

EXECUTIVE SUMMARY

There is no comprehensive regulation of groundwater use in the state of California, and the right to withdraw groundwater is based on surface land ownership. This creates a direct linkage between every land use that requires water and the groundwater underneath that land. Because so many aspects of groundwater use are not regulated by the state, local governments' land use decisions become a key driver of demands on groundwater. Nonetheless, land use decisions and planning are not well coordinated with groundwater management.

Understanding how land use decisions affect groundwater resources has become increasingly important in recent years, as groundwater provides approximately 30 percent of California's water supply in average years and 40 percent of the supply in dry years. In some places, the reliance on groundwater during droughts is much higher, due to reduced supplies of surface water. Growth from housing and irrigated agriculture, among other demands, have led to chronic overdraft and declining groundwater elevations in many communities that rely heavily on groundwater.

To address this problem, Water in the West convened groundwater managers, land use planners, water lawyers, consultants and academics at Stanford University for an Uncommon Dialogue in the fall of 2013. Its aim was to discuss a growing consensus that more effective integration of land use planning and groundwater management is an essential component of preserving groundwater aquifers for the future, and to share possible means of accomplishing this in California.

This report, shaped in part by the Dialogue, provides the background and regulatory context for land use planning and groundwater management in California, shares case studies that highlight the intersection of groundwater and land use, and makes specific recommendations to improve the linkage between land use decisions and groundwater management in the state.

KEY FINDINGS

- Many communities are facing groundwater shortages due to land use changes; they seek tools, including clarity on their authority to regulate groundwater use. For example, groundwater-level declines in the Paso Robles Groundwater Basin have caused some wells to go dry, necessitating a temporary county urgency ordinance to curb the increasing rate of groundwater decline while permanent tools and a structure for managing the basin are explored.
- Local jurisdictions want to avoid adjudication because it is time-consuming, expensive and fails to incorporate a community's vision for the future. The case of Orcutt, a community overlying the adjudicated Santa Maria Groundwater Basin, illustrates that the water accounting done for adjudication by a judge bears little relation to what a community might envision or plan for the future.

- Effective integration of groundwater and land use from the perspective of land use planners is most likely to be driven by incorporating groundwater goals and policies into a jurisdiction's general plan, specific land use decisions and local ordinances. At least 96 cities and counties in California have adopted an optional water element in their general plans. More than half of these were adopted in the past decade.
- Regional water management, as illustrated by the Kings Basin Integrated Water Management Plan, can increase collaboration between land use planners and groundwater managers. Such collaboration builds trust and relationships that lead to projects on the ground that are coordinated to meet regional and basin goals. The regional scale is also a more natural scale to manage groundwater basins.
- A huge and chronic problem is the lack of groundwater data and access to such data. Well information is considered confidential by law, and many communities lack the information to make sound groundwater management decisions.

SPECIFIC RECOMMENDATIONS

Tailor Development to Water Availability

Communities in California need tools to manage new development and crops in a way that does not place additional strain on aquifers that are in chronic overdraft. These communities need locally tailored and flexible options, including regulations supported by state law, that give them the ability to limit the overall demand on these aquifers as land use changes. These tools can include requirements that new water use be offset by reduced demand, or that new demands seek alternative supplies of water.

Require General Plans to Focus on Water

All new general plans in California should include a water element. This new element would strengthen the linkage between land use and water by incorporating water goals into the public planning process. It would also ensure that plans for growth take into account the available water supply.

Increase Data Collection and Availability

The lack of data is a major contributor to groundwater overdraft. Many communities find out their aquifers are in overdraft when it is too late. State law needs to set standards for collecting and sharing groundwater data, including individual well data.

The report focuses on several local case studies — Paso Robles Groundwater Basin, Orcutt (Santa Maria Groundwater Basin), Butte County and Kings Basin Integrated Regional Water Management — to show how different communities in the state are responding to their groundwater and land use challenges.