



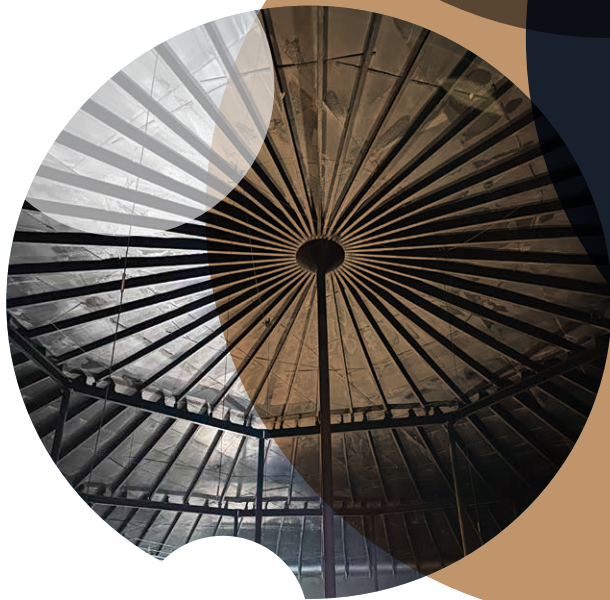
**Sonoma
Water**



2023 Annual Report



**Clean.
Reliable.
Essential.
Everyday.**



WELCOME

MESSAGE FROM CHRIS COURSEY, CHAIR, BOARD OF DIRECTORS, SONOMA WATER

2023 proved to be a thrilling year for Sonoma Water, and one that brought its share of successes and challenges. We began the year entrenched in a multi-year drought, but quickly switched to emergency flood management mode to cope with the cascade of atmospheric rivers that lined up off the coast week after week. After the clouds parted, our reservoirs full, we then turned our attention to the critical work of upgrading our aging infrastructure and continued to rise to the challenges of our changing climate.



2023 Sonoma Water Board of Directors (back row) James Gore, David Rabbitt, (front row) Lynda Hopkins, Chair Chris Coursey and Susan Gorin.

As the chair of the Sonoma County Water Agency Board of Directors and Board of Supervisors in 2023, it fills me with pride that Sonoma Water continues to rise to the challenge of providing clean, reliable drinking water to more than 600,000 people in Sonoma and Marin counties, of delivering wastewater treatment services to eight sanitation districts and zones in Sonoma County and of making continual strides in our responsibilities for flood protection and stream maintenance.

Just as we were fortunate to avoid major flooding last winter, it's a welcome feeling to have navigated a second consecutive year without major wildfire. Of course, we know there will be the threat of significant fires in our future, just as we know there will be more droughts and more extreme weather. Sonoma Water is moving to proactively mitigate the impacts of climate change, with the Board of Directors approving an updated Energy and Climate Resiliency Policy in August. The policy guides Sonoma Water's efforts through its Climate Action Plan, which had identified dozens of actions needed to prepare for and adapt to climate challenges in Sonoma Water's water, sanitation and flood-risk reduction systems. Most of these actions are already in progress. The policy reflects Sonoma Water's leadership in advancing science-based, partner-driven solutions to prepare regional water systems for climate impacts. It also requires us to look more rigorously at who will be impacted by the changing climate and to collaborate with low-income neighborhoods and communities of color to ensure that we develop equitable policies and programs.

As the outgoing chair of the Sonoma Water Board of Directors, I am encouraged by the progress we have made in fortifying the infrastructure needed to continue in our mission. I appreciate Sonoma Water's committed staff for their persistence in helping to address the challenges of climate change, and, on behalf of the Sonoma Water Board of Directors, I'd like to thank Sonoma Water staff for their service to our community and thank our community for allowing us to serve you.

Respectfully,

Chris Coursey

Chair, Sonoma Water Board of Directors

MESSAGE FROM GRANT DAVIS, GENERAL MANAGER, SONOMA WATER



Grant Davis
General Manager

This year, Sonoma Water has charted its way through remarkable accomplishments and formidable challenges. With the New Year ushering in the final days of our two-year drought, we pivoted from a mission of stringent conservation to flood protection and then to the essential task of modernizing our aging infrastructure while steadfastly addressing the exigencies of our changing climate.

Our 2023 Strategic Plan continues to play a crucial role in guiding our organization's direction and priorities. It outlines four key goals: Organizational Excellence, Environmental Stewardship, Climate Change and Community Engagement, each with specific strategies and action items to achieve our mission. Emphasizing the importance of organizational strength, infrastructure planning, environmental stewardship and community engagement, this plan ensures the reliability of our services, resilience in the face of climate change, and the trust and support of our community.

