



## Legislation Details (With Text)

**File #:** 2021-0252  
**Type:** Consent Calendar Item **Status:** Agenda Ready  
**File created:** 3/12/2021 **In control:** Sonoma County Water Agency  
**On agenda:** 4/20/2021 **Final action:**  
**Title:** Bay Area Advanced Quantitative Precipitation Information System  
**Sponsors:** Sonoma County Water Agency  
**Indexes:**  
**Attachments:** 1. Summary, 2. Attachment 1, 3. Attachment 2, 4. Attachment 3, 5. Attachment 4

Date	Ver.	Action By	Action	Result
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**To:** Board of Directors, Sonoma County Water Agency  
**Department or Agency Name(s):** Sonoma County Water Agency  
**Staff Name and Phone Number:** Jake Spaulding, 524-8373  
**Vote Requirement:** Majority  
**Supervisory District(s):** Countywide

**Title:**  
Bay Area Advanced Quantitative Precipitation Information System

### Recommended Action:

Authorize Sonoma County Water Agency's General Manager or designee to execute the agreements below, in a form approved by County Counsel, that are related to the Bay Area Advanced Quantitative Precipitation Information System (AQPI), authorize General Manager to terminate these agreements with approval of County Counsel, and authorize the General Manager to amend the Cooperative Agreement to Provide Funding for Shared Temporary Deployment of Precipitation Forecasting System, with approval of County Counsel, to extend the term or increase funding by up to \$25,000:

- Planning Agreement to Form the San Francisco Bay Area Advanced Quantitative Precipitation Information System Project Local Partner Agencies Committee (LPAC) with Santa Clara Valley Water District, San Francisco Public Utilities Commission, and five East Bay agencies (including East Bay Municipal Utility District, Alameda County Water Agency, East Bay Dischargers Authority, Alameda County Flood Control & Water Conservation District, and Contra Cost County Public Works). There is no cost associated with the agreement; all parties use their own staff resources. The term end date is upon execution of an Implementation Agreement.
- Cooperative Agreement to Provide Funding for Shared Temporary Deployment of Precipitation Forecasting System, with five East Bay agencies: East Bay Municipal Utility District, Alameda County Flood Control & Water Conservation District, Alameda County Water District, East Bay Dischargers Authority, and Contra Costa County Flood Control and Water Conservation District, providing funding for AQPI in the amount of \$165,000 and a term end date of December 31, 2021.
- License Agreement for Rocky Ridge in Castro Valley, CA, with American Towers, LLC, for temporary installation of a precipitation forecasting system, in the amount of \$40,361.89, and a term end date

of June 30, 2023, with an option for three additional periods of five years each.

- D) Agreement for System Integration of the Advanced Quantitative Precipitation Information System, with Regents of the University of California - Scripps Institution of Oceanography, in the not-to-exceed amount of \$400,000 and a term end date of April 30, 2023.

**Executive Summary:**

Sonoma County Water Agency (Sonoma Water) has been awarded \$19.84 million in grant funds to implement the San Francisco Bay Area Advanced Quantitative Precipitation Information System Project (AQPI Project). Costs incurred by Sonoma Water in implementing the AQPI Project and associated agreements will be reimbursed with these grant funds or by local project partners.

The purpose of the AQPI Project is to provide more precise rainfall forecasting for atmospheric rivers, which will give flood control managers, including Sonoma Water, emergency responders, transportation officials, and media outlets more precise information on the location, timing, and intensity of expected rainfall.

This item presents for consideration and approval four separate agreements in support of the AQPI Project.

**Discussion:**

**HISTORY OF ITEM/BACKGROUND**

For more than nine years, Sonoma Water and several other agencies in the Bay Area have collaborated with the National Oceanic and Atmospheric Administration (NOAA), Colorado State University's Cooperative Institute for Research in the Atmosphere, the United States Geological Survey - Pacific Coast and Marine Science Center, and the Center for Western Weather and Water Extremes at Scripps Institute of Oceanography, to develop a regional project called the "San Francisco Bay Area Advanced Quantitative Precipitation Information System" (AQPI Project).

The AQPI Project is a multi-year project to provide improved precipitation and hydrologic information to water agencies and other stakeholders in the San Francisco Bay area to assist the region in mitigating flood hazards, maximize water supply, and enhance ecosystem services. The primary emphasis will be to improve short-term (48-hour) monitoring and prediction of high-impact rainfall events. The secondary emphasis will focus on improved medium-range precipitation forecasts (out to 10 days) for water supply.

