

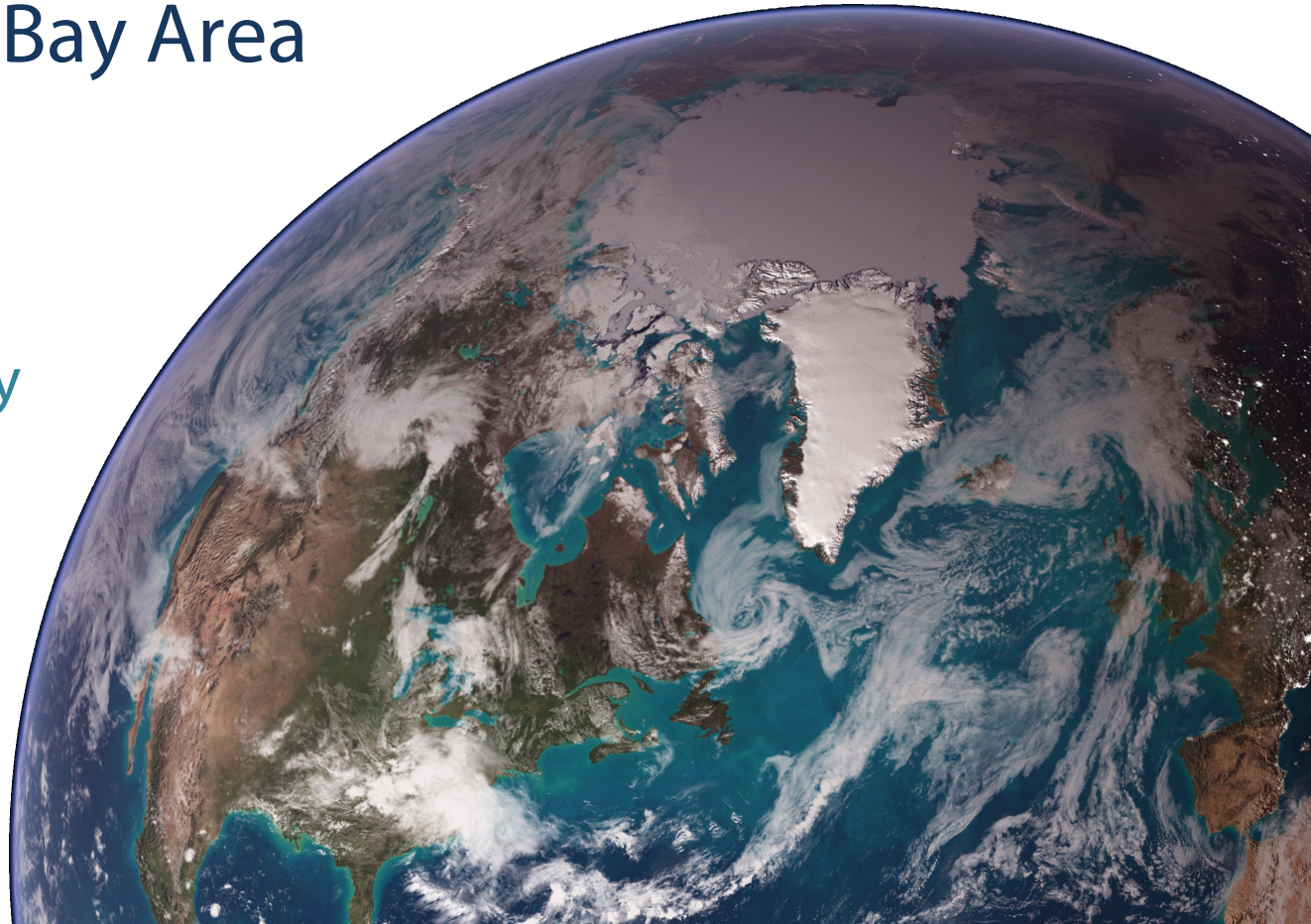


NOAA RESEARCH • ESRL • PHYSICAL SCIENCES DIVISION

An Advanced Quantitative Precipitation Information (AQPI) System for the San Francisco Bay Area

