

Sustainable Groundwater Management

I. Introduction and Background

This document is the first draft of the administration's groundwater management proposal. At this early stage, the proposal—and accompanying legislative language—is intended to help foster the ongoing discussion about the best way to ensure local, sustainable management of our groundwater resources. These discussions will **extend beyond the June budget process**. The administration will continue working with the Legislature and all stakeholders to refine the proposal.

It is critical that this proposal, as well as the topic of groundwater, is viewed in a larger context. There is broad agreement that the state's water management system is unsustainable. The system is unable to reliably meet human, economic and ecological needs; is too exposed to wet and dry climate cycles and natural disasters; and is inadequate to handle the additional pressures of climate change and future population growth. Solutions are complex and expensive, and they require the cooperation and sustained commitment of all Californians working together.

To address these issues, the administration released the California Water Action Plan in January 2014. The Plan has three broad, long-term objectives. First, more reliable water supplies should be developed. Second, important species and habitat should be restored. Finally, the state's water resources system—including water supply, water quality, flood protection and the environment—should be made more resilient and sustainable so it can better withstand inevitable and unforeseen pressures in the coming decades. The Plan sets forth specific actions to take in the next five years that address urgent needs and provide the foundation for sustainable management of California's water resources.

As the Plan explains, the state must improve its groundwater management through supply-side and demand-side measures. Groundwater accounts for more than one third of the water used annually by cities and farms, much more in dry years when surface water is scarce. Some of California's groundwater basins are sustainably managed, but, unfortunately, many are not. The problem has persisted for decades. The state relies on local groundwater agencies to manage the resources, but many do not have the tools, resources or authority to do the job. Pumping more than is recharged to aquifers lowers groundwater levels, which makes extracting groundwater more expensive and energy intensive. Excessive groundwater pumping can cause irreversible land subsidence, which damages infrastructure and reduces the capacity of aquifers to store water.

This proposal is founded on the principle that groundwater resources are best managed at the local level and that every region is unique. This proposal would give local entities the tools and authority needed to manage groundwater resources sustainably. It provides guidance and technical assistance to local agencies. The proposal also includes a state backstop, by which the State Water Resources Control Board can adopt a temporary plan when local agencies have been unable or unwilling to correct major problems in

groundwater management. The backstop is designed to complement the goal of local sustainable groundwater management by providing an incentive to local agencies to take responsibility. In the rare instances where the state must provide a backstop, it would return responsibility to local agencies as soon as they are ready. Ultimately, if California's goal of sustainable groundwater is to be met, it will be local agencies that will make it happen.

II. Proposal for Sustainable Groundwater Management

1. Adopt a State Definition of "Sustainable Groundwater Management"

The proposal includes a statement that it is the policy of the state that groundwater be managed sustainably, and it defines sustainable groundwater management to serve as an objective for local groundwater management plans.

It is the policy of the state that groundwater resources be managed sustainably. Sustainable groundwater management means the management of groundwater to provide for multiple long-term benefits without resulting in or aggravating conditions that cause significant long-term overdraft, land subsidence, ecosystem degradation, depletions from surface water bodies, and water quality degradation, in order to protect the resource for future generations. Sustainable groundwater management requires the development, implementation and updating of local water budgets, plans and programs based on the best available science, monitoring, forecasting and use of technological resources.

The definition clarifies that sustainable groundwater management requires a long-term perspective; continuous investment, management, and planning; consideration of the impacts of management decisions; and a solid technical foundation.

2. Recognize Groundwater Recharge as a Beneficial Use

To encourage the use of surface water to recharge groundwater basins, the proposal would amend Water Code Section 1242 to clarify that the diversion of water to underground storage is a diversion for beneficial use (provided the water is put to a beneficial use consistent with the water right). The beneficial uses of the diverted water include protection of water quality or other beneficial uses made while the water is in underground storage.

3. Provide State Technical Assistance

The Department of Water Resources currently provides assistance to local water agencies on a variety of water management programs. Working from this traditional role, DWR will provide technical assistance to local groundwater management agencies for development and implementation of sustainable groundwater management plans in California.

DWR will update Bulletin 118 every five years utilizing information from local agencies on groundwater levels and groundwater use to conduct a comprehensive assessment of groundwater conditions. The Bulletin 118 updates will identify challenges and opportunities to improve sustainable management, provide overall vision and evaluation of resource management strategies, and will help focus, align, and maximize resources to achieve sustainable groundwater management without overburdening low priority basins.

