



2018  
**ANNUAL  
REPORT**



**Sonoma  
Water**





Sonoma Water was created in 1949 by a special act of the California Legislature.  
The Sonoma County Board of Supervisors acts as the Board of Directors of Sonoma Water.



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WELCOME

MESSAGE FROM JAMES GORE, CHAIR, BOARD OF DIRECTORS, SONOMA WATER



The past year was critical for the entire region as we recovered from the fires of 2017. Sonoma Water helped lead the charge in allowing us to come back stronger than we were before. Between spearheading a program to provide access to sewer for hundreds of homes on aging septic infrastructure, and working to get essential command and control fire cameras placed in key locations throughout the county, Sonoma Water continued to prove itself a leader in resilience.

In One Rain, Sonoma Water has created a tool that leverages both new and existing stream monitoring, rainfall and reservoir levels and provides real-time data that’s invaluable during possible flood events. Overall, 2018 raised our awareness that infrastructure security must be a primary concern, in order to continue our mission to provide high quality drinking water to more than 600,000 residents in areas of both Sonoma and Marin counties.

The new year will bring its own share of challenges, but I am confident that, with its impressive team of professionals, and the support of my fellow directors, Sonoma Water will be more than ready for the challenges that present themselves in 2019. Thank you and onward!

James Gore, Chair, Board of Directors, Sonoma Water

MESSAGE FROM GRANT DAVIS, GENERAL MANAGER, SONOMA WATER



The year 2018 will forever be a milestone year in our organization’s colorful history. We gave a new voice and face to our five unique divisions at Sonoma Water with a new name and logo. Through our Community Engagement Initiative, we have evolved further with changing times and recommitted ourselves to a culture of mutual support, transparency and open dialogue with the public.

For Sonoma Water, 2018 confirmed that infrastructure security should continue to be at the top of our priority list.

At our core, we produce CLEAN water for our customers. Through professional engineering, skilled maintenance and remarkable planning we provide RELIABLE service. Our work is ESSENTIAL and our organization’s greatest asset, our people deliver EVERY DAY.

I am very proud to lead such a skilled group of doers, organizers and inventive thinkers. People who plan, build and maintain the miles of pipelines, natural and engineered channels, and manage the eight sanitation districts and zones in our care remain our organizations greatest asset.

Thank you to our great staff, Board, partners, customers and community members for your many contributions throughout the year to ensure Sonoma Water delivers on our mission.

Grant Davis, General Manager, Sonoma Water



WATER SUPPLY

SOURCE

Rainfall

STORAGE

Lake Sonoma, Lake Mendocino, Russian River

TRANSMISSION

109 miles of aqueduct pipeline

POPULATION SERVED

Approximately 600,000 residents in portions of Sonoma and Marin Counties.

WATER CONTRACTORS

City of Santa Rosa  
City of Rohnert Park  
Town of Windsor  
North Marin Water District  
City of Petaluma

City of Cotati  
City of Sonoma  
Valley of the Moon Water District  
Marin Municipal Water District



WATER SUPPLY UPDATE



RAINFALL IN SANTA ROSA : OCTOBER 2017-18

25.12” of rainfall

RAINFALL IN UKIAH : OCTOBER 2017-18

23.49” of rainfall

LAKE SONOMA STORAGE

76.4% of water supply capacity

LAKE MENDOCINO STORAGE

100.7% of target water supply curve



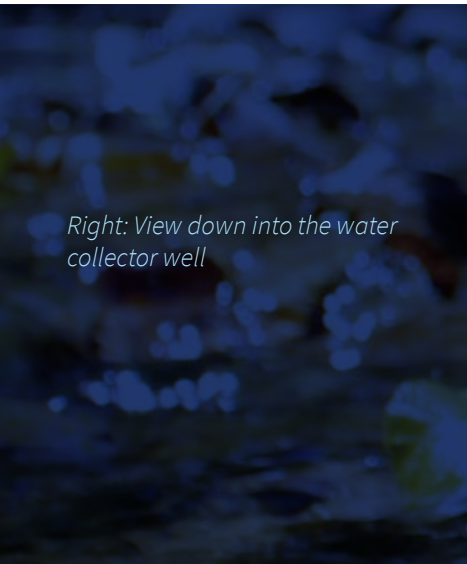
# WATER SUPPLY

## COLLECTOR 6 MAINTENANCE

Collector 6, built in 2006, is Sonoma Water’s largest facility in terms of water production. After doing a baseline collector capacity analysis in 2008 to determine how much water came from each of the twelve laterals, the same test was done this year to assess any degradation to the laterals. Doing so allows Sonoma Water to determine if a preventative maintenance program is needed to help prolong the life of this unique facility.



