



Alameda County Department of Environmental Health, Land Use Program

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Groundwater & Surface Water Protection in California

Recent Groundwater Legislation in California

- Sustainable Groundwater Management Act, Effective January 1, 2015
 - For more information: www.water.ca.gov/cagroundwater/legislation.cfm
- State Onsite Wastewater Treatment System (OWTS) Policy, Effective May 13, 2013
 - For more information: www.waterboards.ca.gov/water_issues/programs/owts/
- Recycled Water Policy, Amended April 25, 2013
 - For more information: www.swrcb.ca.gov/water_issues/programs/water_recycling_policy/index.shtml
- Water Quality Control Plan (Basin Plan) for the San Francisco Bay Basin, Amended July 2013
 - For more information: www.waterboards.ca.gov/sanfranciscobay/basin_planning.shtml

Timeline for Mandated Plans in California

- Water Quality Control Plan for San Francisco Bay Basin (Basin Plan), Amended June 2014
- Conditional Waiver & General Waste Discharge Requirements for Confined Animal Facilities, Early 2014 (Pending)
- Draft Zone 7 Nutrient Management Plan, November 2014
- Conditional Waiver & General Waste Discharge Requirements for Wineries, Fall 2015
- Alameda County Local Agency Management Program (LAMP), draft due May 13, 2016
- Groundwater Sustainability Plan, 2022

