

2019
ANNUAL
REPORT



Sonoma
Water

CLEAN. RELIABLE. ESSENTIAL. EVERY DAY.



WELCOME

MESSAGE FROM DAVID RABBITT, CHAIR, BOARD OF DIRECTORS, SONOMA WATER



Between floods, fires, wind storms and power outages, 2019 was defined by emergencies. Sonoma Water responded to these challenges while maintaining important momentum on a number of key programs that will ensure the reliability of our region's water supply, and provide the resiliency and sustainability required to meet the challenges of climate change and a growing population.

The Dry Creek Habitat Enhancement Project achieved a significant milestone last year when we signed an agreement with our partners, the U.S. Army Corps of Engineers, which cleared the way for completion of the final three miles of habitat enhancement work required by the Russian River Biological Opinion.

In 2019 Sonoma Water conducted an innovative pilot study that diverted water from the Russian River during high flows to help replenish groundwater. The drinking water was injected through a well owned by the City of Sonoma into the aquifer, and then removed at different periods of time. The study found that water quality remained high and that groundwater levels around the well increased. The study results sets the stage for possible future projects to restore local aquifers.

Looking ahead, Sonoma Water has been a key participant in finding a "two-basin solution" for the Potter Valley Project, a hydroelectric project that delivers water from the Eel River into the headwaters of the Russian River. A two-basin solution facilitated by Congressman Jared Huffman aims at securing the region's water supply and protecting endangered salmon species in the Eel River and upper Russian River.

We know the coming year will bring new challenges and our Board is confident that Sonoma Water's management and professional staff is positioned to meet these tests and keep its sights set on the long-term future of our watersheds and precious water resources.

David Rabbitt, Chair, Board of Directors, Sonoma Water

MESSAGE FROM GRANT DAVIS, GENERAL MANAGER, SONOMA WATER



If one theme emerges as we look back on 2019 it is perseverance. The forces of nature tested our agency's – and our community's – mettle as we joined together to recover from the devastation of the 2017 fire disasters and worked to prepare for the next disaster. In spite of the tragic fires, we persevered.

In February of this year we experienced one of the largest floods on record for the Russian River that resulted in evacuations and widespread damage in the lower river area. Our staff braved floodwaters to keep our critical infrastructure safe.

The fall of 2019 brought a series of red flag fire warnings that prompted power shutoffs for fire safety. During one of these high wind events, the Kincadee Fire broke out and scorched thousands of acres, destroyed hundreds of homes in northern Sonoma County, and forced the largest evacuation in the county's history. Fortunately, there was no loss of life with that fire.

Throughout all of these events, I am proud to say that Sonoma Water continued to deliver drinking water to its more than 600,000 customers in the North Bay. Because of our staff's dedication to preparedness and their willingness to persevere during evacuations, floods, fires, high winds and the loss of power, we lived up to our core mission to produce clean drinking water and provide a reliable service that is essential to our customers every day.

I want to thank the Sonoma Water Board of Directors for their leadership, as well as the dedication of our staff this past year. In addition, I want to acknowledge our partners, customers and community for their perseverance and the many contributions made in support of our mission.

A handwritten signature in black ink, appearing to read "Grant Davis".

Grant Davis, General Manager, Sonoma Water



WATER SUPPLY UPDATE

RAINFALL IN SANTA ROSA : OCTOBER 2018-2019

Average (1950-2018 water years): 30.63"

Current Water Year: 48.12" which is 157.10% of average

RAINFALL IN UKIAH : OCTOBER 2018-2019

Average (1894-2018 water years): 36.98"

Current Water Year: 43.53" which is 117.71% of average

LAKE SONOMA STORAGE

Target Storage Curve: 245,000 acre-feet

Current Storage: 219,577 acre-feet (89.62% of Water Supply Pool)

LAKE MENDOCINO STORAGE

Target Storage Curve: 64,342 acre-feet

Current Storage: 77,715 acre-feet (120.78% of Target)

WATER SUPPLY

FORECAST INFORMED RESERVOIR OPERATIONS – 2019

The Lake Mendocino Forecast Informed Reservoir Operations (FIRO) program continued to make significant progress in 2019 to develop this innovative water management strategy. FIRO is a proposed management strategy that uses data from watershed monitoring and modern weather and water forecasting to help water managers selectively retain or release water from reservoirs in a manner that reflects current and forecasted conditions. Working with our federal and state partners, our team successfully operated FIRO for the first time in Water Year 2018/19 under a major deviation to the reservoir rule curve authorized by the U.S. Army Corps of Engineers (USACE).