**San Francisco Bay Area Advanced Quantitative Precipitation Information Project and Grant Funding**

The goal of the regional AQPI Project is to provide early notification of more precise rainfall forecasting for atmospheric rivers, including location, intensity, and amounts, for the improved management of water supply reservoirs, the improved operations of combined sewer and wastewater systems, the improved operations of flood protection facilities, and numerous other benefits to flood control managers, including Sonoma Water, emergency responders, transportation officials, and media outlets. According to a cost-benefit analysis performed by NOAA, implementing the AQPI system can be expected to provide benefits exceeding costs by a ratio of at least 4 to 1. These benefits accrue through a) avoided flood damage costs from early warnings, b) forecast-based operations to maximize reservoir capture for water supply and fisheries flows, c) minimization of water quality impacts from combined wastewater and sewer systems, and d) enhancement of public safety for various transportation modes (pedestrian, highways, marine, and airports).

On January 13, 2016, the Department of Water Resources (DWR) announced statewide Proposition 84 (The Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006)

grant awards that included over \$43 million for water resources-related projects in the San Francisco Bay Area. Nearly half was to go towards funding the regional AQPI Project. Sonoma Water was awarded \$19.84 million in grant funds to implement and serve as fiscal agent for the AQPI Project. Local project partners will host radar sites, after site surveys are finalized during the course of the AQPI Project.

### **Local Partner Agencies Committee Planning Agreement**

The Local Partner Agencies Committee Planning Agreement (LPAC Planning Agreement), which forms the San Francisco Bay Area AQPI System Project Local Partner Agencies Committee (LPAC), is by and between Sonoma Water and Santa Clara Valley Water District, San Francisco Public Utilities Commission, and a group of five East Bay agencies, including East Bay Municipal Utility District, East Bay Dischargers Authority, Alameda County Flood Control and Water Conservation District, Alameda County Water District, and Contra Costa County Flood Control and Water Conservation District.

The LPAC Planning Agreement defines the shared goals and objectives of the parties and establishes the necessary administrative structure to guide AQPI Project development activities prior to the approval of a separate Implementation Agreement. The Implementation Agreement will be developed by the parties to the LPAC Planning Agreement, and will include both a cost allocation structure for installation of the C-band radar and an Operations and Maintenance (O&M) Plan. This separate Implementation Agreement may be amended as needed based upon LPAC membership changes, needed system updates, and/or other changes in status. A party to the LPAC Planning Agreement is not obligated to make financial contributions or participate in the future Implementation Agreement.

Under the LPAC Planning Agreement:

1. The Parties agree to form the LPAC.
2. Sonoma Water agrees to provide administrative support to the LPAC and will ensure committee decisions comply with the DWR grant terms until execution of the Implementation Agreement.
3. Parties act as an unincorporated association of local public entities whose membership benefits and responsibilities are set forth in the LPAC Planning Agreement.
4. Each party to the LPAC Planning Agreement has already made a financial commitment to the AQPI Project and is entitled to seat one representative on the LPAC. The LPAC has discretion to add new members who make future financial commitments on a case-by-case basis.
5. The LPAC may seek to collaborate formally or informally with non-signatory agencies or other entities who offer support for the AQPI Project.
6. The LPAC operates by consensus and will resolve their disputes informally and may choose to engage a facilitator.

The LPAC Planning Agreement became effective upon execution by the first two parties to sign (January 15, 2020, between San Francisco Public Utilities Commission and East Bay Dischargers Authority). Any party who desired to join after that effective date was enabled to do so by executing the agreement and forwarding an executed copy to all then current parties. It has since been signed by a total of seven other parties besides Sonoma Water, so no changes may be made to the agreement.

The LPAC Planning Agreement terminates upon execution of the subsequent Implementation Agreement that replaces the LPAC Planning Agreement. The Implementation Agreement has not yet been executed.

No additional costs beyond contributions previously made are committed in the LPAC Planning Agreement.

### **Cooperative Agreement to Provide Funding for Shared Temporary Deployment of Precipitation Forecasting System**

The Cooperative Agreement to Provide Funding for Shared Temporary Deployment of Precipitation Forecasting System (East Bay 5 Agreement) is a cooperative agreement to share in the costs associated with deploying a precipitation forecasting system in the East Bay at an American Towers site, by and between a group of East Bay agencies, including East Bay Municipal Utility District, East Bay Dischargers Authority, Alameda County Flood Control and Water Conservation District, Alameda County Water District, and Contra Costa County Flood Control and Water Conservation District.

The \$19.84 million DWR grant covers the majority of costs associated with the AQPI Project, but local cost-share is required for several siting and operational tasks.