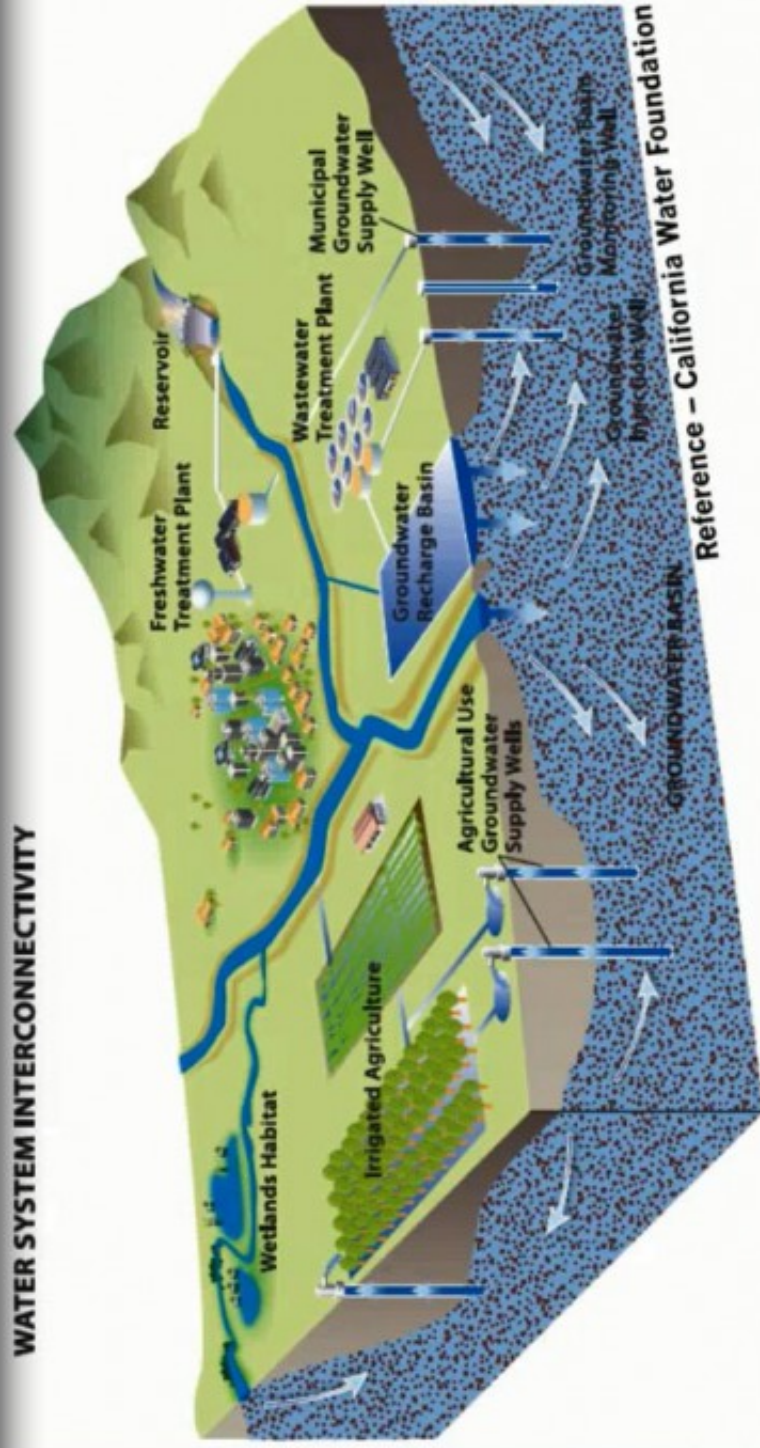
Opportunities for Public Involvement

Meetings

- Alameda County Septic Commission: April 15th, 2015 – 2:00 p.m. at the Castro Valley Library located at 3600 Norbridge Ave, Castro Valley
- East County Community Meeting: April 21st, 2015 – 6:00 p.m. – 8:00 p.m. at the Martinelli Event Center located at 3585 Greenville Rd, Livermore
- Alameda County Unincorporated Services Committee: Wednesday, April 22nd, 2015 - 6:30 p.m. at the San Lorenzo Village Homes Association, located at 377 Paseo Grande, San Lorenzo

Other

- Public Comment Periods on Plans
- Alameda County Department of Environmental Health, Land Use Program Website: www.acgov.org/aceh/landuse
- Sign-up for E-mail alerts: www.acgov.org/aceh/landuse/e-subscription.htm



The Sustainable Groundwater Management Act

Effective January 1, 2015

What you Need to Know



Groundwater Legislation Implementation Fact Sheet

Topline Message

- **Groundwater Legislation:** On September 16, 2014, Governor Edmund G. Brown Jr. signed three bills --- AB 1739 by Assemblymember Roger Dickinson and SB 1168 and SB 1319 by Senator Fran Pavley --- which create a framework for sustainable, local groundwater management for the first time in California history. The legislation allows local agencies to tailor groundwater sustainability plans to their regional economic and environmental needs.
- **Two key principles to the groundwater legislation:**
 - o Groundwater is best managed at the local or regional level, and local agencies should have the tools they need to sustainably manage their resources. Some local and regional agencies do not have the necessary tools to be successful. The legislation ensures that local and regional agencies have the resources they need to sustainably manage groundwater, including the necessary authority, better technical information and financial resources.
 - o When local or regional agencies cannot or will not manage their groundwater sustainably, the state will intervene until the local agencies develop and implement sustainable groundwater management plans. This limited state intervention would be temporary – until an adequate local program is established – to ensure the protection of the groundwater basin and its users from overdraft, subsidence and other problems stemming from unsustainable uses of groundwater resources.
- **California Water Action Plan:** In January 2014 the Brown Administration released the California Water Action Plan to put California on the path to sustainable water management. Groundwater management is an important piece of the California Water Action Plan.
- **Drought:** The drought and drought response continue to be a top priority for the Brown Administration. As the administration works on emergency actions to manage the immediate crisis, it is also taking proactive, long-term steps to prepare California for future droughts and floods. The

current drought reminds us of how important groundwater is for many Californians, because times of drought are precisely when pumping groundwater is necessary. Therefore, it is crucial that these groundwater basins are properly managed and allowed to recharge.

- **Water Bond:** Proposition 1 is a general obligation bond in the amount of \$7.545 billion. It includes funding for ecosystems and watershed protection and restoration, water supply infrastructure projects, including surface and groundwater storage, and drinking water protection.

The planning and coordination for the water bond implementation will be part of the larger effort to build the Governor's January 10 budget. The agencies, departments, conservancies and boards that have been allocated bond funds will all work with the Department of Finance through the normal budget process and use the California Water Action Plan as a long-term guide for expenditure priorities.