Other activities by the project team in 2019 included: (1) developing an operations model that is run on the California Flood Forecast Operations Center; (2) achieving USACE approval for another rule curve deviation for Water Year 19/20; and (3) initiating preparation of the Final Viability Assessment which will document a recommendation for permanent changes to the Water Control Manual using FIRO. In 2020, the team expects to complete the Final Viability Assessment and seek USACE authorization for a 5-year rule curve deviation while a permanent water control manual change is pursued.

GROUNDWATER

Under the Sustainable Groundwater Management Act (SGMA), three Groundwater Sustainability Agencies (GSAs) are developing Groundwater Sustainability Plans (GSPs). The Petaluma Valley GSA, Santa Rosa Plain GSA and Sonoma Valley GSA each met regularly throughout 2019 to discuss draft plan sections, financing for the plans, and groundwater user registration programs.

A total of \$3 million (\$1 million for each GSA) in competitive grant funding from California Department of Water Resources (DWR) is supporting the development of the GSPs, but additional revenues are needed to complete the plans and run the agencies. In Petaluma Valley and Sonoma Valley, the Boards of the GSAs opted to continue contributions from member agencies. In Santa Rosa Plain, the Board adopted a fee to be paid by groundwater users, based on estimated groundwater use. Through June 30, 2022, the new fee will only be collected from cities, towns and water districts in the Santa Rosa Plain basin.

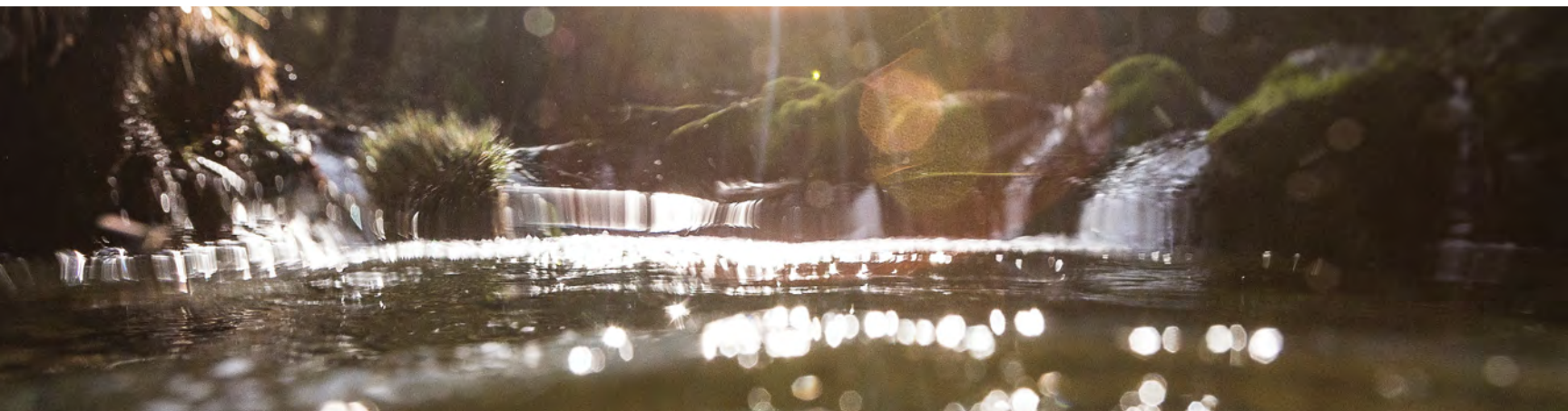
In 2019, the GSAs applied for and received technical support services from DWR for drilling 21 monitoring wells in the three basins to assess the connection between groundwater and local streams.

To learn more about the GSAs and upcoming meetings, visit:

<http://petalumavalleygroundwater.org>

<http://santarosaplaingroundwater.org>

<http://sonomavalleygroundwater.org>



WASTEWATER TREATMENT



SERVICES

In 1995 Sonoma Water assumed responsibility from the County of Sonoma for managing the county sanitation zones and districts, which provide wastewater collection, treatment, recycled-water distribution, and disposal services. County sanitation districts are separate legal entities operated under contract with Sonoma Water, and sanitation zones are owned by Sonoma Water.

