

**PLANNING AGREEMENT TO FORM THE SAN FRANCISCO BAY AREA ADVANCED  
QUANTIFICATION PRECIPITATION INFORMATION SYSTEM PROJECT LOCAL PARTNER  
AGENCIES COMMITTEE**

This “Planning Agreement to form the San Francisco Bay Area Advanced Quantitative Precipitation information System Project Local Partner Agencies Committee” (Planning Agreement) is by and between Sonoma County Water Agency (Sonoma Water), Santa Clara Valley Water District (Valley Water), San Francisco Public Utilities Commission (SFPUC) and a group of East Bay agencies that include East Bay Municipal Utility District (EBMUD), East Bay Dischargers Authority (EBDA), Alameda County Flood Control & Water Conservation District (ACFCD), Alameda County Water District (ACWD), and Contra Costa County Flood Control & Water Conservation District (CCCFCWCD) (collectively, “Parties” and singularly, “Party”).

**RECITALS**

- A. Atmospheric rivers are the main driver of precipitation the SF Bay Area – On average, about 30-50% of annual precipitation on the West Coast occurs in just a few atmospheric river events, contributing to both water supply and flooding risk.
- B. Climate change is intensifying extreme weather. Studies identify a direct link between the extent of warming and the intensity of extreme weather events including the frequency and severity of atmospheric river conditions.
- C. The voters of the state of California passed the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006 (Public Resource Code Section 75001 *et seq.*), also known as Proposition 84, which included funding for Integrated Regional Water Management (IRWM) projects managed by the state of California Department of Water Resources (DWR).
- D. DWR’s IRWM program is a collaborative effort to identify and implement water management solutions on a regional scale that increase regional self-reliance, reduce conflict, and manage water to concurrently achieve social, environmental, and economic objectives.
- E. SFPUC, Valley Water, Sonoma Water, and other entities in the Bay Area Integrated Regional Water Management (BAIRWM) region have collaborated for several years with the National Oceanic and Atmospheric Administration (NOAA) to develop agency-specific projects related to advanced quantitative precipitation monitoring and forecast systems.
- F. In 2013, SFPUC’s Wastewater Enterprise (WWE) initiated a project with NOAA to better model and forecast approaching storm events to optimize operations of the City of San Francisco's combined sewer system. The project envisioned deploying an agency –specific advanced quantitative precipitation monitoring and forecast system by installing three

data-collecting instruments: (1) X-band radar; (2) C-band radar; and (3) Atmospheric River Observatory (ARO). SFPUC WVE completed extensive planning work, but halted their individual project in 2017.

- G. In 2015, Valley Water initiated an agency specific pilot study project with NOAA to use a ground-based X-band radar system to provide more accurate rainfall forecast and mapping prior to the 2016 Super Bowl. This additional information with data from a network of Valley Water’s rain gauges and stream gauges improved Valley Water’s ability to predict, coordinate for, and respond to creek flooding. This pilot project ran from February to May 2016. Following flooding in 2017, the study was renewed for two additional years.
- H. Recognizing that a regional approach to improving precipitation forecasting was beneficial and cost effective, several Bay Area Agencies starting collaborating on a long-term regional project to invest in science and technology. The “San Francisco Bay Area Advanced Quantitative Precipitation Information System” Project (SF Bay AQPI Project or Project) will provide early notification of more precise rainfall location, intensity and amounts by installing 4 X-band radars and 1 C-band radar in the region, as well as, developing standard and customizable data delivery systems accessible to participating agencies. The Project will allow for better situational awareness, the improved operations of combined sewer and wastewater systems, the improved operations of flood protection facilities, better management of water supply reservoirs, improved emergency response, and a myriad of other benefits to transportation and other business sectors for the entire Bay Area.
- I. Sonoma Water, SFPUC, and Valley Water entered into an agreement with the San Francisco Estuary Partnership effective June 1, 2015 to co-fund the preparation of a grant application for the SF Bay AQPI Project to be submitted under Round 4 of Proposition 84 and designated San Francisco Estuary Partnership (SFEP) as the fiscal agent.
- J. On August 6, 2015, the BAIRWM submitted a regional grant proposal that included a suite of projects, including the SF Bay AQPI Project, to DWR.
- K. On January 13, 2016, DWR issued a conditional commitment to award the BAIRWM \$41,305,435 to implement a suite of regional projects, of which \$19,000,000 was designated for the SF Bay AQPI Project, and \$1,858,745 was awarded to SFEP for grant administration on the SF Bay AQPI Project and other projects.
- L. Subsequent to DWR issuing the commitment letter, SFEP determined it could not serve as the fiscal agent for the Project and Sonoma Water agreed to assume the role. As part of the modification, a separate Grant Agreement was drafted with DWR for the SF Bay AQPI Project and an additional \$836,410 in grant reimbursable administration expenses originally allocated to SFEP were allocated to Sonoma Water, bringing the total award for the SF Bay AQPI Project to \$19,836,410.

