



Jet Propulsion Laboratory (JPL) Presentation on Proposed Land Subsidence Remote Sensing Project with DWR

Background

Executive Order B-21-13 directed DWR and the State Water Resources Control Board to address 2013 dry conditions and water delivery limitations through actions including expediting review and processing of one-year water transfers. DWR was additionally directed to continue analyzing trends in San Joaquin Valley groundwater levels and impacts of groundwater extraction on land subsidence. San Joaquin Valley land subsidence due to groundwater extraction was first recognized about 80 years ago; some areas have subsided as much as 30 feet since then. Rates of subsidence can increase during times of drought or shortage, as water users whose surface supplies are reduced turn to groundwater to compensate. Negative impacts of land subsidence include damage to water delivery infrastructure and loss of conveyance capacity in canals, rivers, and floodways. Recently, for example, the Central Valley Flood Protection Board was briefed on subsidence impacts to flood control facilities in Merced and Madera Counties.

DWR has been working with JPL to assess the feasibility of using remote sensing to monitor land subsidence, as is now being done in Arizona by the Arizona Department of Water Resources. JPL is evaluating the ability of satellite-based interferometric synthetic aperture radar (InSAR) to measure the change in land surface elevations in agricultural areas such as the San Joaquin Valley. DWR and JPL are scoping a one-time project to analyze recent subsidence rates in the valley, to comply with the executive order, subject to DWR's finding funding for the work.

Tom Farr, a research geologist with JPL, will present on the proposed subsidence evaluation project with the Department of Water Resources.

Contact

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