



SUSTAINABLE GROUNDWATER MANAGEMENT ACT

Frequently Asked Questions

Groundwater, the Sustainable Groundwater Management Act, and State Intervention

What is groundwater?

Groundwater is water found beneath the Earth's surface. When rain falls to the ground, some of it flows along the surface in streams and rivers; some of it is used by plants; some of it evaporates and returns to the air; and some of it sinks into the ground and becomes groundwater. Groundwater makes up a significant portion of the Earth's fresh water.

Groundwater exists in - and slowly moves through - *aquifers*. Aquifers are made of layers of gravel, sand, sandstone, fractured rock, or other types of sediment. Large amounts of water can accumulate in aquifers. One or more aquifers can make up a groundwater basin.

To learn more about groundwater, visit this [United States Geological Survey website](#).

Why protect groundwater?

Groundwater is one of California's greatest natural resources, making up a significant portion of the state's water supply. The state relies heavily on groundwater for its drinking water supply: approximately 80 percent of Californians use groundwater for drinking or other household uses. People in small, rural, and disadvantaged communities are often [even more dependent on groundwater](#). Groundwater also replenishes streams, creeks, rivers, and wetlands that support wildlife and is an important resource for crop irrigation in agriculture.



In drier years, when surface water is less available, groundwater can be used to make up for some of the lack of surface water: during typical years, groundwater makes up approximately 40 percent of California's total water supply but during dry years, approximately 60 percent of water used is groundwater.

What are current groundwater conditions in California? What are the consequences of depleted groundwater basins?

Some groundwater is replenished each year, due to rain, but this recharge varies by basin and depends on local precipitation amounts. Excessive groundwater pumping can overdraft aquifers, removing water faster than precipitation can recharge it.

In many basins, groundwater has been used for decades at rates that cannot be sustained because groundwater is less easily accounted for than surface water. Some groundwater basins in California are now [critically overdrafted](#) and groundwater levels have dropped below the depths many existing wells reach. This makes it harder to use groundwater for drinking water and irrigation. Overdraft can also cause streams and rivers to go dry, seawater to enter aquifers in coastal areas, water quality to degrade, and the land to subside, which reduces the space in the basin that can be recharged and causes significant and expensive harms to infrastructure.

More about basin conditions throughout the state can be found at [the Department of Water Resources' California Groundwater Live website](#).

What is SGMA? What are its goals?

Overdraft has been occurring in many of California's groundwater basins for decades, causing infrastructure damage and causing wells to go dry in many places, including in rural, largely disadvantaged communities, and harming wildlife and ecosystems. In 2014, the state took action to halt overdraft and bring basins into balanced levels of pumping and recharge through the [Sustainable Groundwater Management Act \(SGMA\)](#), a state law composed of [AB 1739 \(Dickinson\)](#), [SB 1168 \(Pavley\)](#), and [SB 1319 \(Pavley\)](#).

The goal of SGMA is to achieve long-term sustainability in California's groundwater basins. SGMA required local agencies to adopt groundwater sustainability plans

for [high-priority and medium-priority](#) groundwater basins. Local agencies must report annually, meet five year milestones, and reach sustainability within 20 years.

What are the benefits of long-term groundwater basin sustainability?

All Californians benefit when groundwater is managed sustainably. If more groundwater was left in the ground, local economies, ecosystems, and communities would benefit in the following ways:

- **Economies would be more resilient to drought.** Maintaining higher groundwater levels and more groundwater in storage underground keeps groundwater accessible and gives irrigators more of a buffer against uncertain surface water supplies.
- **Drinking water systems would be better able to comply with water quality requirements.** When groundwater levels drop, water with contaminants can flow into wells, requiring water systems to drill new wells or increase treatment. Many small, rural, disadvantaged communities rely on groundwater for their drinking water supply and cannot afford the costs of additional treatment or well-drilling, where appropriate. As a result, their water systems may fall out of compliance with water quality requirements; stable groundwater levels help protect access to safe drinking water for these communities. It should be noted that, even if communities could afford to do so, drilling more wells is generally not a sustainable solution for safe drinking water. The [State Water Board's Safe and Affordable Funding for Equity and Resilience \(SAFER\)](#) drinking water program aims to foster more sustainable solutions for disadvantaged communities reliant on groundwater, especially through consolidations.
- **Infrastructure replacement and maintenance costs would be lower.** Preventing subsidence reduces private, local, and state costs, such as the costs of maintaining canal capacity or levees.
- **Pumping groundwater would be more affordable for agriculture and other uses.** Maintaining higher groundwater levels keeps pumping costs lower, well yields higher, and water treatment costs lower.
- **Groundwater would support more ecosystems and contribute to greater surface water flows.** Where groundwater and surface water resources are hydrologically connected, maintaining higher groundwater levels can benefit public trust resources, support tribal cultural uses of water, support recreation, and improve commercial fishing and subsistence fishing. Cold groundwater flowing into streams can be particularly important for salmon and other cold-

water species in summer and fall when surface water flows are lower and warmer.

