Stanford | Water in the West

Policy Brief

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To Consolidate or Coordinate? Forming California Groundwater Sustainability Agencies

Background

The 2014 Sustainable Groundwater Management Act (SGMA) — California's first statewide framework for managing groundwater — aims to achieve sustainable management of this critical resource. Groundwater accounts for nearly 40% of the state's water supply in average years, and up to 60% in drought years. Focusing on the state's high- and medium-priority groundwater basins, SGMA requires the formation of Groundwater Sustainability Agencies (GSAs), which are granted significant authorities to manage groundwater. These new public agencies are responsible for defining sustainability goals and developing and implementing Groundwater Sustainability Plans (GSPs) to achieve these goals by 2040 or 2042, depending on the state of the basin.


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Since January 2015, thousands of local agencies and other stakeholders involved in managing water and land use have been working to form GSAs, a task that must be completed by June 30, 2017 to avoid state intervention. This process represents uncharted territory. The simultaneous creation of hundreds of new public agencies with significant resource management responsibilities has little precedent in California or elsewhere in the United States. One crucial choice confronting local agencies concerns the scale at which to form GSAs. SGMA allows for a groundwater basin to be managed by one or multiple GSAs. However, multiple GSAs must coordinate with one another, either to develop a single GSP for the entire basin or to prepare multiple plans that utilize the same "data and methodologies" for water budgets, sustainable yield and other key parameters.

This research brief is based on a report that provides a preliminary look at whether local agencies are pursuing "consolidated" (single GSA) or "coordinated" (multiple GSAs) approaches to managing groundwater basins. The

About the Report

This brief is based on the report: "*To Consolidate or Coordinate? Status of the Formation of Groundwater Sustainability Agencies in California*" by Esther Conrad, Janet Martinez, Tara Moran, Marcelle DuPraw, David Ceppos, and William Blomquist. December 2016. This report was a joint effort of the **Water in the West Program** at Stanford University, the **Martin Daniel Gould Center for Conflict Resolution** at Stanford Law School and the **Center for Collaborative Policy** at California State University Sacramento.

report also draws upon eight case studies to examine factors that local agencies are considering during GSA formation. Overall, the study aims to highlight trends in GSA formation as the June 2017 deadline approaches, and lay the groundwork for future studies.

Key Findings – Current Status of GSA Formation

The study includes an analysis of GSA formation notices submitted to the California Department of Water Resources (DWR) through Oct. 31, 2016. This analysis suggests that more basins will be governed through "coordination" than through "consolidation." Furthermore, the majority of entities submitting GSA notices to date represent single agencies rather than partnerships. While this picture may change as more GSA notices are submitted, the current pattern highlights the need for significant investment in coordination across GSAs to achieve sustainable management at the basin scale.

Entities seeking to be GSAs as of Oct. 31, 2016:

- 106 entities submitted notices to DWR indicating their intent to serve as a GSA.
- 91 of these entities (86%) are single agencies — including water districts, cities, counties, irrigation districts and other types of special districts.
- 15 (14%) are multi-agency partnerships working together under a memorandum of understanding or a joint powers agreement.
- One third of these single agencies and one half of multi-agency partnerships already had a voluntary groundwater management plan in place prior to SGMA, at roughly the scale of the proposed GSA.

GSA coverage in high and medium priority basins as of Oct. 31, 2016:

- GSA notices had been submitted in 51 high- and medium-priority basins. These notices cover less than half of the area that must be covered by GSAs before June 30, 2017.
- Anywhere from 1 to 14 agencies submitted GSA notices in these basins.
- Only 13 basins are completely covered by a single GSA.
- So far, only one basin is governed by a newly created entity with a governance structure involving multiple agencies.

Key Findings – What the Case Studies Reveal

The study authors also draw upon observations and interviews in eight case studies, including four examples


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of consolidated governance and four examples of coordinated governance. These case studies provide a glimpse of how GSA arrangements look in practice, and what factors appear to lead local agencies to choose one pathway over another.

