfall along Wildhorse Canyon, Putah Creek. Photo: Andrew Fulks



## Westside Sac IRWM CC Small Grants Program 2023 - 2024



*One of 50 valley oaks (Quercus lobata) planted with a companion Santa Barbara sedge (Carex barbarae) by the City of Winters along the North Bank Trail.*

All 50 trees with a companion sedge were planted and mulched to conserve soil moisture. The sedges spread through rhizomes – underground stems – and will colonize the shade of the young oaks and suppress weeds. At maturity, the oaks will provide near total shade over this heavily used public trail.

The Putah Creek Club and Winters Middle School were awarded \$1,200 to hold a club family picnic and canoe tour of Lake Solano on February 24. This special day helped students and their families foster a positive relationship with the creek and our natural world.

Lake County Watershed Protection District was awarded \$5,000 towards the cost of hosting a [Clear Lake Integrated Science Symposium](#) that builds on collaborative efforts between Tribes, State Water Board, California Department of Fish and Wildlife, Lake County Water Resources Department, UC researchers, and others to address declining populations of the Clear Lake Hitch. The Symposium will be held August 15 - 16, 2024, and will also address Clear Lake water quality, aquatic ecosystems, and biodiversity.

The Westside Sac IRWM Coordinating Committee reopened its small grants program in 2023 and approved four projects in May 2023.

The Yolo County Flood Control and Water Conservation District was awarded \$5,000 to provide flowmeter devices for groundwater wells on socially disadvantaged farms allowing growers to monitor water use and more effectively respond to irrigation issues and changes in groundwater conditions. It has installed a flowmeter device on one farm and seeks another willing participant.

The City of Winters was awarded \$5,000 to plant 50 Valley Oaks and companion Santa Barbara sedges on the south side of the North Bank Trail at the Winters Putah Creek Nature Park. The planting was accomplished as an Eagle Scout project in mid-January, 2024.



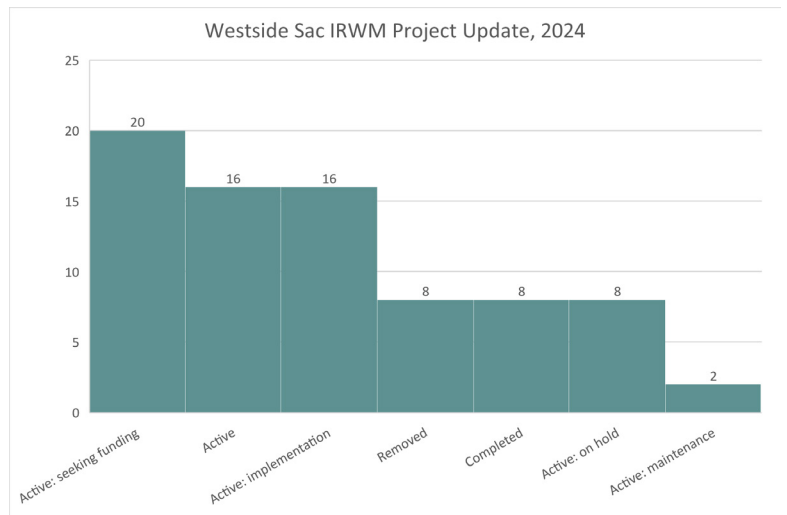
*Members of Putah Creek Club and their family members enjoying an outing on Lake Solano.*

## Westside Sac IRWM Project Update

Every other year, the Westside Sac IRWM CC reviews its project list to determine the status of prioritized projects. Project sponsors for each project active at the time of the last review are contacted to determine the project's current status.

For the 2024-2025 Update, project sponsors of 78 projects that were recorded as "active" in 2022-2023 were contacted about the current status of each project. Of those projects, eight were completed, eight are on hold, and eight were removed for various reasons, including replacement by another project or no longer a priority.

Two projects are complete and in the maintenance phase, fifteen are being actively implemented, and twenty-one are seeking funding. The chart below provides a visual depiction of the status of the Westside Sac IRWM priority projects.



Status of Westside Sacramento IRWM projects considered "active" by sponsors during the 2022 project update.

## Lake County Special District's IRWM Grant Update



Hidden Valley Lake CSD Water Tank Replacement, excavation of the foundation.

Lake County Special Districts (LCSD), in partnership with Hidden Valley Lake Community Services District (HVLCSO), under a sub-grant agreement, completed the third year of project activity on the Prop1, Round 1, IRWM Implementation Grant. The \$4.7M grant was awarded in 2021 and funded six (6) projects in Lake County, CA. The grant benefits a majority of disadvantaged communities with critical water line upgrades, new water tanks, emergency water supplies, and contamination prevention.