Left: Collector well 6 pump



Right: View down into the water collector well



## GROUND WATER

Under the Sustainable Groundwater Management Act (SGMA), three Sonoma County groundwater basins are required to form Groundwater Sustainability Agencies (GSAs) and develop a Groundwater Sustainability Plans by 2022. The Petaluma Valley GSA, Santa Rosa Plain GSA and Sonoma Valley GSA each met regularly throughout 2018 to discuss GSA financing for the creation of the plans, the current conditions of each basin and a timeline for developing the plans. Each of the three GSAs was awarded a \$1 million grant from the California Department of Water Resources (DWR) to support development of the GSP.

The Rate and Fee Studies evaluated a variety of different financing strategies for each GSA in terms of fairness, legality and ease of implementation. A series of public workshops were held in Spring 2018 to understand community needs related to groundwater. The challenge led the Boards of the Sonoma Valley and Petaluma Valley GSAs to opt for continued member contributions. In Santa Rosa Plain, the Board is still exploring options for a fee based on the best approximation of groundwater use.

In May of 2018, DWR released its draft recommendations for groundwater basin reprioritization. Its draft recommendation elevated the status of Sonoma County’s three basins from medium to high priority.

To keep up with the GSAs, visit their new websites:

<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



### FUN FACT:

The Airport-Larkfield-Wikiup Sanitation Zone's treatment plant was originally built in the 1940's to accommodate the Sonoma County Airport. Between February 1943 and January 1946, the U.S. Fourth Air Corps operated the Sonoma County Airport. At that time, it was known as the Santa Rosa Army Airfield and was used primarily to train fighter groups and squadrons. At its peak, some 300 to 500 aircraft and 10,000 personnel were based on the army field.



# SEWER LATERAL INSPECTION PROGRAM



The Sonoma Valley County Sanitation District (District) embarked this year on a Private Sewer Lateral Inspection Program. Property owners are offered free inspections of their private sewer laterals, the pipe that carries wastewater from their residence or business to the sewer main. If the inspection indicates the lateral requires repairs, the property owner will have one year to complete the repairs. The District is offering rebates of up to \$1,000 for repairs, and also offering low-interest financing for repair work that can repaid on property tax bills. Repairing sewer laterals, in addition to the ongoing collection system repairs by the District, are part of an ongoing effort to prevent sewer overflows and protect public health and the environment.



WASTEWATER TREATMENT

LARKFIELD SEWER EXPANSION PROJECT



The devastating October 2017 Wildfires destroyed portions of the Larkfield area, including the entire Larkfield Estates neighborhood. Prior to the fires, most of the neighborhood was on individual septic systems and was not served by the Airport/Larkfield/Wikiup Sanitation Zone (ALWSZ), though the areas are within the zone's boundaries. At the request of residents who are rebuilding following the fires, the ALWSZ is planning to extend the existing sewer collection system into the Larkfield Estates neighborhood, and several adjacent areas. The project is currently being designed with an estimated completion date of summer 2020.



## WASTEWATER TREATMENT

### WASTEWATER WOMAN



### POLLUTION PREVENTION

Sonoma Water's Environmental Services Division implements Pollution Prevention and Source Control programs throughout 8 sanitation Districts and Zones. The aim of these programs is to keep treatment facilities in regulatory compliance and prevent pollutants from reaching waterways through Sonoma Water facilities. This is done by providing outreach and education to the users of the facilities and by conducting inspections, reviewing building plans and requiring pretreatment at industrial and commercial facilities.

### FOG

When poured down drains, fats, cooking oil and greases (FOG) will solidify and build up on the inside of sewer pipes. Even the smallest amount of FOG, over time can constrict flow in pipes that can result in blockages and even sewage spills into our environment. Common sources of residential FOG include meat drippings, juices and fats, cooking oils and condiments like dressings, spreads and sauces. It is best to put used FOG in a can till it solidifies, then throw it in the trash.

### SAFE MEDICINE DISPOSAL

Do not flush unused medications! Traditional wastewater treatment plants are not designed to remove pharmaceuticals, which when flushed, can pass through the treatment plant and end up in the environment. Pharmaceutical drugs can be disposed of at approved take back locations throughout the county or via mail-back envelopes. For more information and a list of locations where medications are accepted please visit [www.safemedicinedisposal.org](http://www.safemedicinedisposal.org).

### WIPES

There are only three things that should be flushed down the toilet: pee, poop, and toilet paper. Items such as sanitary wipes, floss and hygiene products do not readily break down in the sanitary system and become entangled in pipes and pumps. Even items labeled as flushable can lead to blockages that back up sewage into homes and streets presenting a significant and costly environmental hazard.