M. As the LPS, Sonoma Water is acting as the lead agency in managing and administering the IRWM grant award for the SF Bay AQPI Project, including contracting with DWR and sub-grantees. Accordingly, Sonoma Water has entered into contracts with DWR, NOAA, United States Geological Survey (USGS), Cooperative Institute for Research in the Atmosphere (CIRA), Morrison and Associates (M&A), Jennifer Krebs Environmental Planning, and the Bay Planning Coalition (BPC) to support implementation the of the Project. A complete list of the associated agreements executed to-date are listed below:

- (1). Grant Agreement Number 4600011485 between DWR and Sonoma Water for \$19,836,410 was executed on August 19, 2016. The agreement was amended on October 26, 2017 and expires on December 31, 2021. DWR funds are for the design and installation of four (4) X-band radars and one (1) C-band radar, as well as, information systems that will increase the accuracy of weather forecasting and response systems throughout the Bay Area.
- (2). Memorandum of Understanding number 50-35-3RR2NAQ between Sonoma Water and NOAA for \$6,596,159 was executed on August 17, 2017 and expires December 31, 2021. This agreement designated NOAA as the technical lead, and covers tasks including program management, deployment of new monitoring equipment, data assimilation and analysis, development of new predication models, and system integration.
- (3). Agreement 16/17-031 between Sonoma Water and CIRA for \$9,944,053 was executed on August 21, 2017 and expires December 31, 2021. It covers site identification, coordination, procurement, and partial installation costs of (4) X-band radars and (1) C-band radar in the region.
- (4). Agreement 17/18-005 between Sonoma Water and CIRA for \$152,058 was executed on August 21, 2017 and expires December 31, 2021. It covers travel costs for CIRA's activities under 16/17-031 that are not eligible for reimbursement under DWR grant 4600011485.
- (5). Technical Assistance Agreement Number 18WSTAA175836 between Sonoma Water and USGS for \$1,170,833 was executed on March 13, 2018 and covers development and integration of an operational CoSMoS model that will improve flood forecast ability for the San Francisco Bay.
- (6). Agreement 16/17-032 between Sonoma Water and M&A for \$535,430 was executed on August 21, 2017 and had a term ending December 31, 2021. The agreement was for project coordination services including meeting coordination, grant management, siting and permitting assistance, public outreach, and additional services. The agreement was terminated October 1, 2018 following the passing of firm president Carl Morrison. The remaining balance under the contract was reallocated to new consultant(s) to carry on the remainder of the original scope.

- (7). Agreement 18/19-002 between Sonoma Water and JKEP for \$250,000 was executed on November 19, 2018 and expires December 31, 2021. It covers meeting coordination, grant management, siting and permitting assistance, public outreach assistance, and additional services.
- (8). Agreement 18/19-003 between Sonoma Water and BPC for \$300,000 was executed on November 19, 2018 and expires December 31, 2021. It covers stakeholder outreach, business development, and additional services.
- N. In 2017, EBMUD, EBDA, CCFCD, ACFCD, and ACWD in conjunction with Sonoma Water began collaborating on the installation of an X-band radar unit in the East Bay through a separate agreement with an anticipated execution date in early 2020.
- O. In 2018 SFPUC's Water Enterprise re-initiated a project to install an AQPI system X-band radar near San Francisco. The SFPUC Water Enterprise developed plans to install the radar on Montara Mountain, and completed the project review, environmental review, and project approval processes in 2019. Access improvements, site development, and radar installation are expected to be completed by the end of 2020.
- P. The SF Bay AQPI Project advances NOAA's Weather-Ready Nation initiative, which requires action from all government agencies at the national, state, and local government level to ensure the region is ready, responsive, and resilient to extreme weather and climate change.
- Q. The Project builds off the State of California's Extreme Precipitation Monitoring Network and will provide new forecast products and new decision support tools for use by the water resources management and emergency response community in the Bay Area
- R. Parties to this Planning Agreement have provided staff hours and/or financial contributions to the SF Bay AQPI Project. The financial contributions to date are noted in Appendix A. The goal of all such contributions has been to expediently deploy radar systems, to work with NOAA and CIRA staff, and to provide guidance to these agencies as to what types of meteorological information they need to run their hydraulic models and/or inform their agencies' systems.
- S. The current buildout of the AQPI system includes 4 X-Band radars funded by DWR. Ideal X-Band radar coverage for the Bay Area would include additional units. Accordingly, some portions of the Bay Area have less than ideal coverage. Efforts are underway to find other funding sources to add additional X-Band radars in the region. While these efforts would provide many benefits to the AQPI Project, they are currently separate projects. If these efforts are successful and the projects listed below are implemented it is possible they could be added to the AQPI Project. The projects include:

- (1). Santa Cruz County Flood Control and Water Conservation District applied for and received an award for an X-Band radar under the Flood Emergency Response Program. This radar will capture Santa Cruz County as well as portions of Santa Clara County. Santa Cruz will use the same interface that other SF Bay AQPI users will employ.
  - (2). Following the 2017 North Bay fires and around the time of the 2018 floods, Sonoma Water and Marin County Flood Control and Water Conservation District applied for a FEMA Hazard Mitigation Grant Program to acquire two additional X-band radars for the region. The application was recommended for funding by CalOES and is currently under review by FEMA. If awarded, the project envisions deploying a radar in Marin County to cover a known gap in the current SF Bay AQPI configuration and a radar in northern Sonoma County to expand coverage over the remaining portions of its watershed.
- T. This Planning Agreement does not assign future costs for implementation of the SF Bay AQPI Project. A separate implementation agreement as described in Section 3(d) below (“Implementation Agreement”) will be developed for that purpose in the future.

### **AGREEMENTS**

The Parties agree as follows.

1. **Goal of this Agreement:** This Planning Agreement defines the shared goals and objectives of the Parties and establishes the necessary administrative structure to guide project development activities prior to the approval of the Implementation Agreement.
2. **Membership and Structure.**
  - a. **Formation of the Local Partner Agency Committee:** The Parties agree to form the Local Partner Agencies Committee (LPAC). Sonoma Water will provide administrative support to the LPAC and will ensure committee decisions comply with the DWR grant terms until execution of the Implementation Agreement.
  - b. **Unincorporated Association:** For ease of formation, administration, and to maintain flexibility, Parties will act as an unincorporated association of local public entities whose membership benefits and responsibilities are set forth in this Planning Agreement.
  - c. **Membership:** Each agency that has made a financial commitment to the Project listed in Appendix A and as a signatory to this Planning Agreement 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.

- d. **Supporting Entities:** In addition, the LPAC may seek to collaborate formally or informally with non-signatory agencies or other entities who offer support for the Project. Such supporters may perform tasks including, but not limited to, participating in technical discussions, convening groups as needed, providing outreach, or providing in-kind services.
  - e. **Decision Making:** For the purposes of this Planning Agreement, the LPAC will operate by consensus.
  - f. **Dispute Resolution:** The Parties will resolve their disputes informally and may choose to engage a facilitator.
  - g. **Funding decisions:** Parties acknowledge that individual agencies may need to get approval from their governing boards before they are able to provide funding.
  - h. **Meetings:** The LPAC will meet regularly to achieve its goals. Frequency of meeting may change based on needs, but the LPAC will meet not less than quarterly.
  - i. **Independent Agreement:** The Parties agree that this agreement will be independent of any other contract(s) or agreement(s) between or among any of them.
3. **Parties Responsibilities.** The Parties acknowledge that an investment of resources is necessary to site, operate, maintain and improve the SF Bay AQPI system. Resources may include in-kind services, staff time, and potential future financial contributions. Furthermore, several agencies have already committed resources for the initial stages of the Project. Additional parties may seek to join the LPAC at a future date.

Upon signing the agreement, Parties will:

- a. Assign a representative to the LPAC at the General Manager (GM) level, or their designee.
- b. Meet according to the frequency shown in 2(h).
- c. Provide periodic local agency activity updates and share documentation as requested with the grantee (Sonoma Water) for incorporation into quarterly narrative and financial reports required under DWR grant agreement.
- d. Develop an Implementation Agreement among Parties which will include both a cost allocation structure for installation of the C-band radar and an Operations and Maintenance (O&M) Plan. The O&M Plan will consider long-term operation

and funding for maintenance, refurbishment, and enhancement of the Project. 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 this Planning Agreement is not obligated to make financial contributions or participate in a future Implementation Agreement.

- e. Plan to integrate other site-specific activities completed under separate agreements to enable a regional AQPI system, including integration of individual X-band radar units in the SF Bay Area.
- f. Support and coordinate observations to improve forecasting abilities in the SF Bay Area.
- g. Share existing or planned instrumentation data with the AQPI system.
- h. Advocate as a coalition in order to identify and secure funding for long-term implementation of the Project.
- i. Serve as a forum to discuss issues and coordinate Project activities that could affect funding, operations or regional resiliency.
- j. Collaborate on efforts to promote the Project to potential new beneficiaries and end users.
- k. Consider and approve additional Members.