How does SGMA work?

Historically, counties, courts, and irrigation districts have had authorities to manage groundwater. In 2014, the SGMA established a new framework for how groundwater will be managed locally to achieve long-term sustainability. SGMA requires local [groundwater sustainability agencies](#) (GSAs) – which can be local agencies like counties or other entities with authority –, that are in [high-and medium-priority groundwater basins](#), to develop and implement [groundwater sustainability plans](#) (GSPs) for their groundwater basins. GSAs are responsible for achieving long-term sustainable management of their groundwater basins within 20 years of adopting their GSPs.

What is a Groundwater Sustainability Plan? What makes a successful plan?

Groundwater sustainability plans (GSPs) outline how groundwater will be sustainably used and managed to avoid the following six undesirable results in the basins: significant and unreasonable declines in groundwater levels, reductions in groundwater storage, intrusion of seawater, degradation of water quality, subsidence of land, and depletions of interconnected surface waters.

GSPs must address the overuse and excessive groundwater pumping that causes overdraft in the basins and achieve balanced levels of groundwater use to reach long-term sustainability. For groundwater basins experiencing the most severe overdraft, categorized by the Department of Water Resources (DWR) as [critically overdrafted basins](#), groundwater sustainability must be achieved by 2040. For the remaining [high-priority and medium-priority basins](#), groundwater sustainability must be achieved 2042.

Who implements SGMA?

SGMA is implemented by local entities, known as [groundwater sustainability agencies](#) (GSAs), the [California Department of Water Resources](#) (DWR) and the [State Water Resources Control Board](#). SGMA prioritizes local management and empowers GSAs

with the tools necessary to sustainably manage their groundwater basins, including the authority to charge fees. SGMA assigns DWR and the State Water Board distinct roles and authorities to ensure local groundwater management achieves SGMA's goals.

What is the role of GSAs?

Local agencies, such as water districts, counties, irrigation districts, cities, and other local government entities, formed GSAs in their basins to manage groundwater sustainably at the local level. GSAs are responsible for developing and implementing GSPs that detail how groundwater will be sustainably managed and used. A GSA can be formed by a single local agency or a combination of local agencies.

What is the role of the Department of Water Resources (DWR)?

DWR is the primary state technical assistance and oversight agency in SGMA. DWR is responsible for assessing and evaluating GSPs for compliance with SGMA. DWR conducts these assessments every five years. DWR provides ongoing assistance to local agencies through: [best management practices and guidance documents](#) to assist GSAs in developing GSPs; [assistance and engagement](#), including facilitation support and written translation; providing access to a variety of [data and tools](#) including data libraries and dataset viewers; and providing financial assistance via its [Sustainable Groundwater Management Grant Program](#).

What is the role of the State Water Board?

The State Water Board acts when necessary to ensure SGMA is implemented successfully. It will temporarily intervene in groundwater management when the proposed management of a groundwater basin is deemed inadequate due to deficiencies in the groundwater sustainability plan (GSP) or GSPs (if there are more than one) for the basin. The process of state intervention begins after the board receives referrals from DWR for those basins whose plans are not compliant with SGMA.

During this process, the GSA (or GSAs, if there are more than one) must coordinate their ongoing management of the basin with the board, which will work directly with the

GSA or GSAs to resolve failures. The board also works directly with people who pump groundwater to learn more about the basin, and, after a year or more, to determine whether deficiencies have been addressed or whether additional steps are necessary, including the board potentially managing groundwater directly. If deficiencies are resolved, state intervention ends, and GSAs continue managing their basins at the local level without outside help.

What is state intervention?

When local sustainability efforts are inadequate, the State Water Board will temporarily intervene in the management of a groundwater basin in a process called *state intervention*. During this process, GSAs must coordinate their ongoing management of the basin with the board, which works directly with the GSAs to resolve deficiencies in their plans or efforts. Once deficiencies are resolved, state intervention will end, and GSAs will continue managing their basins at the local level without outside help.