Further, DWR will provide technical assistance to local and regional agencies related to collection and reporting of local groundwater data, preparation and updating of groundwater management plans, assessment of the status of local groundwater basins (e.g., overdraft), establishment of appropriate and effective groundwater governance (based on the status of the basin), and preparation of local water balances to determine safe yield. Technical assistance will include development of guidance documents, standards, and protocols; participation in local groundwater advisory groups; review of local basin assessment reports; and overview presentations of statewide groundwater management conditions.

Through DWR's Water Data Library and CASGEM websites, DWR will expand and improve online data availability. Improvements will include statewide exchange of groundwater data and groundwater management-related information, and availability of tools and guidance documents to promote analysis and implementation of sustainable groundwater management. DWR will promote coordination with integrated water management groups, and conduct public education/outreach on groundwater resource assets and issues.

DWR will assist the State Water Board as needed with technical information to support its role as a backstop authority when local groundwater management actions have been insufficient. DWR will periodically audit groundwater management plans and annual groundwater management plan reports for completeness and summarize the status of sustainable groundwater management actions.

DWR and the State Water Board will also develop a technical advisory group to coordinate development of best practices and tools that promote and guide sustainable groundwater management.

With this assistance, local groundwater management agencies will be better equipped to assess and manage groundwater resources.

Summary

- **Update Bulletin 118 every 5 years**
- **Provide local technical assistance with data collection, assessment, plan development, governance, and local water balances to determine safe yield (Funding request in budget and could be available as soon as July 1, 2014)**
- **Improve data availability and utility in Water Data Library and CASGEM**

- **Provide technical information and analysis to the State Water Board to inform its backstop function**
- **Periodically audit groundwater management plans and summarize the status of sustainable groundwater management actions**
- **In coordination with State Water Board create a technical advisory group to coordinate development of best practices and tools**

4. Empower Local Agencies To Achieve Sustainability

Groundwater is best managed at the local or regional level. To achieve sustainable groundwater management, local agencies need all the necessary tools and authorities. Building on the existing AB 3030 structure and SB 1938 Plan requirements, the proposal provides local agencies with unambiguous authority to carry out groundwater management on the local or regional level and is designed to provide those agencies with maximum flexibility to get to sustainability at the sub-basin. Local agencies will decide what authorities to use and how best to use them when tailoring solutions to local conditions. The authorities are granted to existing local agencies in compliance with AB 3030 upon enactment and to new local agencies organizing under the AB 3030 process upon creation. The authorities include, but are not limited to:

- Measuring and reporting of groundwater conditions
- Conducting investigations and studies
- Regulating groundwater pumping
- Registering and permitting wells
- Assessing fees
- Cooperating with other agencies, the United States, and Indian tribes
- Providing technical assistance to groundwater extractors
- Enforcing compliance with a groundwater management plan

Additionally, counties, which sometimes were not permitted to undertake groundwater management under AB 3030, are given broader authority to do so.

By January 1, 2018, locals will have to provide aggregated groundwater extraction reporting to DWR, based on guidance provided by the DWR. By January 1, 2020, local agency groundwater authority is suspended if a local plan does not meet the requirements of law, but allows the local agency to continue funding its program in order to bring it into compliance. This will require agencies to incorporate concepts of sustainability into their plans by 2020, ensure that plans cover an entire sub-basin by 2020, and by 2020 develop plans for critically overdrafted basins that will eliminate overdraft by 2035.

Consistent with the current SB 1938 structure, local agencies are not mandated to adopt a plan, but the proposal includes several incentives to do so within a specified, reasonable timeframe. After five years, agencies without a plan will lose eligibility for state grants, will lose ability to use the new fee authority for implementing any plans that they have (they would retain authority to assess fees to create a plan), and the State Water Board would be

able to exercise its backstop authority. It is expected that, in some cases, local agencies will seek special legislation to obtain an effective governance structure that suits their situation, as many successful groundwater management agencies have done in the past.