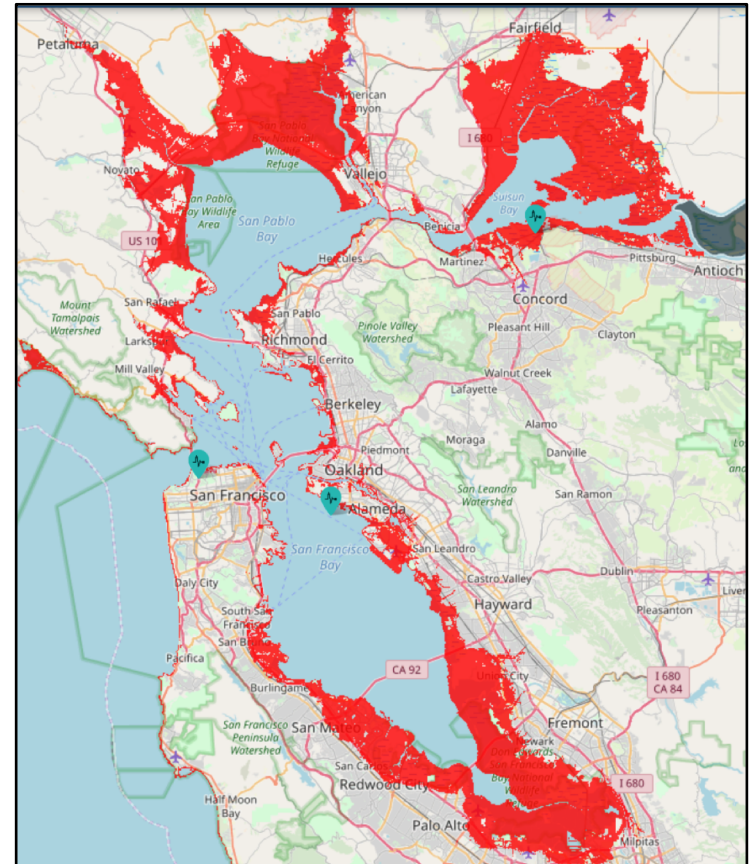
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Storms, Flooding, and Sea
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AQPI Overview

- Goal to improve early warning through monitoring, and prediction of precipitation, streamflow, and storm surge
 - Integration of capabilities for many users
 - Benefits for flood mitigation, waste water management, water supply, water quality, emergency management, transportation
- Grant awarded by California Dept. Water Resources (Prop 84)
 - 4 year project, started Oct 2017
 - Sonoma Water is local sponsor



Areas surrounding San Francisco Bay prone to high tide flooding (courtesy of NOAA Office of Coastal Management).

Project Team

Bay Area Partners

- California Department of Water Resources
- Sonoma Water
- Valley Water
- San Francisco Public Utilities Commission
- East Bay Municipal Utilities District
 - Discharge and Parks
- Alameda County (Public Works, Water, District 7)
- Contra Costa County
- Marin County Flood Control, Municipal Water District
- Napa County
- San Mateo County
- Solano County
- Bay Area Flood Protection Agency Association
- National Weather Service

Technical Partners

- NOAA
 - Earth System Research Laboratory
 - National Severe Storm Laboratory
 - Cooperative Institute for Research in the Atmosphere (CIRA)
- USGS
 - Pacific Coastal and Marine Science Center
- Colorado State University
 - Department of Economics/Resource Economics
- Scripps Institution of Oceanography
 - CW3E

AQPI Components

- New weather radars and surface meteorology deployments
- Integration of observations and forecast models
- Precipitation, streamflow, and coastal storm surge forecasts
- Integrate and disseminate observations and forecast information (the AQPI System)