FLOOD PROTECTION & STREAM MAINTENANCE SERVICES

FLOOD CONTROL & STREAM 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

LAGUNA DE SANTA ROSA

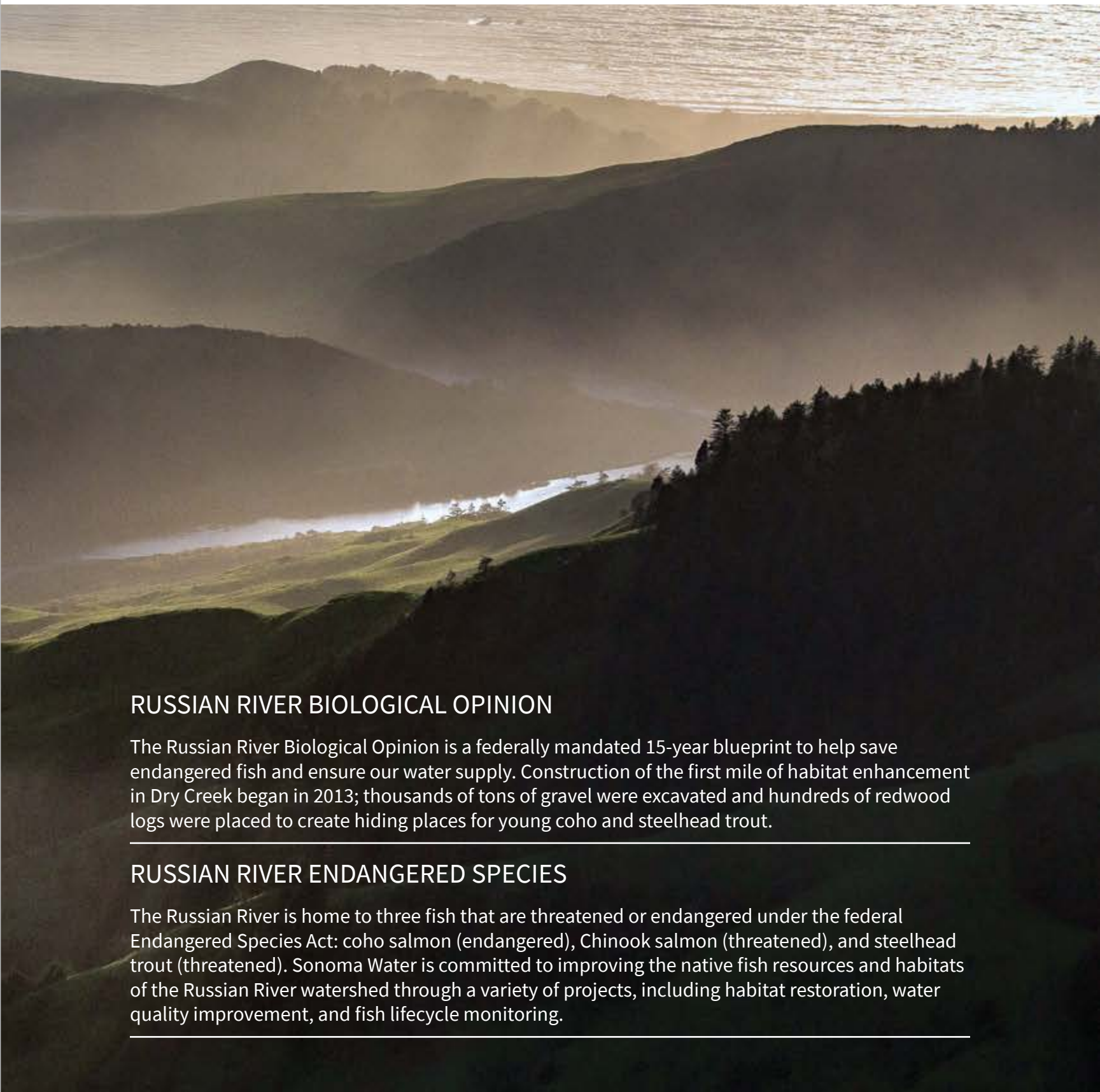
Natural tributary to the Russian River that stores approximately 80,000 acre-feet of water during peak floods

STREAM MAINTENANCE

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







**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.

**RUSSIAN RIVER ENDANGERED SPECIES**

The Russian River is home to three fish that are threatened or endangered under the federal Endangered Species Act: coho salmon (endangered), Chinook salmon (threatened), and steelhead trout (threatened). Sonoma Water is committed to improving the native fish resources and habitats of the Russian River watershed through a variety of projects, including habitat restoration, water quality improvement, and fish lifecycle monitoring.