FACILITIES

Occidental, Russian River, Sonoma Valley, and South Park Sanitation Districts. Airport/Larkfield/Wikiup, Geyserville, Penngrove, and Sea Ranch sanitation zones.

POPULATION SERVED

Approximately 22,000 residences and businesses.

SONOMA VALLEY COUNTY SANITATION SEWER TRUNK MAIN REPLACEMENT PROJECT

The Sonoma Valley County Sanitation District's largest most important pipeline (called a sewer trunk main) is 60 years old and at the end of its life expectancy. This multi-year project would replace approximately 1.8 miles of the existing 21-inch diameter sewer trunk main originally constructed in 1958 with a new 27-inch diameter main.

The project is planned to be constructed in three phases, with the first phase, Reach 4-A breaking ground this past July. This segment of the line runs between 6th Street West and Studley Street, and continues along Highway 12 ending in Ramon Street. The project also included a short segment in Maxwell Farms Regional Park. Replacing the pipe in the Sonoma County Regional Park allowed for construction to take place between scheduled activities and as part of the park's master plan. The sewer trunk main replacement is also a requirement of a settlement agreement with the San Francisco Regional Water Quality Control Board aimed at improving water quality and minimizing impacts to the environment.

LARKFIELD ESTATES SEWER PROJECT

The 2017 Tubbs Fire destroyed thousands of homes in Sonoma County, including the entire neighborhood of Larkfield Estates, located at the intersection of Old Redwood Highway and Mark West Springs Road. As residents began the rebuilding process, they approached Sonoma Water about the possibility of extending sewer service to the neighborhood, which had previously been served by septic systems.

Sonoma Water, which operates the Airport/Larkfield/Wikiup Sanitation Zone (ALWSZ), held a series of community meetings to gauge interest in the sewer project and to explore the feasibility of extending the existing sewer collection system into the impacted Larkfield Estates neighborhood. While some property owners were interested in staying with their existing septic systems, approximately half of the residents chose to participate in the sewer project. Two years later, design of the Larkfield Estates Sewer Project is complete with construction scheduled to begin in early January 2020. The project includes over 10,000 feet of new sewer main with laterals to all participating parcels. The \$4.8-million project is anticipated to be complete by autumn of 2020.

The ALWSZ also provided low-cost financing for the costs of construction and the sewer connection fee for those property owners wishing to connect to the system. Participation in the project is entirely voluntary. Property owners may also choose to join the system at any time in the future, but the low-cost financing will not be available.



FLOOD PROTECTION & STREAM MAINTENANCE SERVICES

FLOOD CONTROL WORKS

Coyote Valley Dam (Lake Mendocino), Warm Springs Dam (Lake Sonoma), Central Sonoma Watershed Project, and Laguna de Santa Rosa

CENTRAL SONOMA WATERSHED PROJECT FACILITIES

Santa Rosa Creek Reservoir, Matanzas Creek Reservoir, Piner Creek Reservoir, Brush Creek Middle Fork Reservoir, and Spring Creek Reservoir



96,950 LBS
Trash
Removed

41,574^{CY}
Sediment
Removed

LAGUNA DE SANTA ROSA

Natural tributary to the Russian River that stores approximately 80,000 acre-feet of water during peak floods

STREAM MAINTENANCE

Maintain 75 miles of flood control channels and have easements for maintenance on 150 miles of creeks



4,371^{CY}
Vegetation
Removed

1,700
Riparian trees
planted

ENVIRONMENT

RUSSIAN RIVER BIOLOGICAL OPINION

The Russian River Biological Opinion is a federally mandated 15-year blueprint to help save endangered fish and ensure our water supply. Construction of the first mile of habitat enhancement in Dry Creek began in 2013; thousands of tons of gravel were excavated and hundreds of redwood logs were placed to create hiding places for young coho and steelhead trout.