To be adequate, plans must satisfy all of the requirements of SB 1938 and plans in critically overdrafted basins must be designed to achieve sustainability within 20 years. Plans that will not achieve sustainability within five years must include five-year milestones to measure progress toward eliminating the overdraft, a key indicator of an unsustainable basin. Because the specific aspects of sustainability are difficult to define, the proposal includes protection against private lawsuits that would limit a local agency's ability to fund its program, if the challenge is based on the plan's consistency with the sustainability standard. If a plan is inadequate, the local agency would lose eligibility for state grants and fee authority, and the state may intervene to impose its own plan. Over time, DWR and local agencies will establish more concrete indicators for sustainability as DWR develops technical assistance and best management practices and as local agencies develop plans.

Areas without serious groundwater problems, such as adjudicated basins, are not required to adopt a plan.

There is no automatic state review of plans, in part because it would be difficult to provide meaningful review of hundreds of plans. Rather, the quality of the plans will be determined by local agencies, technical assistance and BMPs from DWR, the potential loss of state grants and fee authority for inadequate plans, and the potential of state intervention.

Summary

- **Amends AB 3030 and SB 1938 to require that plans meet SB 1938 requirements and expands those requirements to include managing for sustainability and submission of groundwater extraction data to DWR starting January 1, 2018**
- **Expands the authority that local agencies meeting AB 3030 and SB 1938 can exercise, including providing a framework for regulatory fee authority**
- **Suspends the enhanced authority January 1, 2020 if the plan does not meet the requirements of law, but allows the local agency to continue funding its program in order to bring it into compliance**
- **Consistent with existing law, development of a plan is voluntary, but those without plans by January 1, 2020 will no longer be eligible for state funding**
- **The State Water Board may take action to develop a plan for any subbasin without a plan after January 1, 2020**

5. Improve the Linkage Between Land-Use and Groundwater Planning

The proposal includes provisions to improve coordination between land-use planners and water managers, which is essential to sustainable groundwater management as the state continues to grow and develop.

Cities and counties would share General Plan amendments with groundwater management authorities. Groundwater management agencies, likewise, would share information (such as recharge areas, percolation basins, etc.) with cities and counties.

Cities and counties must review, and update as necessary, their General Plans upon certain events, including the adoption of groundwater management plans.

To provide an incentive to local agencies to form basin-wide plans, and to address the persistent problem of large, new groundwater pumping in completely unmanaged areas, the proposal includes a placeholder to discuss options for limiting extractions after 2020. The limitation would apply if a basin is not subject to a groundwater management plan. The intent is to avoid making the situation worse and to encourage the development of sustainable groundwater management plans. The administration is interested in exploring options that do not create a rush to drill and that protect unexercised, overlying correlative water rights, while not exacerbating the condition of overdraft.

Summary

- **Requires Cities and Counties to share General Plan amendments with groundwater management authorities**
- **Requires groundwater management authorities to share plans and other relevant information with Cities and Counties**
- **Requires Cities and Counties to review groundwater management plans submitted to them, upon completion, to determine whether general plan updates are needed to account for the new information**
- **Provides a placeholder to discuss appropriate limitations on limitations after 2020 if a plan is not in place**

6. Provide for State Backstop Authority When Local Action Has Not Occurred or Has Been Insufficient

The proposal would allow the State Water Board to backstop and, if necessary, draft and adopt a plan for an area that has serious groundwater problems and has either not adopted a plan, failed to implement a plan, or adopted an inadequate plan. The backstop is designed to provide an incentive to local agencies to take action prior to, during, and after the State Water Board initiates formal proceedings. The adoption of a temporary, state-drafted plan is the last of several incremental steps that allow the State Water Board flexibility to engage with, encourage, and incentivize local agencies to solve the problems themselves. The proposal includes procedures and hearings at several steps to ensure a fair process, as well as mechanisms that allow local agencies to cure their deficiencies. The State Water Board may also adopt elements of successful local plans and programs within a basin, to avoid undoing progress made by responsible local agencies. Local agencies have a two-year safe haven to form a basin-wide governance structure and five years to adopt an adequate plan before the board can adopt its own plan. When drafting a plan, the State Water Board must follow water rights to the extent feasible.

The backstop has four incremental steps. In step one, the State Water Board would engage with local agencies before initiating any formal process. With other authority related to groundwater quality, the State Water Board has successfully brokered local solutions to groundwater quality problems in Ventura County and San Gabriel Valley without formally intervening. Under the proposed backstop, many cases would be resolved similarly, which would conserve time and resources for the board and local agencies.