BIOLOGICAL OPINION UPDATE



DRY CREEK HABITAT ENHANCEMENT PROJECT

The Dry Creek Habitat Enhancement Project achieved a key milestone this year: as of November, 2018 a total of 3.14 miles of habitat enhancement were completed. Resource agencies continue to work with Sonoma Water and the U.S. Army Corps (Corps) of Engineers to evaluate the success of the project and work toward the eventual enhancement of an additional three miles of habitat in Dry Creek.

The 2018 construction season got underway in June and included work on multiple habitat enhancement sites in two separate reaches of Dry Creek. Reach 4A, consisting of three side channels and a modification to the downstream-most grade control sill, is being constructed by the US Army Corps of Engineers for Sonoma Water under the Continuing Authorities Program. The Corps began work in June and finished by mid-November.

Reach 14 is located just downstream of Warm Springs Dam and consists of three side-channel features, two of which were completed in October and the third will be begin in the summer of 2019.

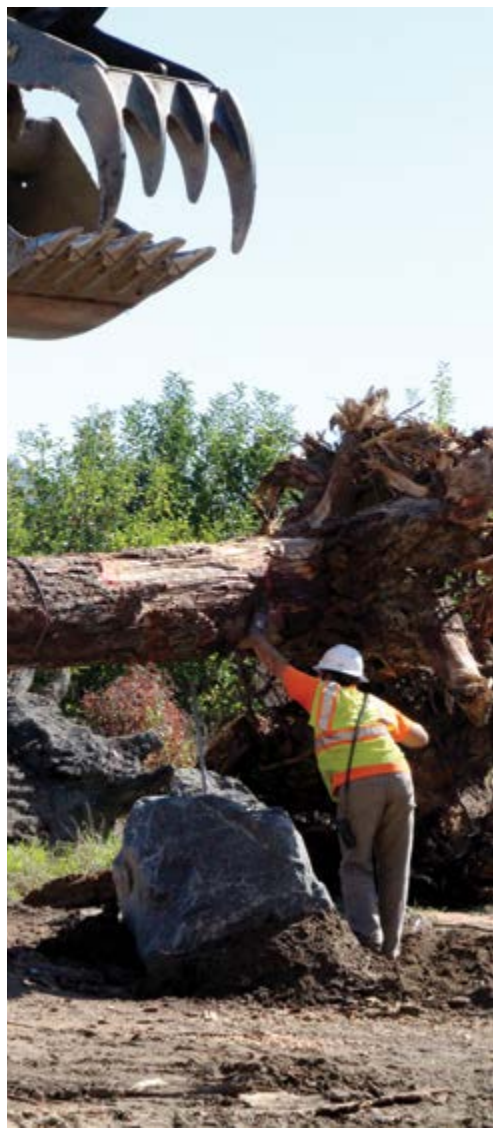
Sonoma Water staff are also working with landowners, design consultants, and the Corps on Miles 4, 5 and 6 of Dry Creek habitat enhancement projects. The Corps effort for Miles 4-6 planning, called a General Investigation (GI) Ecosystem Restoration Study, is currently under review and will hopefully be approved in 2019. Meanwhile, Sonoma Water is meeting with property owners and working with the design consultants as they collect field data and refine habitat enhancement designs.

FISH FLOW PROJECT

The Fish Flow Habitat and Water Rights Project (Fish Flow) Draft Environmental Impact Report (Draft EIR) was released on August 19, 2016. The public comment period closed on March 10, 2017. Three public hearings were held to obtain public comments on the Draft EIR. A total of 623 comments were submitted, either by letters, written cards submitted at the public hearings, or individual oral testimony at the public hearings. Sonoma Water staff are currently evaluating and drafting responses to the comments. Submitted comments fall into a number of categories, but many comments fall into the following general issues:

- Water Quality
- Water Rights
- Recreation
- Proposed Project description and alternatives

Sonoma Water staff are addressing issues raised by comments. Staff are also clarifying the next steps for the CEQA process including potential recirculation of the Draft EIR.







**RUSSIAN RIVER ESTUARY MANAGEMENT PROJECT**

This was the ninth year of implementing the Lagoon Outlet Management Program. The Russian River Estuary closed twice in 2018 as a result of formation of a barrier beach; once in January 2018 and again on the final day of the management period (May 15-October 15). Both closures ended as the result of self-breaching of the barrier beach.

