



From the Ground Down

Understanding Local Groundwater Data Collection and Sharing Practices in California

JUNE 2016

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Groundwater provides up to 60 percent of California's water supply, contributes to stream flow and supports many ecosystems. Despite its importance, groundwater went unregulated until the passage of SGMA. This legacy resulted in fragmented management, inconsistent data and a broad range of management outcomes, which will make meeting the new legislation's requirements a long and arduous task for many groundwater basins.

In fall 2015, Stanford University's Water in the West Program and The Gould Center for Conflict Resolution conducted a groundwater data survey to learn more about the current groundwater data collection, use and sharing practices across the state and identify some of the common data-related challenges local groundwater agencies are likely to face during SGMA implementation.

The results of our survey suggest that a variety of regulatory and policy actions could substantially improve the quality of data collected by local agencies for sustainable groundwater management.

Examples of our recommendations for local agencies include:

1. **Expand or develop groundwater monitoring well networks.** One-third of survey respondents with wells in their management area did not have a dedicated groundwater monitoring well network.
2. **Use the authority given under SGMA to monitor private production wells.** Only slightly more than half of respondents consider the geographic coverage (54 percent) of groundwater level data to be adequate for decision-making purposes. Using more private wells for monitoring purposes would improve spatial coverage.
3. **Use the authority given under SGMA to implement groundwater extraction metering.** Nearly 30 percent of survey respondents indicated the need for groundwater extraction data. Groundwater extraction information is a critical component of water budget and groundwater model development.



Examples of our recommendations for state and federal agencies include:

1. **Require local groundwater management agencies to use consistent, state-developed data collection and monitoring standards and a common data sharing platform to enable data integration across regions.** Nearly 60 percent of survey respondents indicated the need for standardized data collection methods and a common data sharing platform.
2. **Develop a statewide advisory committee to provide guidance on data collection technologies and other data-related topics.** Some 40 percent of survey respondents plan to use geophysical methods or satellite-based methods for groundwater management in the next three to five years. This committee would advise the state and groundwater management agencies on geophysical methods, technologies and other data-related topics.
3. **Require the use and reporting of geophysical borehole logs in new wells.** Some 63 percent of survey respondents have used geophysical borehole logs

for groundwater management. These logs provide objective information about subsurface conditions that can be used for improved basin characterization.

Results from this survey suggest that many local agencies across California already have a strong foundation on which to build their groundwater monitoring networks for sustainable groundwater management, albeit with significant gaps. As agencies move toward the basin scale coordination requirements under SGMA, it will be increasingly important that agencies focus on acquiring data using consistent collection and monitoring protocols to ensure that data can be readily integrated and shared.

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This summary was created based on information from the original report “[FROM THE GROUND DOWN, UNDERSTANDING LOCAL GROUNDWATER DATA COLLECTION AND SHARING PRACTICE IN CALIFORNIA.](#)”