Two of the projects included in the grant are completed. The Spring Valley Lake, Quail Trail Water Line Replacement in Clearlake Oaks is a water supply project that added 2,000 linear feet of 6" watermain, hydrants, and valves. An expected benefit of the project is that it will reduce the amount water mainline leaks/breaks and repairs based on a ten-year analysis of water mainline leaks/breaks and repairs generated in the district's Cost Accounting Management System. The analysis indicated that Quail Trail Waterline experienced at least one mainline/service line leak and repair a year; LCSD staff will report back to DWR on progress of this benefit for the next three years.

The Hidden Valley Lake Community Services District Inflow & Infiltration (I&I) Mitigation project is a water quality project that rehabilitated 700 feet of sewer pipe and replaced 50 manhole covers with specialized stormwater protection covers. An expected benefit of the project is a reduction in the amount of stormwater entering the sewer collection system by 10 acre-feet per year (AFY). HVLCSO staff will report back to DWR on post project completion and progress of this claimed benefit for the next three years.

## Lake County Special District's IRWM Grant Update *(continued)*



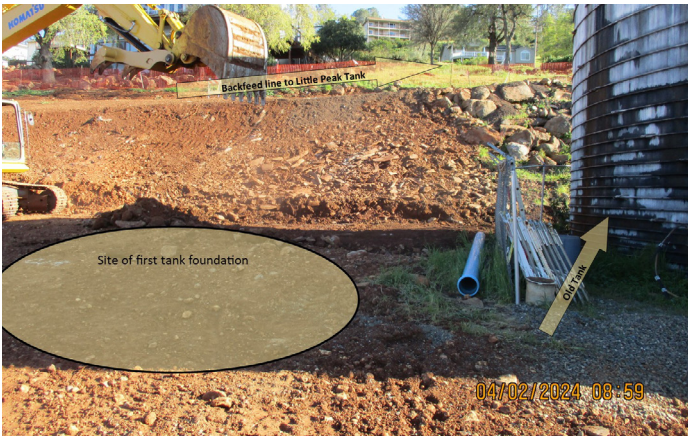
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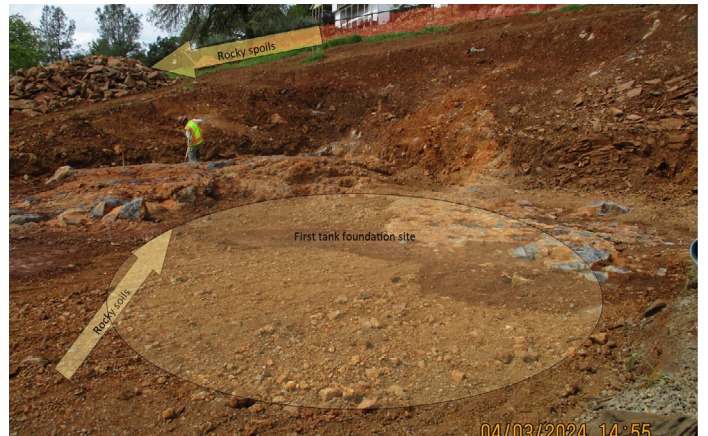
*Back feed pipe installation.*

The four additional projects in the grant agreement are underway and in different stages of completion.

- 1.) Spring Valley Reservoir Recovery project: staff are working with one final permitting agency; the design is nearly complete. The intent of the Project is to reclaim the original capacity of the Spring Valley Lake of nearly 320 acre-feet. This Project is about 75% complete.
- 2.) Lake County Sanitation's (LACOSAN) Infiltration and Inflow (I&I) Reduction Plan, which is 70% complete, will analyze and repair about 110 miles of the sewer collection system.
- 3.) The Live Oak Water Line Replacement is about 75% complete and will replace 650 feet of water mainline.
- 4.) Finally, the Hidden Valley Lake CSD Water Tank Replacement is 75% complete; the project will replace an existing, deteriorating 150,000-gallon wood storage tank with two 250,000-gallon bolted steel water storage tanks totaling 500,000-gallons. The replacement tanks will decrease the water loss from the leaky wooden tank.



*Site of First Tank Location, Back Feed line to Little Peak Line, Old Tank*



*Rocky Spoil Site, Rocky Soils, First Tank Foundation*

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