Biological and water quality monitoring was conducted when the season began on May 15. Staff are working on data analysis and preparation of reports for the prior year management season. The annual Estuary Project community meeting was held in May in Jenner and the 2018 Outlet Channel Management Plan was discussed, in addition to presentations on beach morphology, water quality and pinniped monitoring results.

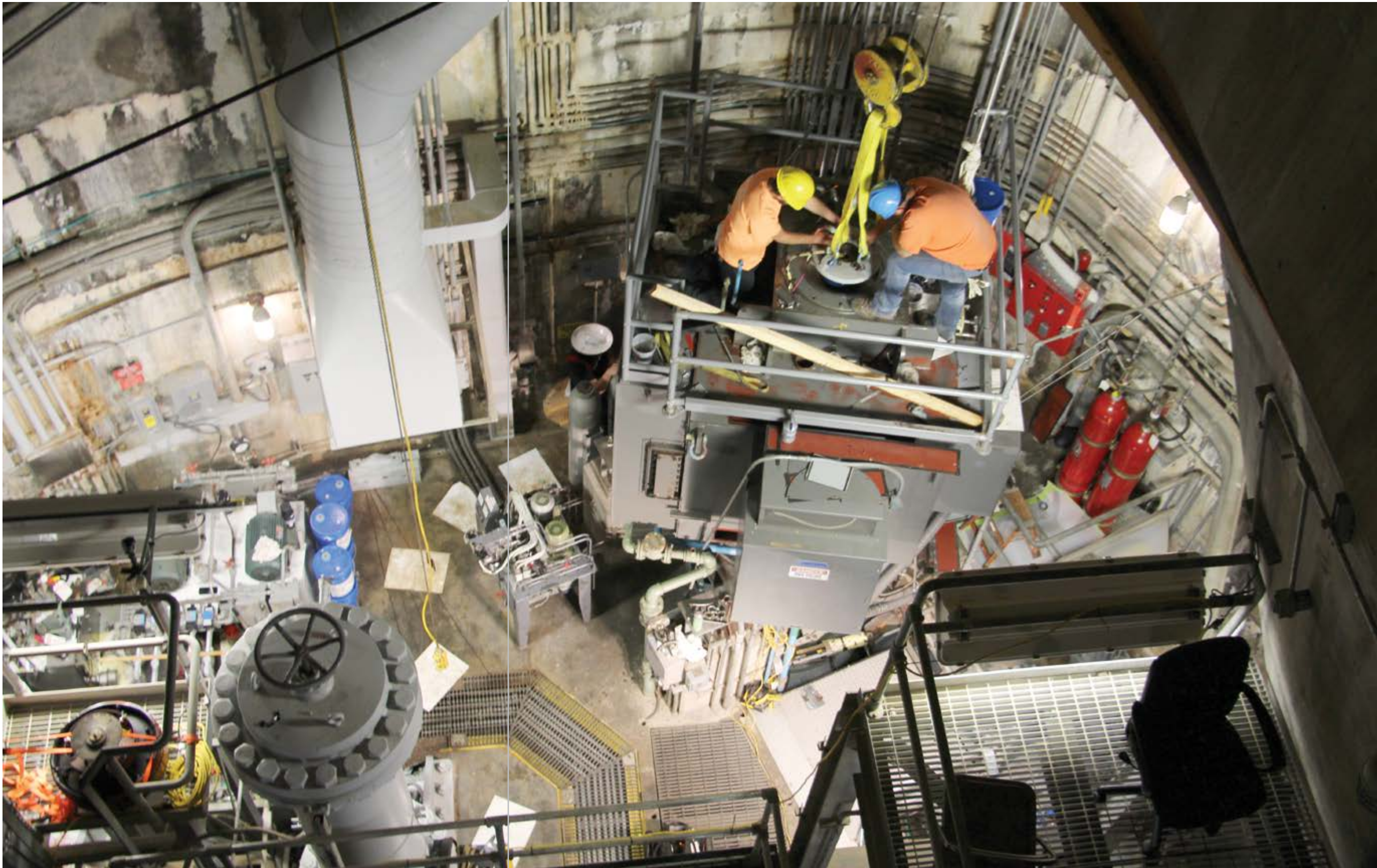




CARBON FREE WATER

WARM SPRINGS DAM  
HYDRO TURBINE

In 2016, a condition assessment was performed on the Warm Springs Dam hydropower facility, to gauge efficiency after 25 years in operation. The condition assessment required disassembling the entire system, inspecting and testing internal components, and reassembling the system. The condition assessment found that the hydropower system is generally in good shape mechanically, but the turbine vibrated at low flow rates, was slightly out of alignment, and had power production that was 6% less than what it could be. In addition to these mechanical deficiencies in the powerhouse, it was found that the electrical instrumentation and control systems are outdated. Upon reassembly, the alignment was corrected, the vibration decreased, and power production improved. A replacement of the electrical instrumentation and control systems is currently being designed.