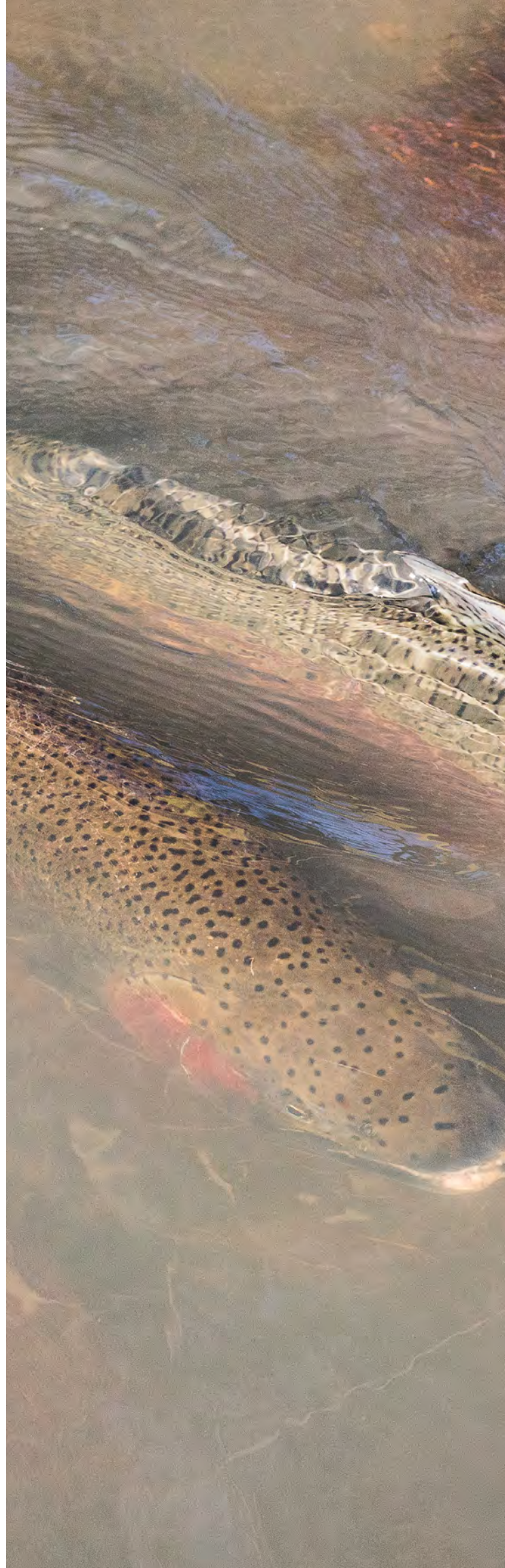
DRY CREEK HABITAT ENHANCEMENT PROJECT

Shortly after the Dry Creek Habitat Enhancement Project reached a major milestone in 2018 by completing more than 3 miles of the 6-mile project, Sonoma Water and the U.S. Army Corps of Engineers had another occasion to mark significant accomplishments. In April of this year, the partners on the Dry Creek Project celebrated: the completion of the Army Corps Continuing Authorities Program (CAP) project in Reach 4A, and the signing of a Design Agreement for the remaining three miles of the project. This agreement will allow Sonoma Water to continue working with the Army Corps to complete the project and ensure that costs will be shared by the two partners.

The ribbon-cutting event and the Design Agreement signing ceremony were held at the Army Corps project site owned by Ferrari-Carano Vineyards, one of the many willing and cooperative property owners in the Dry Creek Valley that have made the project possible. Representatives from the Army Corps, Sonoma Water Board of Directors, Sonoma Water staff, Federal and State fisheries officials, and Congressman Jared Huffman were among those in attendance.

In June of 2019 McCullough Construction began habitat enhancement work on the third of the three sites on property owned by Gallo Wines, located just downstream of Warm Springs Dam. That work was completed in late summer. Sonoma Water staff are also working to complete the final designs and permitting for the projects that are planned to be constructed in 2020.

Sonoma Water and the Army Corps are moving ahead with Phases IV, V, and VI of the habitat enhancement project, which make up the last three of the six miles required by the Russian River Biological Opinion. Sonoma Water is meeting with participating property owners to obtain comments, answer questions, address concerns, and explain the process. The Army Corps plans to Construct Phase IV in 2021, Phase V in 2022, and Phase VI in 2023.