X-band Radar

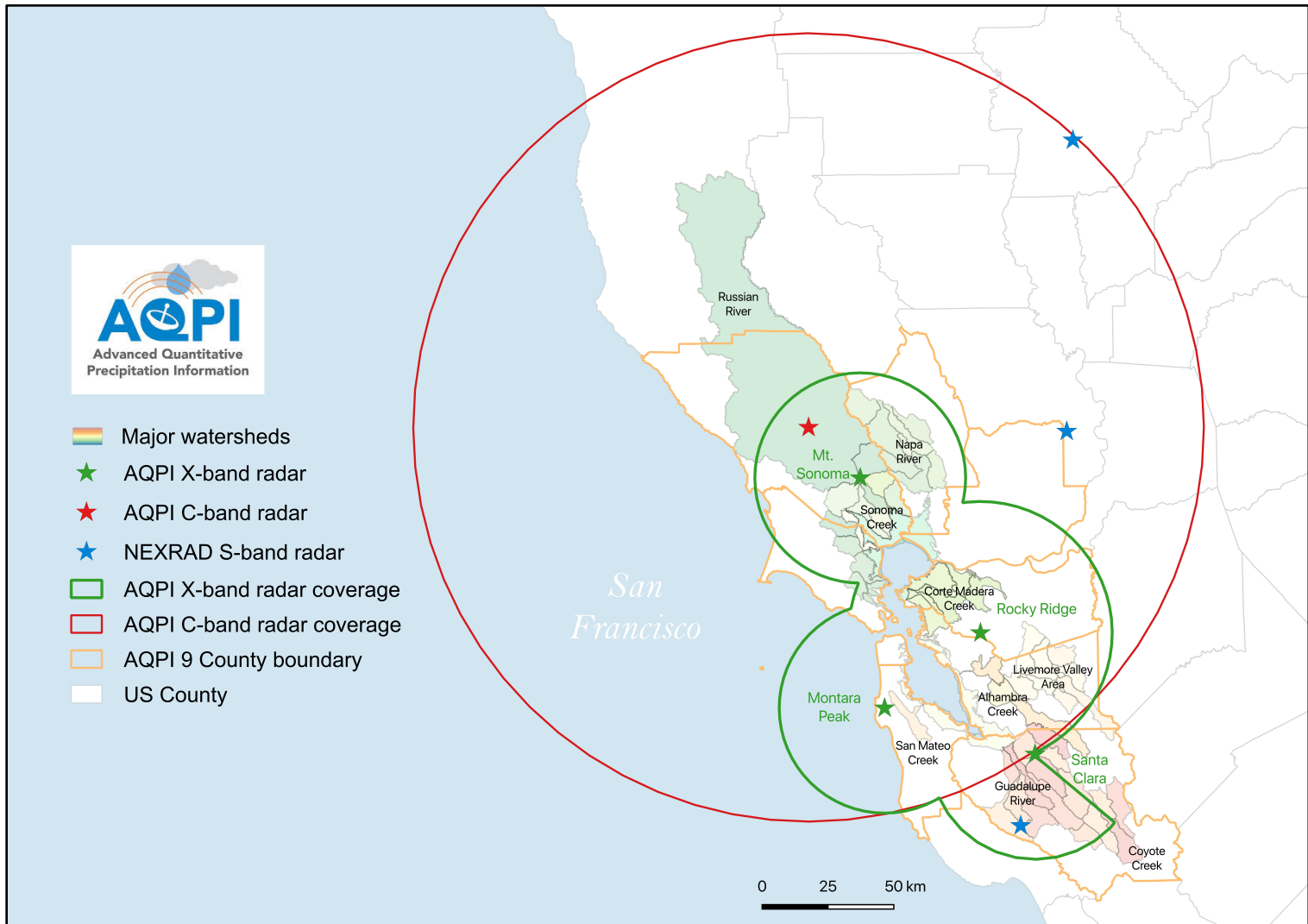


C-band Radar



Surface Met

AQPI Radar Deployments



Current Status and Next Steps

● AQPI Radars

- 2 (out of 5) radars deployed
- 1-2 more planned for 2019-2020 wet season
- Sonoma Water FEMA grant conditionally accepted
 - 2 additional X-band radars
- City of Santa Cruz deploying an X-band radar

● AQPI System

- Completed initial needs and requirements gathering
- Data capture and 1st iteration data delivery
 - Focus on precipitation forecasts
- Next iteration to include visualizations for radar monitoring, streamflow, and coastal flooding forecasts
 - User Groups starting January 2020

● AQPI Benefits and Evaluation of Products

- Working with local partners