#### **GENERAL TERMS**

- 4. **Effective and Termination Dates.** This Planning Agreement is effective upon execution by two or more Parties (“Effective Date”). Any party who desires to join this Planning Agreement after the Effective Date may do so by executing this Agreement, and upon forwarding an executed copy of this Agreement to all then current parties to this Planning Agreement, shall then become a party to this Agreement. It will terminate upon the execution of a subsequent Implementation Agreement that replaces this Planning Agreement.
- 5. **Withdrawal.** Any Party may withdraw from this Planning Agreement at any time and for any reason, upon written notice to Sonoma Water. The Planning Agreement will continue in effect as between remaining Parties, as long as at least two Parties remain.
- 6. **Amendment.** This Planning Agreement may be amended only by a written amendment executed by all Parties.

7. **Notice.** Any notice under this Planning Agreement will be made by electronic mail to the following:

<b><u>Name:</u></b>	<b><u>Email Address:</u></b>
Grant Davis	Grant.Davis@scwa.ca.gov
Steven Ritchie	Sritchie@sflower.org
Norma Camacho	Ncamacho@valleywater.org
David Briggs	David.Briggs@ebmud.com
Jake Spaulding	Jake.Spaulding@scwa.ca.gov
Jackie Zipkin	jzipkin@ebda.org
_____	_____
_____	_____
_____	_____

8. **Remedies.** This Planning Agreement does not establish any remedies related to a Party's performance hereunder.
9. **Third Party Beneficiaries.** This Planning Agreement does not create any third party beneficiaries.
10. **Reservation of Rights.** Each Party reserves all of its rights and authorities with respect to its participation in the Planning Agreement.
11. **Entire Agreement.** This Planning Agreement constitutes the entire agreement of the Parties and supersedes all prior agreements and understandings, written or oral.
12. **Successors and Assignees.** The rights and duties of the Parties may not be assigned or delegated without the advance written consent of all Parties and any attempt to assign or delegate such rights or duties in contravention of this paragraph will be null and void.
13. **Severability.** If one or more terms of this Planning Agreement are held to be unlawful or invalid, the Parties agree that the remainder of the Planning Agreement will not be affected thereby. Such terms will be deemed reformed so as to be lawful and valid to the maximum extent possible.
14. **Counterparts.** This Planning Agreement may be executed in separate counterparts, each of which when so executed and delivered will be an original. All such counterparts will together constitute but one and the same instrument.

Signatures appear on the following pages.

SONOMA COUNTY WATER AGENCY

By: \_\_\_\_\_  
Grant Davis  
General Manager

SAN FRANCISCO PUBLIC UTILITIES COMMISSION

By: \_\_\_\_\_  
Steven R. Ritchie  
Assistant General Manager, Water

SANTA CLARA VALLEY WATER DISTRICT

By: \_\_\_\_\_  
Norma J. Camacho  
Chief Executive Officer

EAST BAY MUNICIPAL UTILITY DISTRICT

By: \_\_\_\_\_  
Alexander R. Coate  
General Manager

EAST BAY DISCHARGERS AUTHORITY

By: \_\_\_\_\_  
Jacqueline T. Zipkin  
General Manager

ALAMEDA COUNTY WATER DISTRICT

By: \_\_\_\_\_  
Robert Shaver  
General Manager

ALAMEDA COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT

By: \_\_\_\_\_  
Daniel Woldesenbet, PhD, PE  
General Manager

CONTRA COSTA COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT

By: \_\_\_\_\_  
Brian M. Balbas  
Director

**APPENDIX A**

**SF Bay AQPI Capital Expenditures to Date**

**List of Funds Expended to Develop and Implement the AQPI Project**

<b>Party</b>	<b>Investment for</b>	<b>Years</b>	<b>Amount</b>
CA DWR	Grant to implement SF Bay AQPI Project (Acquisition of 4 X-Band Radars, 1 C-Band Radar, Surface Meteorological / Observational Gages, AQPI System Design)	2016-2021	\$ 19,836,410
NOAA	AQPI System Design (federal cost share)	2012-2019	\$ 7,180,000
Sonoma Water	Grant Administration	2015-2019	\$ 440,930
Sonoma Water	X-Band Deployment (local cost share)	2017-2019	\$ 165,963
SFPUC	X-Band Deployment (local cost share)	2013-2019	\$ 1,869,398
Valley Water	X-Band Deployment (local cost share)	2015-2019	\$525,000
East Bay Agencies	X-Band Deployment (local cost share)	2019	EBMUD: \$45,000 ACFCWCD: \$40,000 ACWD: \$31,000 EBDA: \$29,000 <u>CCCFCWCD: \$20,000</u> TOTAL: \$165,000 plus staff time

\*All expended funds with the exception of CA DWR self-reported by Member Agencies in November 2019. CA DWR amount shows the full grant award which is expected to be fully reimbursed by or during grant closeout.

## APPENDIX B

### Proposed Schedule

Milestone	Target Date
Execute Planning Agreement	January 2020
Initiate Regional Federal Advocacy Strategy	January 2020
Initiate Regional State Advocacy Strategy	January 2020
Draft Implementation agreement	May 2020
Execute an Implementation Agreement	July 2020