By addressing these goals and strategies, we are not only ensuring the sustainability and excellence of our operations but also actively contributing to the well-being of the regions we serve, making the Strategic Plan a cornerstone of our commitment to responsible governance and service.

We've also made significant progress in forging a regional solution for improving fisheries in the Eel River and continuing diversions to the Russian River with the Potter Valley Project. As a member of the Eel-Russian Project Authority, Sonoma Water will be able to negotiate directly with the Pacific Gas and Electric Company as it renders its surrender application for the Potter Valley Project in the months ahead.

As I reflect on the past year and the considerable strides made in fortifying our infrastructure, I am deeply encouraged by the collaborative spirit and tireless dedication displayed by our staff. I want to express my gratitude to the Sonoma Water Board of Directors, who have provided exemplary leadership throughout another challenging year. I also extend my heartfelt thanks to our partners, customers, and the community for their steadfast support and unwavering commitment to our mission.

Sincerely,

Grant Davis

General Manager, Sonoma Water

STRATEGIC PLAN GOALS

Sonoma Water published the 2023 Strategic Plan this year, a five-year planning blueprint that focuses on our core functions and looks to a changing future. The Strategic Plan is a living document that will be monitored and adapted as needed over the next five years, with the newly created Project Management Office ushering along its implementation.



Organizational Excellence.

Strengthen the organization and workforce to perform our core functions and responsibilities.



Planning and Infrastructure.

Implement comprehensive, integrated, and innovative infrastructure planning to strengthen existing services, minimize life cycle costs, and prepare for the future.



Environmental Stewardship.

Protect and sustain our watersheds to maintain water resources, ecosystems, and communities.



Emergency Preparedness.

Build organizational resilience and ensure effective emergency response to extreme weather events, disasters, and security risks.



Climate Change.

Implement comprehensive, integrated, Assess risk and uncertainty of climate change and develop and take actions that improve resiliency and sustainability.



Community Engagement.

Engage with the community to build understanding, trust, and support for projects and programs.



WATER SUPPLY

WATER SUPPLY UPDATE

RAINFALL IN SANTA ROSA:

OCTOBER 2022-2023 Average:
(1950-2022 water years)



30.28"

Current Water Year:
which is 138.1% of average



41.83"

RAINFALL IN UKIAH:

OCTOBER 2022-2023 Average:
(1894-2022 water years)



36.55"

2023 Water Year:
which is 106.4% of average



38.89"

LAKE SONOMA STORAGE:

LEVELS ON Dec. 31, 2023
Minor Deviation Storage
Curve:



254,500
acre-feet

Current Storage:
(91.9% of Minor Deviation
Storage Curve)



234,051
acre-feet

LAKE MENDOCINO STORAGE:

LEVELS ON Dec. 31, 2023
FIRO Storage Curve:



80,050
acre-feet

Current Storage:
(77.1% of FIRO Storage
Curve)



61,736
acre-feet

FORECAST-INFORMED RESERVOIR OPERATIONS

In its ninth year, the Russian River Forecast-Informed Reservoir Operations (FIRO) program continued to make great strides in 2023 by demonstrating the viability of this innovative strategy to more effectively operate reservoirs using modern technology and forecasting skill. This nationally recognized demonstration project involves several state and federal agencies in collaboration with Sonoma Water to initially assess the viability of FIRO at Lake Mendocino and currently assess the viability at Lake Sonoma. The program is co-led by Sonoma Water, Scripps and the U.S. Army Corps of Engineers with a steering committee that includes the U.S. Army Corps of Engineers, National Oceanographic and Atmospheric Administration (National Weather Service, Office of Atmospheric Research, and National Marine Fisheries Service), Bureau of Reclamation and California Department of Water Resources.

In 2023, Lake Mendocino was operated under a Major Deviation that was approved in 2021 to implement FIRO on an interim basis for five years. Lake Sonoma was operated under a Minor Deviation to implement FIRO on a one-year interim basis and was approved for a three-year minor deviation starting in water year 2024. Water year 2023 produced above average precipitation for the Russian River watershed, which allowed Lake Mendocino and Lake Sonoma to go from the low storage levels (historic low in Lake Sonoma) in October 2022 to encroaching into the flood pool by January 2023. The Army Corps was able to successfully utilize FIRO tools within the Major Deviation-defined pool to operate for flood control and also store more water when conditions allowed going into the spring and summer. The Army Corps also utilized the Minor Deviation pool space in Lake Sonoma to store more water going into the spring and summer. Lake Mendocino was able to store about 5,000 acre-feet and Lake Sonoma about 19,000 acre-feet of additional water supply due to FIRO operations. This additional water is valuable to provide releases for fisheries, recreation and consumption as well provide carryover storage into the following water year in case of drought.