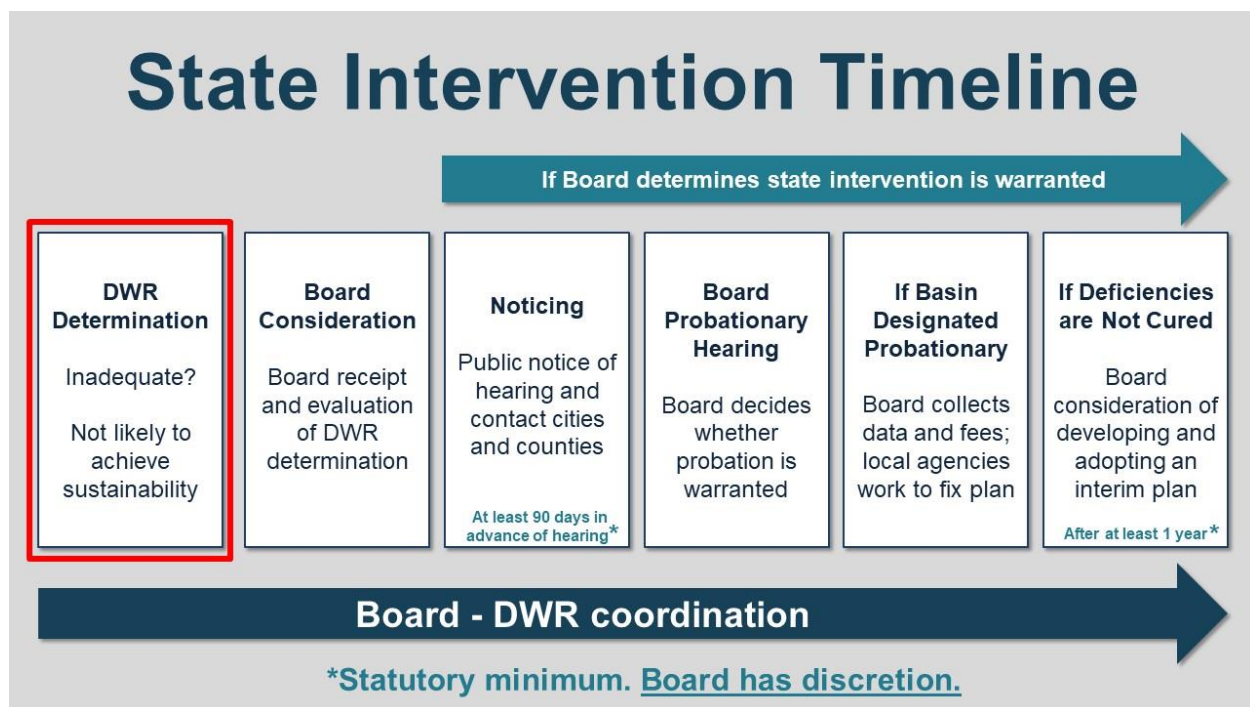
State intervention has two phases.

1. After consideration, the board may hold a public hearing and decide to place a groundwater basin in **probation**.
2. In the second phase, after another public hearing, the State Water Board may implement an **interim plan** for the basin.

If GSAs address the deficiencies, the state intervention process can end at any point before or during these phases, following a board decision.

What are the timelines for the two phases (probation and interim plan) in the state intervention process?

The pace of state intervention in a basin is contingent on many factors, including the complexity and urgency of the groundwater issues in the basin, GSA resource constraints and the level of public engagement. The following graphic outlines the steps for the two phases of state intervention, including the required public notice period:



What is probation?

Probation is the first phase of state intervention, *but it is not automatic for all basins referred to the board and does not begin immediately.*

Following the referral of a groundwater basin, the State Water Board must first review the information it receives from DWR and evaluate whether a probationary hearing is warranted. If it is, the board will provide at least 90-days' notice to cities and counties, and at least 60-days' notice to all known well owners, before it holds the probationary hearing.

At the hearing, the board may place a basin in probation if it finds that the GSA fails to sustainably manage its groundwater. Under probation, the board will work with GSAs to resolve failures and will require most groundwater pumpers in the basin to report information about their groundwater use.

Given that the board's efforts to provide groundwater management for the basin involve assessment, planning and enforcement costs, most groundwater pumpers will be required to pay fees to cover these costs, though exceptions will likely be made for small domestic users and disadvantaged communities.

The overall goal of probation is to gather information to inform and help local GSAs address deficiencies in their plans so they can sustainably manage their groundwater resources as soon as possible without outside help.

What is an interim plan?

An interim plan is the second phase of state intervention. If the GSA or GSAs have not achieved sustainable local management of their groundwater basin during probation, the State Water Board may adopt an interim plan that allows the board to implement the actions necessary to sustainably manage the basin's groundwater. An interim plan must include corrective actions to stop overdraft, a schedule for the corrective actions, and a monitoring plan. The board's interim plan may incorporate a GSP (in a basin with multiple GSPs) or portions of an existing GSP if that will help achieve sustainable management.