## ENVIRONMENT

### QUAGGA AND ZEBRA MUSSEL INSPECTION PROGRAM

#### STATE BILL TO FUND IN INSPECTION SITES

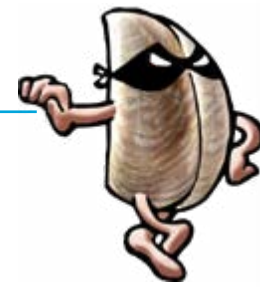
Governor Jerry Brown signed into law Senate Bill 790, authored by State Senator Mike McGuire that will allow any person or entity that manages any aspect of the water in a reservoir where recreational, boating, or fishing activities are permitted, such as Sonoma Water, to apply for and receive grant funding to prevent the spread of invasive quagga and zebra mussels.

Local legislators also supported the bill including Assembly Member Marc Levine. “Sonoma Water can now apply for critical mussel prevention dollars to bolster our prevention efforts and keep our waterways mussel-free,” said Sonoma Water Board of Directors Chairman James Gore. “We appreciate the support of Senator McGuire and our local representatives whom worked tirelessly to develop and pass SB 790. Governor Brown’s signature sends a strong message that protecting our water resources from invasive species remains a top statewide priority.”

Quagga and Zebra mussels are two species of non-native freshwater mussels from Eurasia that can disrupt the ecological balance of waterbodies and reduce their recreational value, and impede distribution of water supply systems by encrusting water intakes, pipes, and other structures. To minimize further impacts to the State it is important to prevent them from being spread.

The signing of SB 790 into law was in response to a recent positive mussel detection on a boat trying to enter Lake Mendocino. Before entering Lake Mendocino, a specially trained dog detected quagga mussels on the boat’s engine. The boat was not allowed to enter the waterway and was decontaminated. The close call drew immediate attention from regional water resource managers and local legislators to increase mussel prevention funding and programming. Prior to the SB 790, local water managers, such as Sonoma Water, were not allowed to receive state mussel prevention dollars if the facility was not completely owned by the local water manager. Lake Sonoma and Lake Mendocino are owned by the U.S. Army Corps of Engineers, however Sonoma Water is the local co-sponsor of the facilities and manages water flows from the reservoirs for water supply purposes. SB 790 now allows the local sponsoring agencies of any waterway, such as Sonoma Water, to apply for and receive the highly sought-after state mussel prevention funds.

In 2012, Governor Brown signed into law legislation (AB2443) that requires the Department of Motor Vehicles (DMV) to collect an additional fee (\$16 every two years) on behalf of the Department of Parks and Recreation, Division of Boating and Waterways (DBW) on vessels used in freshwater and subject to registration in the State of California. Proof of fee payment is demonstrated by display of a unique sticker alongside the registration sticker. The fee funds prevention programs at uninfested reservoirs open to the public for recreational activities. These grants will help water managers develop prevention programs, implement programs, or expand upon an existing program.





## GRANTS

### LOCAL HAZARD MITIGATION PLAN

A Local Hazard Mitigation Plan (LHMP) forms the foundation for a community's long-term strategy to reduce disaster losses and break the cycle of disaster damage, reconstruction, and repeated damage.