Sonoma Water has also been assisting the Center for Western Weather and Water Extremes with other FIRO projects throughout the state including Prado Dam on the Santa Ana River, Lake Oroville on the Feather River and New Bullards Bar on the Yuba River.

Sonoma Water is currently supporting the development of assessments for Lake Oroville and New Bullards Bar. These are much larger reservoirs: Lake Oroville is 32 times the size of Lake Mendocino (3.55 million acre-feet) and New Bullards Bar is nine times the size of Lake Mendocino (1 million acre-feet). Results for these systems look very encouraging and FIRO may even be viable for these much larger reservoirs. Next, the team of the Center for Western Weather and Water Extremes scientists and Sonoma Water engineers will be embarking on a study to evaluate FIRO for Howard Hanson Dam near Seattle.



GOVERNMENT AFFAIRS

Sonoma Water was recognized by the Association of California Water Agencies in 2023 for its federal outreach on Forecast Informed Reservoir Operations (FIRO) and atmospheric river research.

FIRO is being implemented at Lake Mendocino thanks to a coalition of federal, state, and local partners both from the government, academia and the community at large. This award recognized the collective partnership that has made FIRO possible. Thanks to FIRO, we are capturing more water from recent atmospheric rivers and storing more water in Lake Mendocino. Looking forward to FIRO Lake Sonoma next!



GROUNDWATER

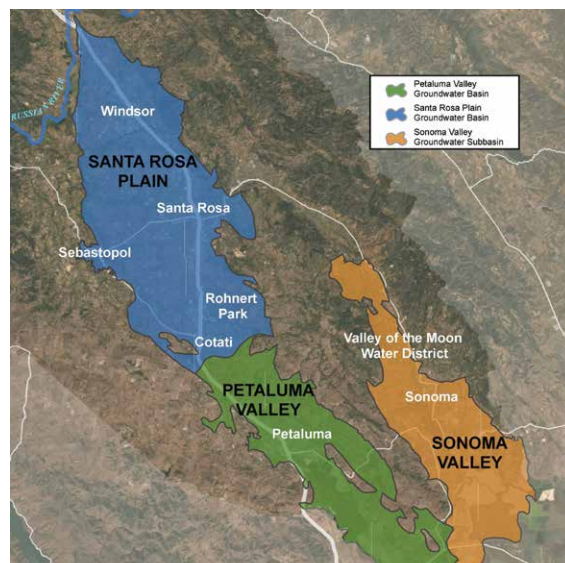
In January 2023, the California Department of Water Resources announced approval of all three local groundwater sustainability plans: Santa Rosa Plain, Sonoma Valley and Petaluma Valley. The plans assess the conditions of the groundwater basins, analyze the basins' sustainability over a 50-year period, and identify projects and actions needed to ensure the basins are sustainable by 2022. Of the 51 plans reviewed by the state agency at that time, the local plans were three of only 12 approved statewide.

In October 2023, the state agency awarded the three basins a total of \$15.1 million in grants to implement the plans. The funds will be used for a variety of projects and programs, including water use efficiency programs for rural well owners and farmers and filling critical data gaps.

Also in 2023, construction of the Santa Rosa Plain Drought Resiliency Project continued, with Sonoma Water renovating one existing groundwater supply well, replacing another and initiating a project that will allow the well to work in reverse. Instead of pumping water out of the ground, the well will receive treated, high-quality drinking water when it's plentiful. The water will be stored underground where it will recharge the aquifer and will be available for use during future droughts and emergencies.

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

-  www.petalumavalleygroundwater.org
-  www.santarosaplainingroundwater.org
-  www.sonomavalleygroundwater.org



WATER USE EFFICIENCY

Sonoma Water and the Sonoma-Marín Saving Water Partnership (Partnership), consisting of 12 water retailers and Sonoma Water, work together on water use efficiency programs to enhance water supply and resiliency, and to meet statewide water efficiency goals. The state of California is developing new efficiency targets based on 2018 legislation (SB 606 and AB 1668) called Making Water Conservation a California Way of Life. This new framework will result in updated water efficiency goals that extend beyond the year 2035 and build on previous reductions achieved under the state’s 20 percent by 2020 target. Sonoma Water and the Partnership will continue to offer programs to lower water use as the state completes the new water-use efficiency standards.