Consolidated Governance: Analysis of these four case studies — Santa Cruz Mid-County, Yolo, Upper Ventura, and subbasins in Tehama County — indicates several factors played a role in shaping the development of consolidated basin governance. These include: prior experience collaborating at the basin scale; basin size (although this was not always a determining factor); ability to address concerns about representation through a single governance structure; and the creation of strategies to account for heterogeneous basin conditions and promote autonomy for participating entities.

Coordinated Governance: Consideration of these four case studies — Eastern San Joaquin, Kings, East Butte and Colusa subbasins — provides insight into similarities that seem to have played a role in shaping the development of coordinated basin governance, such as: existence of prior collaboration, although not always at the basin scale; various concerns about autonomy and representation; concerns about financing future GSA activities; and the importance of convening entities in launching discussions about coordination at the basin scale.

Key Findings – Factors Shaping Decisions about Basin Governance

Given the diverse settings for groundwater management across the state, no single governance structure, whether consolidated or coordinated, will work everywhere. While it is too early to be conclusive, analysis of the eight case studies reveals a set of seven inter-related factors that appear to have played a role in decisions about the scale of GSAs, and whether to pursue consolidated or coordinated approaches to management at the basin scale: 1) basin size; 2) degree of heterogeneity in basin conditions; 3) concerns about autonomy and representation; 4) needs for financing GSA activities; 5) existing capacity to serve as a GSA; 6) prior collaborative experience; and 7) the presence of trusted basin-wide leadership. The last two factors appear to play a key, positive role in supporting the development of either consolidated or coordinated governance forms.

Recommendations

Drawing upon these case studies, this report identifies several lessons for agencies and stakeholders to consider as they grapple with decisions over consolidated or coordinated approaches to basin management:

For entities involved in the GSA formation process:

- The presence of a convening entity — whether it is a county government, a water district, or a water users' association — proves helpful in bringing stakeholders together for basin-wide discussions.
- Creating an inclusive, basin-wide process can help stakeholders to become aware of the range of governance options under SGMA, provide a constructive forum to discuss representation, and assess resource needs.
- In basins with more than one GSA, whether one or multiple GSPs are developed, mechanisms will be needed for coordination. Key topics for discussion include the type of agreement needed among GSAs — a memorandum of understanding or a joint powers agreement — and how costs will be shared.
- No matter which approach to GSA governance is chosen in a particular basin, it will likely need to be modified as SGMA implementation proceeds. In meeting the June 2017 deadline, it is helpful to focus on defining core principles and creating clear avenues for amending governance structures once they are formed.

For promoting learning about governance during SGMA implementation:

- Formal learning forums will be needed to ensure the success of SGMA. State agencies should support the development of learning platforms that enable a broad range of GSAs and stakeholders to participate, such as regional workshops, pilot studies to test innovative approaches and online learning resources.
- Researchers can also play an important role in helping to understand and assess the performance of specific governance arrangements under SGMA. Partnerships between researchers, state agencies and GSAs can enable the design of research projects to inform how GSA governance structures evolve over time to meet SGMA's goals, as well as help identify ways to improve implementation and needs for revisions to state law.

Conclusions

The patterns seen in this preliminary analysis may change in the coming months, but thus far, a wide array of governance arrangements is emerging. Many basins are likely to be managed through coordination among multiple GSAs. Whether they prepare one or multiple GSPs, these GSAs will need to develop robust mechanisms to coordinate with one another in order to agree upon and implement coherent, basin-wide goals and management strategies. Finally, the diversity of governance approaches, combined with the unprecedented nature of the GSA formation process, creates an imperative for learning and adapting as SGMA's implementation proceeds.

About the Authors

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About Water in the West

Water in the West, a joint program of the Stanford Woods Institute for the Environment and the Bill Lane Center for the American West, marshals the resources of one of the world's preeminent research universities to answer one of the most urgent questions about the American West's future—how can the region continue to thrive despite growing water scarcity? Through Water in the West, Stanford University's world-class faculty, researchers and students are working to address the West's growing water crisis and to create new solutions that move the region toward a more sustainable water future. Learn more: waterinthewest.stanford.edu

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