



# IMPROVE SUBSIDENCE MONITORING NETWORK

*This project focuses on the publication of interferometric synthetic aperture radar (InSAR) based subsidence data for high- and medium-priority groundwater basins and installation and maintenance of ground-based subsidence monitoring stations in areas of existing and emerging subsidence.*

## What is Proposition 68?

The California Drought, Water, Parks, Climate, Coastal Protection and Outdoor for all Fund (Senate Bill 5, Proposition 68) authorized \$4 billion in general obligation bonds for state and local parks, environmental protection and restoration projects, water infrastructure projects, and flood protection projects. The Improve Subsidence Monitoring Network project utilizes \$9.5 million on data, tools, and analysis efforts for drought and groundwater investments to achieve regional sustainability in support of the Sustainable Groundwater Management Act (SGMA) over a period of five years.

## How Does This Project Support SGMA?

This project provides groundwater sustainability agencies (GSAs), related stakeholders, and the public with regional and statewide data, tools, and analysis aligned to the technical requirements of the groundwater sustainability plan (GSP) regulations and SGMA. The resulting information provides standardized, statewide data and reporting.

This project builds on the knowledge and successful track record of DWR's Regional and Statewide Integrated Water Management technical assistance programs and aligns with the Governor's Water Resilience Portfolio (Executive Order N-10-19) and the Open and Transparent Data Act (AB 1755). The information and knowledge gained through this project can assist local water agencies to successfully develop and implement GSPs.

## What is the Value of this Information?

Collection and reporting of InSAR datasets as part of DWR's SGMA technical assistance role helps GSAs with

the development and implementation of their GSPs and provides important SGMA-related data. Additionally, the datasets are valuable for DWR's evaluation of initial GSPs and ongoing performance.

## What is New in 2019?

- January 2015 to June 2018 InSAR dataset published.
- Contract executed for the continued collection and reporting of InSAR datasets.
- Development of a contract with USGS to maintain and collect data from extensometers in the Central Valley.
- Development of a contract for installation of new and maintenance of existing continuous global position system (CGPS) stations.

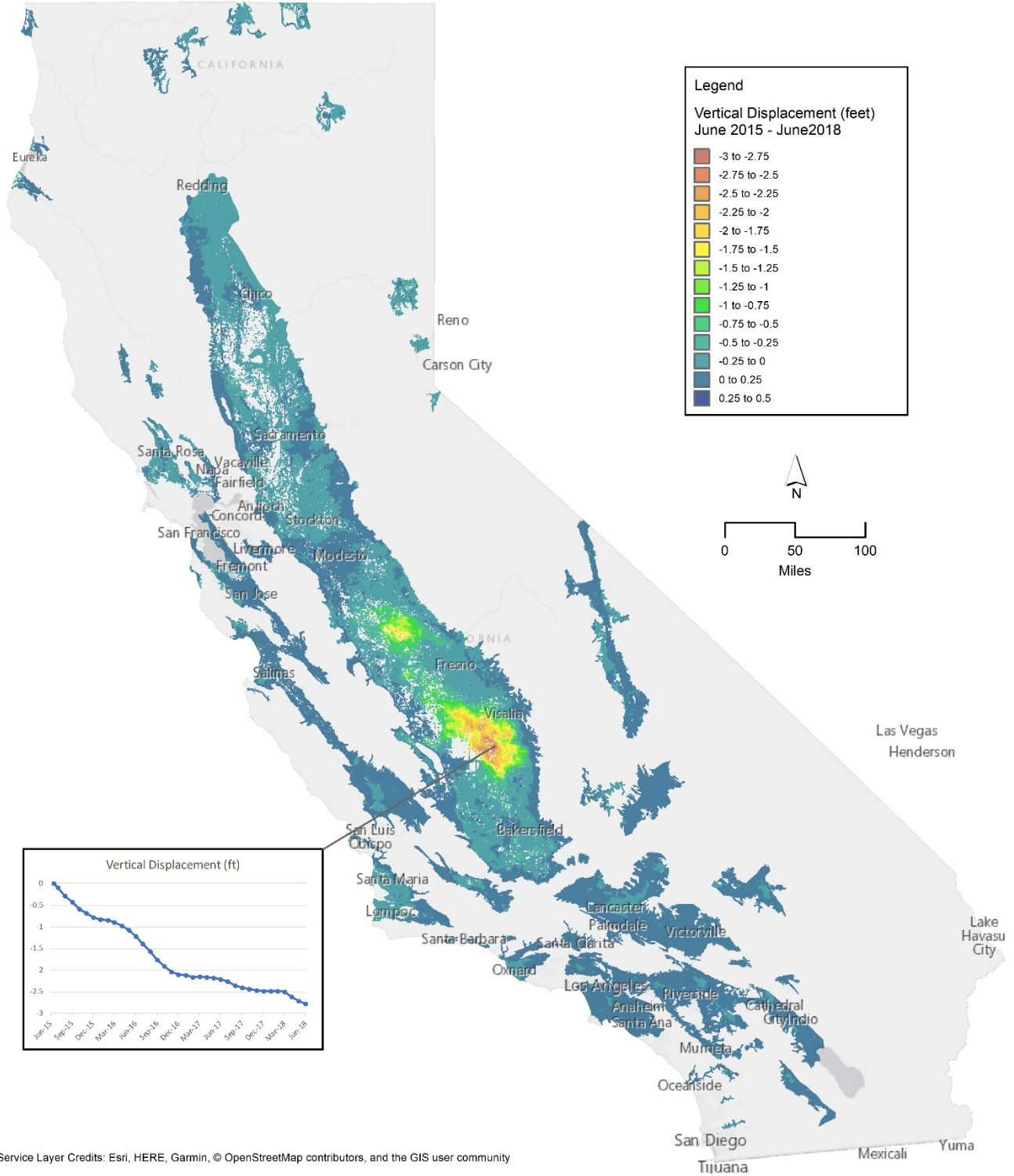
## What are the Next Steps?

DWR will continue to procure and provide InSAR data. Data from June 2018 to September 2019, will be available in Spring 2020. Data from October 2019 to September 2020, will be available in Spring 2021.

## How is InSAR Data Collected and Analyzed?

InSAR is a geodetic technique using microwave energy to detect, measure, and monitor changes in elevation between two or more satellite images of the Earth's surface taken at different times. Over time, the results of the analysis can be used to identify and measure areas of subsidence. When ground-truthed against ground-based monitoring, such as CGPS stations, subsidence can be detected with great accuracy and high spatial resolution.

## June 2015 to June 2018 Vertical Displacement



### Contact and Additional Information

For more information or questions, contact Ben Brezing at [Benjamin.Brezing@water.ca.gov](mailto:Benjamin.Brezing@water.ca.gov)

### DWR SGMA Data Viewer

<https://sgma.water.ca.gov/webgis/?appid=SGMADataViewer#landsub>

### DWR SGMA Data and Tools Webpage

[www.water.ca.gov/Programs/Groundwater-Management/Data-and-Tools](http://www.water.ca.gov/Programs/Groundwater-Management/Data-and-Tools)