Due to a severe ongoing drought in 2022, the Partnership focused its efforts on achieving significant short-term water savings needed to extend available water supplies and to meet a 20 percent mandatory reduction in Russian River diversions required by a State Water Board Order. To lower water use, the Partnership implemented a year-round outreach campaign in 2022 called Drought is Still Here. A Dye Tab Challenge was sponsored in the spring to raise awareness of the importance of identifying and fixing leaky toilets. Throughout the summer, the Partnership hosted Saving Water Pop Up events at farmers markets, community music venues, festivals, and home improvement stores to hand out drought kits containing items like efficient showerheads, and to share tips and program information to help customers save water.

Focused on easy to implement water saving strategies and the elimination of wasteful practices, the Partnership’s campaign had a continual presence on local news media websites and print publications, on broadcast radio, and on online streaming media sites. A “how to” video series highlighted efficient use of drip irrigation, essential tree care during drought, and the importance of timely sprinkler tune-ups. Social media posts also brought awareness to the Partnership’s regional programs, such as the Eco-Friendly Garden Tour, which continued to be offered in an online virtual format due to COVID concerns. By late fall, the Partnership had achieved a 30 percent reduction in Russian River diversions, and by year’s end annual water use fell to a new low of 93 gallons per capita per day.

As a testament to the good work being done, the U.S. Environmental Protection Agency (EPA) awarded the Partnership the 2023 WaterSense Promotional Partner of the Year Award for its efforts in promoting water use efficiency through the 2022 Saving Water Pop Up events, and was additionally awarded one of twelve 2023 WaterSense Sustained Excellence Awards for its Qualified Water Efficient Landscaper (QWEL) program – an irrigation-professional certification and training program. This is the seventh EPA WaterSense Sustained Excellence Award for QWEL.

With predictions that our future will be drier than our past, the response and collective actions of our community to save water during the drought are reassuring as we continue to take steps to make water conservation a California way of life.

To learn more about the Partnership and its programs, visit

[▶ www.savingwaterpartnership.org](https://www.savingwaterpartnership.org)



WASTEWATER TREATMENT

SANITARY SEWER MANHOLE INSPECTION PROGRAM

Sonoma Water’s Maintenance Division launched the Sanitary Sewer Manhole Inspection Program in 2023, ensuring that these critical access points remain in optimal condition. By combining state-of-the-art 360° video inspection technology with artificial intelligence-assisted coding, Sonoma Water can streamline the inspection process, enhance data accuracy, and proactively address maintenance needs.

Using high-resolution cameras capable of capturing panoramic views within the manhole enabled inspectors to assess the manhole condition comprehensively. The panoramic view ensures that no detail is overlooked, reducing the risk of missed defects, while allowing inspectors to assess the manhole without entering it physically, reducing exposure to hazardous gases and minimizing safety risks.

To augment the inspection process further, AI-assisted coding is integrated into the program, using machine learning algorithms to detect and categorize cracks, corrosion, root intrusions and structural damage within the manhole. The system assesses the severity of defects, enabling prioritization of maintenance based on the level of urgency.

By optimizing the inspection process, Sonoma Water can ensure the longevity and reliability of its sewer systems, protect public health, and contribute to a cleaner environment while minimizing operational costs. This forward-thinking approach underscores the commitment to efficient and sustainable infrastructure management.

SANITATION RATE RELIEF PROGRAM

In 2023, Sonoma Water launched a Sanitation Rate Relief Program to pay one half of eligible low-income residential customer sewer bills. As a result of the rate relief program, 167 sanitation customers received more than a total of \$127,000 in rate relief. This program is expected to reduce costs for hundreds of eligible customers on an ongoing basis.

The program will be offered to income eligible customers April through June each year. Customers will be notified in the annual newsletter and on Sonoma Water’s website.

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

STREAM MAINTENANCE

Sonoma Water maintains 75 miles of flood control channels and has easements for maintenance on 150 miles of creeks



Cubic yards of sediment removed:



32,008

Cubic yards of vegetation removed:



2,760

Pounds of trash removed:



83,280

Miles of creek worked:



31



CLIMATE

ADVANCED QUANTITATIVE PRECIPITATION INFORMATION

Sonoma Water is nearing completion of implementing a \$19.8 million grant provided by the California Department of Water Resources to create the Advanced Quantitative Precipitation Information system. The AQPI project includes installing new high resolution weather radars in the north, south, east, and west quadrants of the San Francisco Bay Area to provide more precise atmospheric river rainfall forecasting. Fifty percent of major flooding in the Bay Area, and closer to 70 percent in the North Bay, has come from atmospheric rivers.