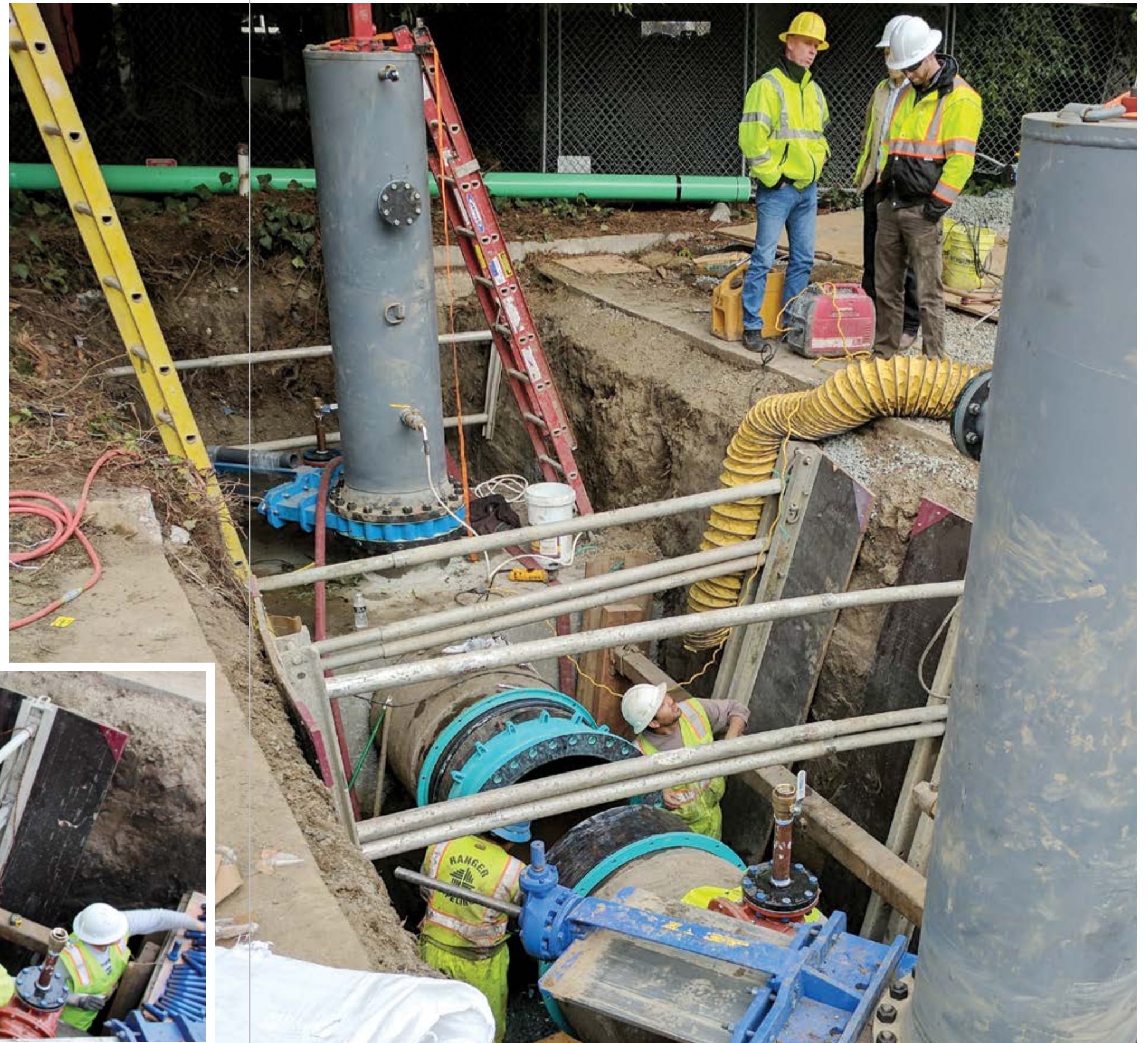
The Federal Emergency Management Agency (FEMA) utilizes LHMPs to issue grant funding for pre-disaster and hazard mitigation actions.

Sonoma Water's LHMP, which is a blueprint for reducing the damage to Sonoma Water's infrastructure from natural disasters, such as floods, droughts, fires, and earthquakes – has been formally approved by FEMA.

Sonoma Water must update its LHMP every five years to ensure it remains relevant to current events and system conditions and to meet funding eligibility requirements set forth by FEMA. The LHMP reviewed Sonoma Water's vulnerabilities and risks, as well as a prioritized listing of hazard mitigation actions.

In 2004 Sonoma Water initiated a natural hazard assessment, which was instrumental in creating Sonoma Water's first LHMP in 2008. This LHMP was updated in 2013, and again in 2018 and includes a priority listing of hazard mitigation actions.

To view the LHMP, visit: [www.sonomacountywater.org/secureourwater](http://www.sonomacountywater.org/secureourwater)





COMMUNITY

PUBLIC AFFAIRS

COMMUNITY AND GOVERNMENT AFFAIRS

Sonoma Water’s Community & Government Affairs Group is proud to implement public education and awareness programs. The programs are a major component of Sonoma Water’s strategic business plan and includes implementing legislative, media and community outreach programs.