In step two, the State Water Board may issue a declaration of a basin's condition. The board would issue findings that (1) the basin is in a condition of long term overdraft or that groundwater pumping is dewatering streams in a manner that significantly harms beneficial users, and (2) no management plan exists that would fix the problems. The designation serves to put local agencies on notice that, if they do not promptly adopt a groundwater management plan, the State Water Board will. Designation also initiates requirements to report groundwater extraction, which will provide information of value to either a local agency or the board in preparing a plan. Informal negotiations with local agencies could continue; the board is not required to proceed to the next step. When the threat of the board action causes a large rush to drill new wells, the proposal includes a placeholder to consider avenues by which the board may issue a limitation on extractions. Doing so would not overturn water rights of overlying users; it is intended to provide a pause while the State Water Board and local groundwater management agencies develop a solution.

In step three, the State Water Board may adopt a temporary groundwater management plan. The State Water Board is not required to proceed with this step. Even while a plan is being drafted, the board can put the process on hold if the locals diligently pursue an adequate plan or by initiating adjudication. The board's authority to adopt a plan would not begin for two years (where there is no local governance structure) or five years (where there is no local plan). When drafting a plan, the board must follow water rights to the extent feasible.

In step four, after the State Water Board has adopted a groundwater management plan, it is required to return control to a local agency when the local agency has subsequently adopted an adequate plan or completed adjudication. The State Water Board also may rescind the plan short of the completion of a local plan or adjudication, based on the diligent progress made by a local agency or by adjudication. Upon the petitioner's request, the State Water Board may rescind only part of the plan and allow other parts to remain in effect.

Because the backstop is triggered by the condition of the basin and the lack of an effective plan or program to fix the problem, local agencies cannot avoid state action by adopting an ineffective plan or by ineffectively implementing a plan. Also, the basin conditions that could trigger action (long-term overdraft, dewatered streams) are well understood, and, thus, provide a more objective threshold than the broader concept of sustainability. Of course, these conditions are also key indicators of unsustainable groundwater management.

In short, the backstop is designed to be flexible, incremental, and constructive. Local agencies can avoid it in several ways. Well-managed basins are not exposed to the state authority, presumably, because the threshold basin conditions would not be present or the agencies would have a plan to address them. In all basins, local agencies have two years to put in place a basin-wide governance structure and five years to adopt a groundwater management plan. In basins with overdraft problems, where the State Water Board intends to pursue a state groundwater management plan, local agencies may adopt a local groundwater plan that cures the defects within 180 days of notice by the State Water Board, ask the State Water Board to stay its action while local agencies diligently pursue an adequate plan or an adjudication, or ask the board to incorporate, in whole or in part, elements of existing local plans that are working well.

Summary

- **The State Water Board could designate basins at any time, but would be prohibited from taking any further action in a sub-basin until January 1, 2017 so long as a governance structure is developed by January 1, 2017, and if a local structure is in place, limit board action until January 1, 2020.**
- **The State Water Board actions could include the following steps all designed to promote local action and provide the State Water Board the flexibility to suspend the process if the locals develop an adequate plan at any point in the process:**
 - **Engagement with locals before initiating any formal process to solicit information and provide assistance**
 - **After holding hearings, the board may issue a determination that the sub-basin is in long-term overdraft or that it is having a significant effect on the beneficial uses of interconnected surface water and that there are no groundwater management plans in the sub-basin that will solve the problem. If a sub-basin receives this designation the State Water Board will notify them of the board's intent to develop a groundwater management plan for the sub-basin and provide an opportunity for the local agencies to act**
 - **The State Water Board adopts a groundwater management plan for the sub-basin and implements the plan**
 - **The State Water Board returns groundwater management authority to a local agency when they have adopted a sufficient plan or completed adjudication**

7. Make groundwater adjudications more efficient.

The proposal would improve the adjudication process to provide an additional tool to address unsustainable groundwater management. It will extend the expedited process for statutory adjudications for surface water to include groundwater. It will also include provisions to modernize and speed the process and to encourage negotiated settlements.

This element of the proposal is still being developed and will be provided soon.

What is required by AB 3030 today?

http://www.water.ca.gov/groundwater/gwmanagement/ab_3030.cfm

What is required by SB 1938 today?

http://www.water.ca.gov/groundwater/gwmanagement/sb_1938.cfm