The new weather radar and forecasting system will give flood control managers, emergency responders, transportation officials and media outlets more precise information on where, when, and the intensity of expected rainfall and subsequent stream flow rates. The south and north bay radars have been operational since 2017. The weather radar in the east bay became operational in 2023. The weather radar in the west bay on the San Mateo peninsula will become operational in 2024. A fifth radar facing the Pacific Ocean on the Marin coast to detect oncoming atmospheric rivers was approved in 2023 by Marin's Board of Supervisors for deployment in 2024.

Learn more at

[▶ http://sonomawater.org/aqpi](http://sonomawater.org/aqpi)



CLIMATE ADAPTATION PLAN

Sonoma Water’s Climate Adaptation Plan, adopted by the Board of Directors in October 2022, identified 77 actions across Sonoma Water’s water supply, flood and sanitation portfolios. As of October 2023, 49% of those actions were in progress, with another 13% of actions planned for near-term implementation. Within the Anchor Project portfolio, a term used to summarize a series of projects reflecting hallmark concepts, such as Forecast-Informed Reservoir Operations, 80% of projects were in progress with 8% planned.





INTERNAL PROGRAM SERVICES

A new section formed in 2023, Internal Program Services supports internal program development with the following sections: Emergency Management, Security Services and a formal Project Management Office.

EMERGENCY MANAGEMENT SECTION

In 2023, the Emergency Management Section completed the Emergency Concept of Operations document (CONOPS). The CONOPS outlines Sonoma Water's tactical response to major emergencies that may impact critical sites, locations, or infrastructure within the water, wastewater and flood control systems. The plan establishes and provides a common understanding of our response system with the objective of conducting rapid situational assessment and incident stabilization activities. The CONOPS can be automatically employed after a sudden onset emergency event, such as an earthquake, or in anticipation of a forecasted event such as a winter storm. The CONOPS also establishes seven Incident Command Posts throughout the county to serve as hubs for resource distribution and communications for field-based staff.

Emergency Management trainers took Sonoma Water staff through 525 individual emergency training and exercise hours in 2023, including five training hours by each Emergency Operations Center staff member to prepare for the activation and operations of an Emergency Operations Center and three training hours by each Operations & Maintenance staff member in preliminary damage assessment procedures.

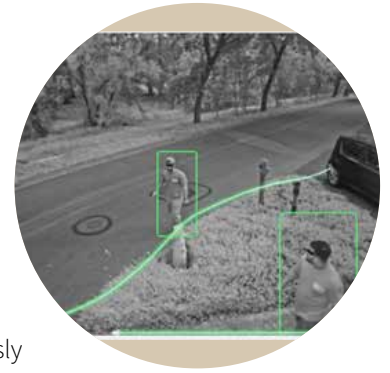
The team upgraded Sonoma Water's primary Emergency Operations Center to support a coordinated emergency response and develop established the EOC Handbook, which contains standard operating procedures, forms and tools that guide the operations of the EOC.

Emergency managers stocked 10 Sonoma Water facilities across the county with emergency supplies kits, which include water, food, flashlights, radios, and PPE, for use by employees during emergencies.

SECURITY SERVICES

In 2023, Sonoma Water filled a full-time security analyst position for the first time.

As a function of its mission to safeguard facilities and staff, Security Services began to upgrade the physical security systems across our infrastructure. The upgrade process began in May with a camera safety project aimed at replacing outdated or previously removed cameras within our chlorine injection and storage rooms at Wohler, Mirabel and at the Airport-Larkfield Wastewater Treatment Plant. Continued efforts were directed at installing cameras at strategic locations to support operations and security monitoring needs.



Security Services began a security enhancement project including upgraded gate controls, pedestrian gates, camera monitoring, and fencing, for our 24/7 operations facility. This project is set to be completed by spring of 2024.

In 2023, Sonoma Water began moving forward with a facility-wide upgrade to our access control system. This upgrade will allow full integration of all electronic security measures to allow more granular control and settings, ensuring the security of our facilities while allowing staff to have access to the areas they need. This project is currently in the beginning stages and is expected to be complete in early 2024.