The parties to the East Bay 5 Agreement (Participants) have identified a potential, suitable site with existing infrastructure, which is currently owned by East Bay Municipal Utility District, and leased and operated by American Towers, LLC.

Participants have requested that Sonoma Water enter into a sublease agreement with American Towers, LLC, on their mutual behalf to allow for the deployment and operations of the precipitation forecasting system at the American Towers site. Participants are willing to share in the costs associated with deploying the precipitation forecasting system at the American Towers site. Sonoma Water is willing to enter into the desired agreements, administer the agreements, and provide overall project management and coordination under the terms described in the East Bay 5 Agreement.

Under the East Bay 5 Agreement, Sonoma Water will (a) coordinate the installation of precipitation forecasting equipment; (b) coordinate and procure data analysis consulting services; (c) prepare and negotiate a lease agreement with American Towers for the purpose of siting and accessing the precipitation forecasting equipment; (d) provide contract administration, for an amount not to exceed a total of \$165,000, and (e) ensure that data from the precipitation forecasting equipment and analysis of that data is provided to the Participants in a format the Participants are able to use.

Each Participant will deposit the amounts listed below with Sonoma Water to cover its anticipated pro-rata share of contract costs and expenses:

1. East Bay Municipal Utility District: \$45,000
2. Alameda County Flood Control & Water Conservation District: \$40,000
3. Alameda County Water District: \$31,000
4. East Bay Dischargers Authority: \$29,000
5. Contra Costa County Flood Control and Water Conservation District: \$20,000

The East Bay 5 Agreement was finalized January 29, 2020 and has been signed by all the other parties, so no changes may be made to the agreement. The term end is December 31, 2021. The Coronavirus pandemic and the fires of 2020 caused a number of delays in executing the agreement. Sonoma Water expects to request an extension to the East Bay 5 Agreement once a new timeline for the overall project is approved by DWR.

## **American Towers, LLC Agreement**

The American Towers, LLC License Agreement is for temporary installation, deployment, and operation of a precipitation forecasting system at Rocky Ridge, off Bollinger Canyon Road, in Castro Valley, California, with American Towers, LLC. The precipitation forecasting system is the property of Sonoma Water pursuant to its agreement with DWR, and is being loaned to Participants in the East Bay 5 Agreement for the purpose of determining whether the American Towers site is suitable for the permanent installation of a precipitation forecasting system, i.e., that the precipitation forecasting system does not cause interference with other equipment already located at the American Towers site and that the site provides the coverage desired by Participants of the East Bay 5 Agreement.

Should the American Towers site ultimately be deemed suitable for a permanent precipitation forecasting system, a new, long-term agreement will be entered into among the East Bay 5 Participants to cover the installation of a new, permanent X-Band Radar System at the site, and to cover long-term maintenance and operational costs.

The cost of the license agreement is \$40,362 for the initial term of the agreement, which is from April 1, 2021 to June 30, 2023. The agreement may be renewed for three additional periods of five years each. Sonoma Water will be permitted the non-exclusive right to install, maintain, operate, service, modify and/or replace its approved equipment (transmitter, receiver, and antenna) at the site for the transmission and reception of wireless voice and data communications signals within permitted frequencies.

## **Scripps Institution of Oceanography at the University of California at San Diego Agreement**

Under the proposed professional services agreement with Scripps Institution of Oceanography at the University of California at San Diego (Scripps) Agreement, Scripps will, in consultation with NOAA, the LPAC, and other San Francisco Bay Area authorities, prepare comprehensive operation and maintenance plans that articulate how the AQPI Project will meet system requirements during routine operations.

The cost of services will not exceed \$400,000; the term end date is April 30, 2023.

### **SELECTION PROCESS**

Scripps was selected for the proposed agreement, because since 2011, Sonoma Water has been collaborating with Scripps as well as NOAA, United States Geological Survey (USGS), and Colorado State University's Cooperative Institute for Research in the Atmosphere, to develop a regional AQPI project. Scripps was selected to prepare the concept of operations plan for the AQPI Project because of this ongoing relationship and because of Scripps' reputation for leading research in climate change impacts and adaptation and innovative technology to observe the planet. In addition, Scripps has worked extensively with Sonoma Water on the Forecast-Informed Reservoir Operations (FIRO) project at Lake Mendocino, including engineering support and preparation of a feasibility study, and is party to an MOU for scientific and education cooperation related to FIRO.

