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Fostering Meaningful Coordination Between Land Use Planning & Groundwater Management Under SGMA

Stanford University
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Goals of the Uncommon Dialogue

1. To hear lessons learned from urban and agricultural areas throughout California where land use planning and water management have already been closely coordinated.
2. To learn about the challenges facing agricultural communities in meeting SGMA requirements and potential solutions for maintaining the economic viability of rural communities.
3. To identify the most useful materials and resources to support the meaningful coordination of water management and land use planning under SGMA and beyond.

Uncommon Dialogue Overview and Motivation

Land use planners make plans for the future of urban, agricultural, and rural land development. Long-term changes in land use patterns ultimately drive water demand. Recognizing the linkages between land use and water management, the Sustainable Groundwater Management Act (SGMA) requires increased coordination between land use planners and water managers at newly-formed groundwater sustainability agencies (GSAs). At a minimum, cities and counties must now refer proposed general plan changes to GSAs (CA Water Code § 65352), and similarly groundwater sustainability plans (GSPs) must take into account “the most recent planning assumptions stated in local general plans of jurisdictions overlying the basin” (CWC §10726.9). However, meaningful coordination can go well beyond these statutory “notify and consider” requirements.

SGMA also grants GSAs with broad discretionary authorities to manage groundwater by requiring well registration (CWC §10725.6), extraction reporting (CWC §10725.8(c)), and the installation of water meters (CWC §10725.8(a)), as well as the ability to impose well spacing requirements (CWC § 10726.4(a)(1)). Most significantly, GSAs will have the authority to limit groundwater pumping where necessary to ensure sustainability (CWC § 10726.4(a)(2)). In some cases, GSAs and well permitting agencies may wish to move from ministerial well permitting to the development of conditional groundwater extraction permits with pumping restrictions. However, doing so will require coordination with several agencies, including the county health department (which, in California, is typically the ministerial well permitting agency) and land use planning agencies responsible for zoning and land development approvals.

Despite the best of intentions in requiring coordination between land use and water management, SGMA remains all but silent on the practical details of how general plans and GSPs and other water plans should be integrated or how authorities should be delegated across agencies. With the goal of developing a better understanding of the factors contributing to meaningful coordination between land use planners and water managers, Dialogue participants will hear case studies from urban and agricultural regions throughout California that have developed regulations, policies, ordinances, or other mechanisms to link land use with water management.

Uncommon Dialogue sessions will tackle several other topics of significance to land use planning and groundwater management under SGMA. First, planners are increasingly involved in environmental justice and issues pertaining to social equity, and in many cases, can provide resources to help GSAs reach out to disadvantaged communities, economically distressed areas, and other stakeholders, as required under SGMA (CWC §10723.2). The need to achieve groundwater sustainability under SGMA has a high potential to drive major land use changes, especially within California's agricultural communities, where groundwater pumping reductions will influence a breadth of choices, including the amount of irrigated land and potential choice of crops to grow. Agricultural land use changes will have profound economic and social effects on many communities in California. Finding strategies that can help plan for and minimize these impacts is essential for the long-term viability of California's Central Valley and the people who live and work there, as well as for the state's and nation's economy and food security.

Second, California has a highly-complicated water infrastructure system, which transports surface water large distances across the state. By tying groundwater sustainability to potential impacts on connected surface water, SGMA creates critical linkages between groundwater basins, headwater regions, and the state's surface water infrastructure connecting them. Additionally, because SGMA adopts the groundwater basin and subbasin designation defined in the Department of Water Resources' Bulletin 118, many groundwater subbasins, particularly in California's Central Valley, are hydrologically linked, but will be managed separately. Dialogue participants will grapple with challenges of managing flows in groundwater subbasins that are affected by water management and land use decisions made in adjacent groundwater regions, distant headwaters, and many areas in between.

Finally, California's long history of voluntary groundwater management has resulted in a dearth of information about groundwater systems, including groundwater basin geology, levels, and use. This in turn makes it difficult to link land use-related changes in groundwater demand to changes in groundwater levels over time. SGMA adopts a science-based approach to groundwater management, requiring agencies to develop robust groundwater monitoring networks to serve as the basis for groundwater management decisions. Developing these monitoring networks, along with additional data required for effective groundwater management (e.g., land use data (collected annually or sub-annually), streamflow data, recharge data), with the input of land use planners will promote coordination, alleviate redundancy, and support consistency in the data being collected between agencies.

This Uncommon Dialogue brings together a select group of land use planners, groundwater managers, growers, state agency representatives, and policy experts to discuss opportunities for meaningful coordination between land use planning agencies and GSAs under SGMA that protect the social, economic, and environmental interests of all water users. Anticipated outcomes from the Dialogue could include policy recommendations, whitepapers, and case studies.