RUSSIAN RIVER ESTUARY MANAGEMENT PROJECT

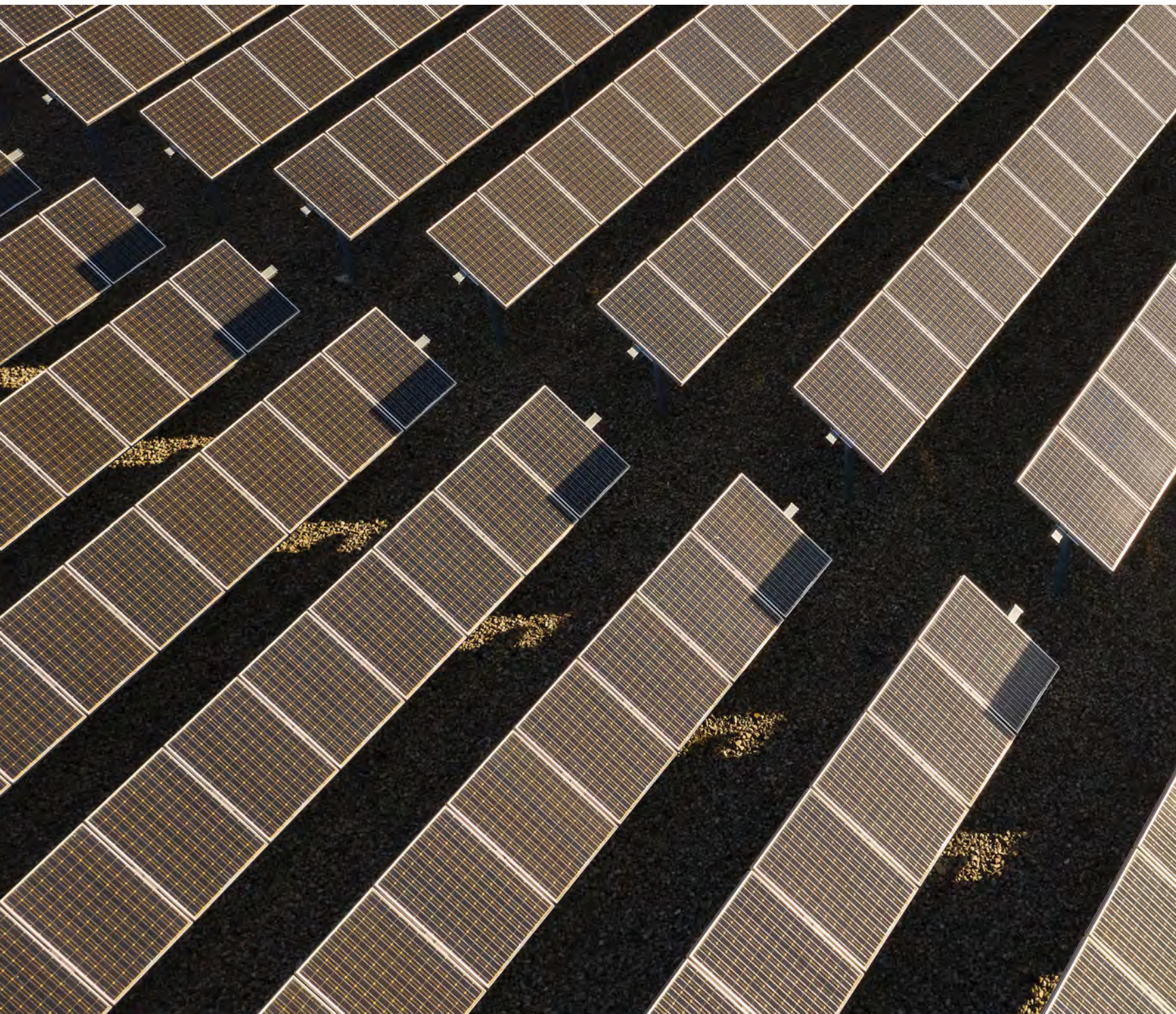
This was the tenth year of implementing the Estuary Management Program. The Russian River Estuary closed once during the lagoon management season (May 15 - October 15 in 2019) as a result of formation of a barrier beach. To date, there have been three additional closures outside the management season. Both closures ended as the result of self-breaching of the barrier beach.

Biological and water quality monitoring was conducted when the lagoon management season began on May 15. Staff are working on data analysis and preparation of reports for the prior year management season. The annual Estuary Management Project community meeting was held in August in Jenner and the 2019 Russian River Estuary Adaptive Beach Management Plan was discussed, in addition to presentations on fisheries, invertebrates and prey availability, water quality and pinniped monitoring results.