An interim plan may implement the following two types of actions to help protect groundwater. The first is called *demand management*. Demand management refers to actions that decrease the amount of water being pumped from the aquifer. The most direct example of demand management is enforcing a groundwater extraction allocation, which sets how much water each well owner is allowed to pump from the aquifer and limits them to that amount only. Groundwater extraction allocations would likely not apply to people who extract groundwater for household purposes only, as they are intended to reduce the extraction of groundwater for reasons other than human health and sanitation.

The other type of action is the development of *physical solutions*. A physical solution is infrastructure that is used to help manage groundwater. Engineered basins that allow water to percolate into an aquifer, known as recharge basins, are an example of a physical solution. Physical solutions can be used to help increase the supply of groundwater.

When does the State Water Board implement an interim plan for a basin?

The State Water Board must wait at least one year after a basin is placed in probation before it may begin providing notice of an interim plan adoption hearing.

Interim plans are likely to be used **only** when probation is not enough to help local GSAs sustainably manage their groundwater basins.

Which basins are being referred to the State Water Board, and why?

On March 2, 2023, DWR referred six basins to the board for state intervention after determining that their GSPs were inadequate, meaning that the plans would not bring their basins into sustainable groundwater management by 2040. Consistent with the law, the GSAs for these basins were provided substantial technical assistance and reasonable time to develop their basin plans and fix the problems DWR identified after the plans were initially submitted. Comprehensive information about the plans and process can be found on [DWR's SGMA Portal](#). Here is a list of the basins and summaries of their plan determinations:

Chowchilla Subbasin – Broadly, the GSP was found to lack adequate management criteria for multiple elements of sustainability, including groundwater levels and subsidence.

Delta-Mendota Subbasin – This is a large basin with 23 GSAs. Some components of the GSPs for the basin do not have coordinated data, methodologies, definitions of undesirable results or sustainable management criteria, and some documents contradict others. A common approach to these plan components is necessary for sustainable management.

Kaweah Subbasin –The GSPs did not set adequate management criteria for groundwater levels or subsidence in a manner required by SGMA and GSP regulations.

Kern County Subbasin – This is a large basin with 17 GSAs. The GSPs submitted for these management areas do not establish consistent definitions for undesirable results, and lack adequate and coordinated sustainable

management criteria for the chronic lowering of groundwater levels and subsidence.

Tulare Lake Subbasin – The GSP does not adequately define undesirable results or management criteria for groundwater levels or subsidence and does not sufficiently explain how GSAs will manage water quality.

Tule Subbasin – The GSPs do not justify their management criteria for chronic lowering of groundwater levels and subsidence.

What will happen to the basins that have been referred, and when?

Following the referral of basins to the State Water Board, the board will examine each referral and decide whether to move forward with probation in each case. For those basins where the board decides to move forward, a separate public hearing will be held for each basin. To set a hearing, the board must issue a 90-day notice to cities and counties for the basin, and a 60-day notice to all well owners.

Based on noticing requirements set by statute, should the board choose to move forward with probationary hearings related to any of the six basins referred in early March 2023, the earliest the board could hold a probationary hearing would be late summer 2023.

Do I have a say in the state intervention process?

Yes. The decision to place a basin in probation or on in interim plan is not one the State Water Board will take lightly, and it seeks public input on all aspects of these decisions, including the conditions of probation and, if later deemed necessary, the content of interim plans. A few examples of the conditions that the board may determine include:

- What deficiencies must GSAs resolve to end probation.
- If any extractors besides *de minimis* users (those who use less than 2 acre-feet per year) should be exempt from reporting information and paying fees.
- If any GSAs within a basin are sustainably managing their groundwater and should therefore be exempted from probation.

The board makes its decisions only after holding public hearings, during which it can hear directly from people in the basin and others affected by water management.

The primary intent of SGMA is to protect people who live in the basins from the devastating consequences of losing access to groundwater, so the board is eager to hear their concerns and understand their perspectives before making decisions that affect them directly.

All probationary plan hearings for groundwater basins during the state intervention process, or later, if deemed necessary, interim plan hearings, will be publicly noticed at least 60 days in advance. Hearings may be attended in person or remotely, and anyone may provide public comment.

To hear about opportunities to participate in the process and make your voice heard, register to receive notifications at this website, https://www.waterboards.ca.gov/water_issues/programs/sgma/, under “Stay Informed.”

For more information, email SGMA@waterboards.ca.gov or call (916) 322-6508.

Revised March 1, 2023