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

## CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) COMPLIANCE:

Sonoma Water's General Manager has determined that the license agreement and temporary placement of a mobile radar system is exempt from CEQA pursuant to Section 15303, New Construction or Conversion of Small Structures, Section 15306, Information Collection, and Section 15311, Accessory Structures, because the license agreement and temporary placement of mobile weather radar equipment at Rocky Ridge would not impact a scenic or historical resource and because the Project consists of data collection, research, and resource evaluation activities that would not degrade the quality of the environment and would not result in any significant or cumulative adverse effect upon the environment. Sonoma Water staff has prepared a Notice of Exemption for the project in accordance with the CEQA, the State CEQA Guidelines, and Sonoma Water's Compliance Procedures for CEQA.

## Prior Board Actions:

2/13/18: Authorized Water Agency's General Manager to execute an agreement with the Board of Governors of the Colorado State University System, acting by and through Colorado State University for installation and management of an X-band Radar Unit through August 31, 2018 in the amount of \$150,000.

2/13/18: Adopted a resolution authorizing adjustments to the Water Agency's Fiscal Year 2017-2018 adopted budget for the General Fund in the amount of \$150,000 for the temporary deployment of precipitation forecasting system.

8/15/17: Authorized Water Agency's General Manager or designee to execute an agreement with the Board of Governors of the Colorado State University System for system design and implementation services through December 31, 2021, in the amount of \$9,945,000, and a separate agreement for related travel expenses through December 31, 2021, in the amount of \$153,000.

8/15/17: Authorized Water Agency's General Manager or designee to execute an agreement with U.S. Department of Commerce National Oceanic and Atmospheric Administration to provide system integration and coordination of the development of the Bay Area Advanced Quantitative Precipitation Information system through December 31, 2021, in the amount of \$6,596,160.

8/15/17: Authorized Water Agency's General Manager or designee to execute an agreement with United States Geological Survey to develop coastal flooding prediction modeling through December 31, 2021, in the amount of \$1,171,000.

8/15/17: Authorized Water Agency's General Manager or designee to execute an agreement with Morrison & Associates for project coordination services through December 31, 2021, in the amount of \$535,430.

8/15/17: Authorized General Manager or Designee to execute four professional services agreements with technical partners to perform work funded by California Department of Water Resources Proposition 84 IRWMP Implementation Grant on Behalf of the San Francisco Bay Region for the AQPI Project; Resolution authorizing adjustments to the adopted FY 2017/2018 budget in the amount of \$9,255,085.

3/01/16: Adopted Resolution Authorizing the General Manager or Designee to Execute an Agreement with the California Department of Water Resources for a Proposition 84 IRWMP Implementation Grant on Behalf of the San Francisco Bay Region

11/5/13: Adopted Resolution Supporting the Proposed San Francisco Bay Area Advanced Quantitative Precipitation Information System to be Included in the San Francisco Bay Area's Proposal under Round 3 of Proposition 84 Integrated Regional Water Management Implementation Grant Funding.

## FISCAL SUMMARY

Expenditures	FY 20-21 Adopted	FY21-22 Projected	FY 22-23 Projected
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Budgeted Expenses	\$330,000	\$65,000	\$170,000
Additional Appropriation Requested			
<b>Total Expenditures</b>	<b>\$330,000</b>	<b>\$65,000</b>	<b>\$170,000</b>
<b>Funding Sources</b>			
General Fund/WA GF			
State/Federal	\$165,000	\$65,000	\$170,000
Fees/Other	\$165,000		
Use of Fund Balance			
Contingencies			
<b>Total Sources</b>	<b>\$330,000</b>	<b>\$65,000</b>	<b>\$170,000</b>

**Narrative Explanation of Fiscal Impacts:**

Budgeted amount of \$330,000 is available from FY 2020/2021 appropriations for the Water Agency General Fund. FY 2021/2022 & 2022/2023 appropriations will be budgeted in that fiscal year.

All costs will be reimbursed by grant funds (State) or reimbursed by the agencies participating in the East Bay 5 Agreement (Fees/Other). Total anticipated expenditures of \$565,000 will be incurred over a period of three fiscal years: \$330,000 in FY 2020/2021; \$65,000 in FY 2021/2022; and the remaining \$170,000 in FY 2022/2023.

<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>

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

N/A

**Attachments:**

1. Planning Agreement to Form the San Francisco Bay Area Advanced Quantification Precipitation Information System Project Local Partner Agencies Committee
2. Cooperative Agreement to Provide Funding for Shared Temporary Deployment of Precipitation Forecasting System
3. License Agreement
4. Draft Agreement

**Related Items "On File" with the Clerk of the Board:**

None