ENVIRONMENT

SOLAR PHOTOVOLTAIC SYSTEMS

In 2019, condition assessments were performed on all four of Sonoma Water's solar photovoltaic systems, to gauge system efficiencies after three to 14 years in operation. The condition assessment required thorough inspection, testing, and monitoring of all panels, electrical connections, and supporting equipment. The condition assessment found that the photovoltaic systems still have decades of useful life, and can continue to save on electricity costs into the future. But some inverter replacements need to be made. Inverters convert direct current produced from the solar panels to more useful alternating current for use by power consuming equipment. Replacement of the inverters will occur over the next few years.



GRANTS

Sonoma Water leverages local funds with state and federal grants to help pay for projects. This year, Sonoma Water received over \$3.4 million in state and federal grants , helping to keep its cost of service as low as possible.

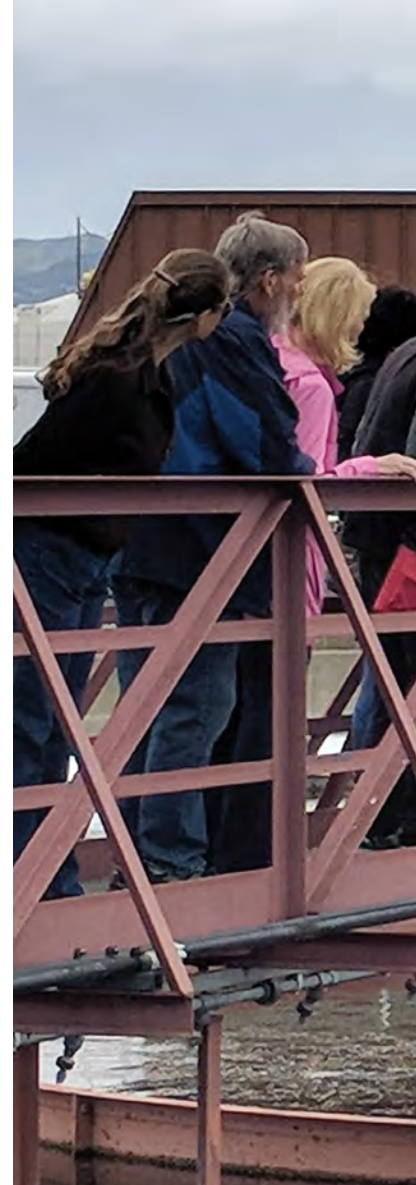
GRANT AWARDS FOR 2019

| WATER AGENCY PROJECT NAME | GRANTOR | GRANT PROGRAM | GRANT FUNDS | MATCH FUNDS |
|---|--|--|------------------------|------------------------|
| FEDERAL GRANTS | | | | |
| Ely Booster Station Hazard Mitigation Project | FEMA | Hazard Mitigation Grant Program | \$2,306,867 | \$768,956 |
| SVCS D Secondary Clarifiers Seismic Retrofit (Phase 1 - Design) | FEMA | Hazard Mitigation Grant Program | \$195,959 | \$65,319 |
| | | Total Federal | \$2,502,826 | \$834,275 |
| STATE GRANTS | | | | |
| PVP Facilitation Services for Ad Hoc Committee | California Natural Resources Agency | River Parkways (Prop 68) | \$103,360 | \$25,007 |
| Lake Sonoma and Lake Mendocino Mussel Infestation Prevention Programs | CA Dept of Parks and Recreation, Division of Boating & Waterways | Quagga and Zebra Mussel Infestation Prevention Program | \$800,000 | \$61,731 |
| | | Total State | \$903,360 | \$86,738 |
| | | Grand Total | \$3,406,186 | \$921,013 |

COMMUNITY

PUBLIC TOURS

Sonoma Water hosts a number of tours throughout the year in both English and Spanish. Tours are free and open to the public, and can be found at www.sonomawater.org/tours



WATER EDUCATION PROGRAM

The water education program is dedicated to helping educators teach students the value of water as an important natural resource. Students are encouraged to use water wisely and make environmentally sustainable choices to help secure a reliable source of fresh water.