PUBLIC TOUR FACTS

3

Flood tours  
one held in each  
flood zone  
(1A, 2A, 3A)

6

Water supply tours  
in both English and  
Spanish

2

Wastewater  
treatment plant  
tours





COMMUNITY

WATER EDUCATION UPDATE

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

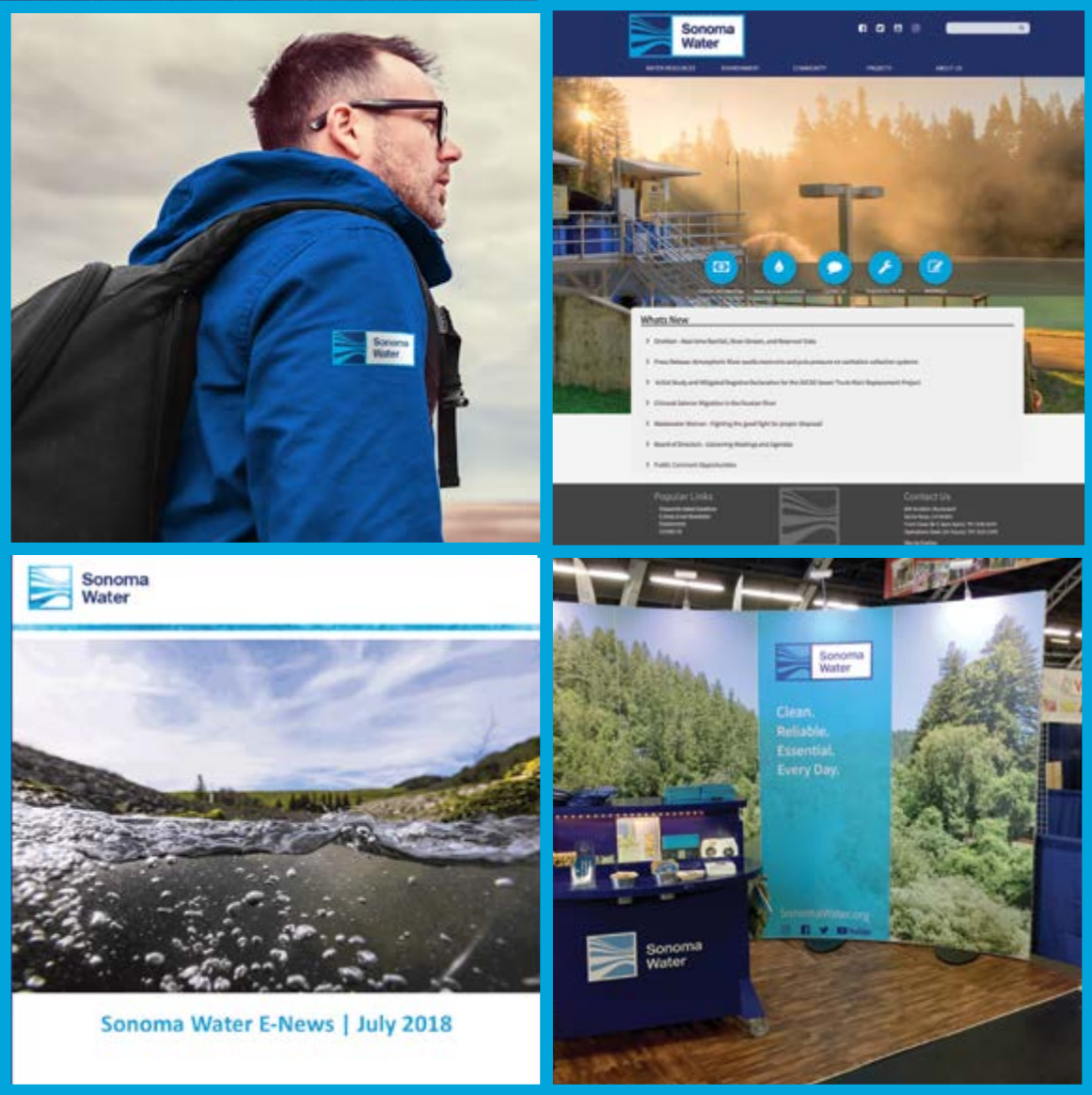
During the **2017-2018** school year, more than **11,296 students** received direct instruction through classroom and field visits. Curriculum materials were provided for over **30,000 students**. **Two teacher** workshops were held, with **81 teachers** attending. The Musical Watershed Assembly Program reached **9,282 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 **62 participants** and a **calendar poster contest** with **3,600 participants**. A new education program about renewable energy was created this year, through a collaboration with Sonoma Clean Power.







As part of the Strategic Plan, Sonoma Water’s Community & Government Affairs Department spearheaded a “Community Engagement Initiative” in an effort to increase public transparency and awareness of our day-to-day operations. To better communicate and engage with our community, Sonoma Water has an updated mission, visual identity and revamped website.



sonomawater.org



COMMUNITY

MISSION: **CLEAN. RELIABLE. ESSENTIAL. EVERY DAY.**







404 Aviation Boulevard, Santa Rosa, CA 95403  
[sonomawater.org](http://sonomawater.org)