PROJECT MANAGEMENT OFFICE

In 2023, the Project Management Office made strides in ensuring that the adopted 2023 five-year Strategic Plan was socialized internally assisted through agency-wide presentations, team presentations and on-site tailgate gatherings for operations, and that it was realized from documented strategic objectives into actionable and executable activities.

In addition to the transition of strategies into actions, the Project Management Office acquired, developed and implemented a strategic plan dashboard to assist in confirming the execution of priority actions while guiding us through further definition of our strategic initiatives.

This platform supports our goal of engaging and aligning the organization around our goals, and ultimately provides a visual and interactive structure for measurement, monitoring and adjustments to our five-year strategic goals and activities.

The Project Management Office is building up the educational foundations necessary for consistent and effective project management at Sonoma Water and will end the 2023 calendar year with broad-based training to cover the essential generally accepted project management principles for all project managers or project team members. Training will broaden in the next calendar year with courses focused on practices and processes specific to Sonoma Water.



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.

During the 2022-23 school year, our water and energy education program led programming for more students than almost any year before. This year the Water Education team collaborated with other environmental education providers in Sonoma County to develop the Pathways Program. The goal of the program is to provide an environmental education experience for every student in Sonoma County. Sonoma Water has received funding from the Community Foundation to implement this program.



12,931 students in 521 classrooms participated in classroom lessons or field trips (direct instruction)



12,532 students participated in the ZunZun musical assembly program



37,448 students in 1,391 classrooms received free school supplies.



86 classes participated in the Steelhead in the Classroom program.



26 videos were received through the high school video contest.



COMMUNITY ENGAGEMENT

Sonoma Water’s Community Engagement Division often acts as intermediaries for the media and ambassadors to the public, providing insight into how the agency conducts its critical core functions. During the winter storms of 2023, the Community Engagement team orchestrated over 15 media interviews and went on to conduct numerous Spanish language interviews on local radio stations throughout the year.

Sonoma Water’s strategic approach to communication informed the production of 17 press releases in both English and Spanish in 2023, resulting in positive earned and organic media coverage, including articles and television spots. The team actively engaged the public by organizing tours of Sonoma Water’s wastewater and water distribution facilities, featuring bilingual guides, and represented the organization at various events such as the Steelhead Festival, Los Cien meetings, Santa Rosa Earth Day and Dia de Independencia.



GRANTS

	GRANTOR	LOCAL COST SHARE	GRANT AMOUNT	TOTAL PROJECT COST
State Awards				
Laguna-Mark West Creek Watershed Master Restoration Planning Project	CDFW	\$0	\$84,245	\$84,245
RRCSD Force Main Emergency Replacement/Repair Project	CA State Water Resource Control Board	\$0	\$2,321,273	\$2,321,273
Foothill Yellow-legged Frog Distribution and Abundance at Sugarloaf Ridge Park Project	CA Dept of Water Resources	\$0	\$27,233	\$27,233
2022 QZ Mussel Inspection Program at Lake Sonoma	CA Dept of Boating and Waterways	\$0	\$399,994	\$399,994
		\$0	\$2,832,745	\$2,832,745
Federal Awards				
RRCSD Headworks, Lift Stations and Force Main Planning Project	State Water Board	\$0	\$2,089,915	\$2,089,915
Phase II - SVCSD Secondary Clarifiers Retrofit	FEMA	\$1,167,295	\$3,589,052	\$4,756,347
Ely Booster Station Hazard Mitigation Project	FEMA	\$666,667	\$500,000	\$1,166,667
NBWRA Phase II Projects	U.S. Department of Interior Bureau of Reclamation	\$20,803,966	\$6,934,655	\$27,738,621
Sonoma Marin Drought Resiliency Program	U.S. Department of Interior Bureau of Reclamation	\$2,444,445	\$2,000,000	\$4,444,445
		\$25,082,373	\$15,113,622	\$40,195,995
Other Awards				
Foothill Yellow-legged Frog (FYLF) Distribution and Abundance at Sugarloaf Ridge Park Project	CA Dept of Water Resources	\$0	\$27,233	\$27,233
Environmental Education Program	Sonoma County Community Foundation	\$0	\$150,000	\$150,000
Water Security Projects	Sonoma County	\$0	\$2,980,645	\$2,980,645
		\$0	\$3,157,878	\$3,157,878
	GRAND TOTAL	\$25,082,373	\$21,104,245	\$46,186,618

Eco-FRIENDLY GARDEN TOUR

SONOMA & MARIN COUNTIES



www.savingwaterpartnership.org





**Sonoma
Water**

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