



## Legislation Text

---

**File #:** 2019-1172, **Version:** 1

---

**To:** Board of Directors, Sonoma County Water Agency  
**Department or Agency Name(s):** Sonoma County Water Agency  
**Staff Name and Phone Number:** Carlos Diaz / 547-1956  
**Vote Requirement:** Majority  
**Supervisory District(s):** First, Third, and Fifth

**Title:**

Flood Warning Monitoring Network 2019-2020 Expansion

**Recommended Action:**

In an ongoing effort to protect the public and property during storm events and inform Sonoma County Water Agency infrastructure operations:

Authorize Sonoma County Water Agency's General Manager to execute an agreement with OneRain Incorporated to install and configure an expansion of the existing network of stream and rain gauges as part of an early warning and monitoring system to protect the public and property during storm events and to inform water system and flood control operations, in the not-to-exceed amount of \$178,900. (First, Third, and Fifth Districts)

**Executive Summary:**

In response to the 2017 firestorm, the Sonoma County Water Agency (Sonoma Water) engaged OneRain Incorporated (Consultant) to install a flood warning monitoring network consisting of rain and stream gauges throughout the Tubbs and Nuns fire burn areas to provide early detection of post-fire flood conditions in burn scars and areas downstream that could be impacted by flash floods and debris flows. This monitoring network provides the National Weather Service with the intelligence it needs in real time to issue flash flood warnings to be relayed via the Emergency Alert System and Wireless Emergency Alert. The monitoring network is also used by Sonoma Water field crews during and after storm events to respond to hazard conditions identified by the monitoring network. This item requests authorization to further expand this network to monitor conditions in Sonoma Water flood control reservoirs and within the Russian River to inform operations at the Mirabel facilities. Under this Agreement, Consultant will install and configure five new locations in the flood warning monitoring network, and provide one year of system support and maintenance.

**Discussion:**

HISTORY OF ITEM/BACKGROUND

As a result of the Sonoma Complex Fires in 2017, dangerous conditions threatened numerous properties in and around the burn areas of Sonoma County, including some properties owned or maintained by Sonoma Water. A Watershed Emergency Response Team, consisting of CalFire, California Geologic Survey, California Natural Resources Agency, California Governor's Office of Emergency Services, California Department of Water Resources, and the California State Water Resources Control Board, initiated efforts to assess the risks of landslides and flooding posed by fire-impacted zones throughout the area. This assessment was used to develop preliminary emergency protection measures needed to avoid life-safety threats.

The analyses for the Tubbs and Nuns Fires developed recommendations for watch and warnings for hazards, including an early warning system for flood and landslide risks. The analyses concluded that some of the burn areas would exhibit elevated runoff and streamflow rates as well as significantly increased erosion. The analyses also indicated a higher potential for landslides, debris flows, and flash floods that could be a risk to public safety and property. Sonoma Water engaged Consultant to install the initial stages of the network in response to the recommendations. Stream and rainfall monitoring gauges were strategically located and installed at 22 sites to help assess areas of elevated risk.

#### NETWORK EXPANSION

Sonoma Water owns, operates, and maintains four critical flood detention reservoirs, constructed in the early 1960s as part of the Central Sonoma Watershed Project, and provides flood protection services within Flood Protection Zone 1A - the Laguna de Santa Rosa/Mark West Creek watershed. Furthermore, Sonoma Water owns and operates the Mirabel water facilities on the Russian River, consisting of the Mirabel and Wohler Collectors, the Mirabel Inflatable Dam, and associated fish screening and fish passage facilities. This system is essential for providing drinking water to over 600,000 residents in Sonoma and northern Marin counties.

Following initial installation of the flood warning monitoring network in response to the WERT analyses in the burn areas, Sonoma Water identified three additional locations, not within areas affected by fire, where rainfall and stream gauge data collection would be useful for flood protection. These sites and sensors were installed in the spring of 2018 and included rain and stream gauges within the Copeland Creek, Nathanson Creek, and Santa Rosa Creek watersheds.

Sonoma Water continues to seek opportunities to improve the network and inform our operations. The requested expansion proposed for FY 2019-20 is focused on installing water level sensors within each of Sonoma Water's four flood control reservoirs that form the Central Sonoma Watershed Project. This is critical to understanding operation of the reservoirs as Sonoma Water evaluates the impact of future climate on the functionality of these reservoirs and their ability to continue to provide flood protection for the community. This expansion also includes water level sensors to be placed both upstream and downstream of the Mirabel Rubber Dam to inform operations of the dam and infiltration basins that recharge groundwater into the aquifer that provides water supply to our wholesale customers.

#### SELECTION PROCESS

On November 20, 2017, Sonoma Water emailed eight firms to request proposals for the installation, configuration, and support of a flood warning monitoring network and selected Consultant to perform the initial network setup. To standardize and provide continuity with the existing proprietary systems, Consultant will continue with the network expansion.

Sonoma Water may seek to amend or enter into subsequent agreement(s) with Board approval if required, relying upon this competitive selection process, if additional expansion is needed.

#### SERVICES TO BE PERFORMED

Under the proposed agreement, Consultant will install, configure, and support the expansion of the flood warning monitoring network, which includes water level sensors at each of our four flood control reservoirs

within Central Sonoma Watershed Project and two water level sensors at Mirabel. In addition, rain gauges will be installed at two reservoirs where they currently do not exist (Spring Lake and Matanzas Reservoirs already have rain gauges) and at Mirabel. Consultant will install standpipes with power equipment, data collection and transmission system, and appurtenances required to connect new sites and sensors into overall network. The agreement also includes a task for ongoing system support and maintenance.

The cost of services will not exceed \$178,900; the term end date is December 31, 2020.

The agreement includes two options for Sonoma Water to extend this agreement for a period of one year each by providing written notice to Consultant thirty days in advance of the expiration date of the agreement and of the first extension option.

**Prior Board Actions:**

12/05/2017: Approved agreement between Sonoma Water and a consultant [not determined at the time of the Board meeting] for Burn Area Watershed Protection: Flood Warning Monitoring Network in an amount not to exceed \$400,000 for a term of twelve months.

**FISCAL SUMMARY**

<b>Expenditures</b>	<b>FY 19-20 Adopted</b>	<b>FY20-21 Projected</b>	<b>FY 21-22 Projected</b>
Budgeted Expenses	\$178,900		
Additional Appropriation Requested			
<b>Total Expenditures</b>	<b>\$178,900</b>		
<b>Funding Sources</b>			
General Fund/WA GF			
State/Federal			
Fees/Other	\$178,900		
Use of Fund Balance			
Contingencies			
<b>Total Sources</b>	<b>\$178,900</b>		

**Narrative Explanation of Fiscal Impacts:**

Budgeted amount of \$154,900 is available from FY 2019/2020 appropriations for the Flood Control Zone 1A fund and \$24,000 for the Water Transmission fund. No additional appropriation is required.

<b>Staffing Impacts:</b>			
<b>Position Title (Payroll Classification)</b>	<b>Monthly Salary Range (A-I Step)</b>	<b>Additions (Number)</b>	<b>Deletions (Number)</b>
N/A			

--	--	--	--

**Narrative Explanation of Staffing Impacts (If Required):**

N/A

**Attachments:**

Attachment 1: DRAFT Agreement with OneRain Incorporated.

**Related Items “On File” with the Clerk of the Board:**

None