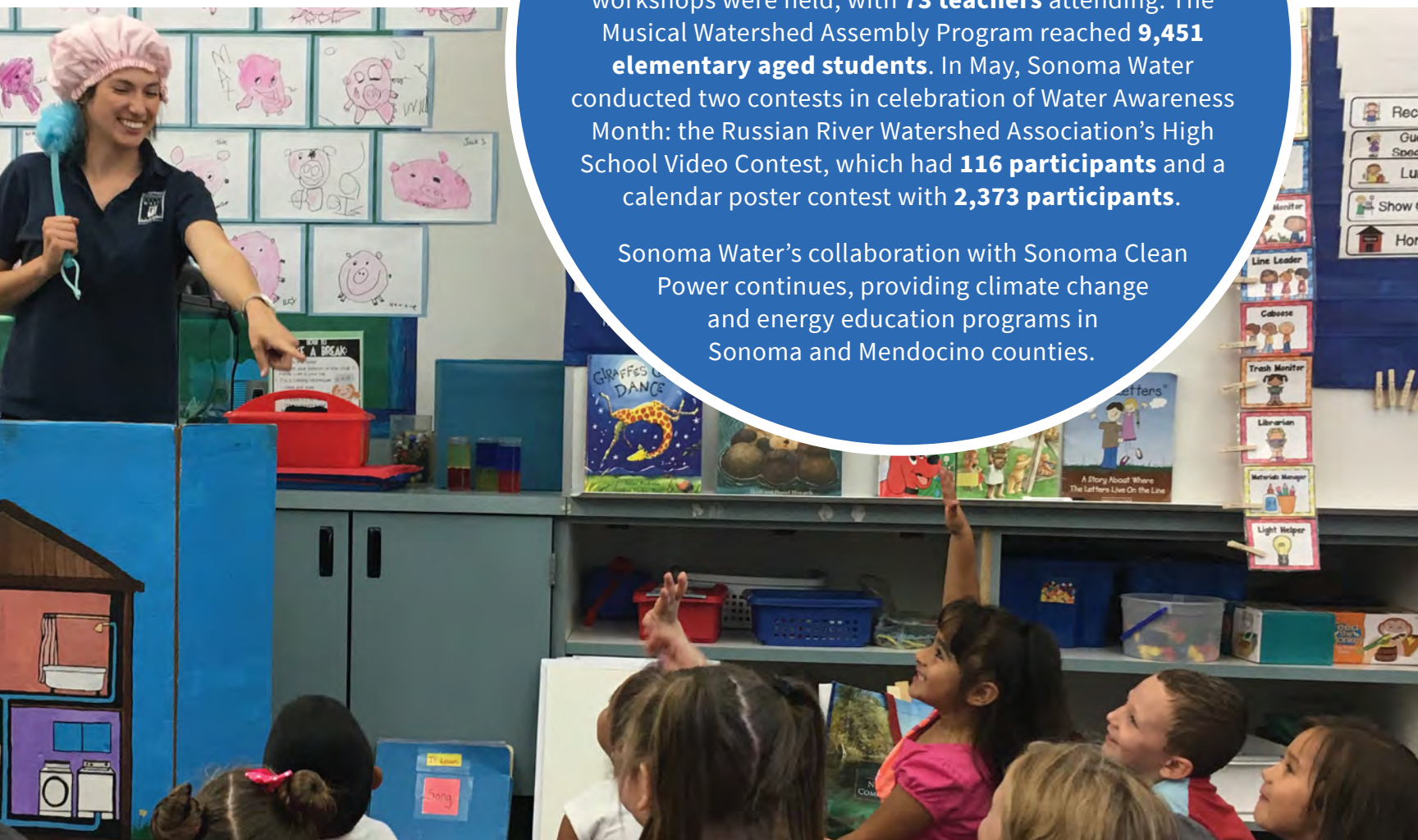




HIGHLIGHTS

During the **2018-2019** school year, more than **13,058 students** received direct instruction through classroom and field visits. Curriculum materials were provided for over **32,000 students**. Two teacher workshops were held, with **73 teachers** attending. The Musical Watershed Assembly Program reached **9,451 elementary aged students**. In May, Sonoma Water conducted two contests in celebration of Water Awareness Month: the Russian River Watershed Association's High School Video Contest, which had **116 participants** and a calendar poster contest with **2,373 participants**.

Sonoma Water's collaboration with Sonoma Clean Power continues, providing climate change and energy education programs in Sonoma and Mendocino counties.





**Sonoma
Water**

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www.sonomawater.org