- **Water Bond Funds for Groundwater:** Proposition 1 provides \$100 million for sustainable groundwater management planning and implementation for local groundwater sustainable agencies. The bond also provides billions more for groundwater cleanup, storage projects and other actions that will help local agencies manage groundwater sustainably.
- **Groundwater is a critical element of our water supply in California.** It makes up more than one-third of our water supply in wet years and more than half of our water supply in dry years. Groundwater basins provide cost-effective local storage for water supplies that, if well managed, will make communities more resilient against climate change and future droughts.
- **The state's water management system is unsustainable.** The system is unable to reliably meet human, economic and ecological needs. Currently, where groundwater is managed, it is managed by local and regional agencies, some of which manage their resources sustainably. Other regions do not manage sustainably, resulting in problems such as groundwater overdraft, land subsidence, dry wells, increased pumping cost and deteriorated water quality.

Summary of Groundwater Legislation

1. Adopts a state definition of "sustainable groundwater management"
2. Empowers local agencies to achieve sustainability
3. Establishes a uniform framework for local groundwater management planning
4. Respects regional differences and provides local agencies flexibility to tailor plans that meet their needs
5. Provides state technical assistance
6. Improves coordination between land use and groundwater planning
7. Provides for state review of groundwater plans and limited state intervention authority when local action has been insufficient
8. Protects water rights

Core Principles

- **Groundwater should be locally and collaboratively managed to address unique basin conditions and challenges.** Every basin is different, and solutions must be tailored to the basin and its users. Over time, local residents will largely pay for and benefit from the construction, operation and maintenance of improvements to their water resources. Consequently, it is essential that local and regional agencies exercise leadership and obtain consensus on the solutions to their groundwater problems.
- **Groundwater should be managed sustainably.** The goal in all regions of the state must be to manage groundwater sustainably. It is not acceptable for a region to deplete or degrade its groundwater resources to the detriment of future generations.
- **The state's role should complement and support the goal of local sustainable groundwater management.** The state should support local control of sustainable groundwater management by providing the necessary authority, technical support and financial resource options. The state should step in only when local agencies are unable or unwilling to solve serious groundwater problems. When the state does so, however, it should transfer management back to local authorities when they are prepared to assume responsibility.
- **Water rights should be protected.** The water rights of existing water right holders should be reassured that their rights are protected by law. The goal is better groundwater management, which makes those rights more valuable.

Background

- **Groundwater is essential to California.** Because of California's variable precipitation and regular dry periods, California has always relied on groundwater, particularly when surface water is scarce.
 - More than 80 percent of Californians rely, in part, on groundwater for their drinking water.
 - Groundwater is about 38 percent of the state's total annual water supply— up to 60 percent in dry years.
 - Rural areas and small urban areas rely entirely on groundwater, as well as some larger cities, such as Fresno.
 - Groundwater basins are one of the most cost-effective and environmentally friendly places to store water locally during wet years.
 - Collectively, groundwater basins are the state's largest reservoirs— more than 10 times the size of all its surface reservoirs combined.
 - If managed well, groundwater can serve as a buffer against the impacts of climate change and drought.

- **Groundwater and surface water are part of the same system.** Groundwater feeds surface water streams when groundwater levels are high. When groundwater levels decline, groundwater contributions to stream flow may decline or surface streams may lose more water to the aquifer than under natural conditions. Some streams may become completely disconnected from groundwater, entirely losing contributions from groundwater inflow.
- **Groundwater problems vary greatly and are locally very important.**
 - Overdraft is a problem in large parts of the San Joaquin Valley, as well as some Central Coast and southern California basins with limited surface supplies.
 - Between 2006 and 2010, the Central Valley lost enough groundwater to fill our largest reservoir, Lake Shasta, five times.
 - Seawater intrusion into aquifers is a problem in some coastal areas, such as the Oxnard plain and parts of Monterey County.
 - Groundwater pumping is dewatering rivers that supply surface water to communities and farms, and support salmon and other important species.

Q&A

Q. What does “sustainable” mean?

A. Simply put, sustainable groundwater management means managing our precious water so that it is available for future generations, while balancing the more immediate needs of our economy, environment and essential human health and safety.

Q: Many areas already manage their groundwater sustainably. Does the legislation impose new mandates on them?

A: One of the law’s core principles is that groundwater should be managed at the local and regional level. There are many examples where local management has proven successful and state management is not needed. As long as local or regional agencies are demonstrably managing their groundwater in sustainable fashion, state management is unnecessary. The state’s role is then limited to support and monitor the success of local or regional management agencies.

Q. How does the groundwater legislation relate to the drought?

A. Sustainable groundwater management is an issue that goes beyond the current drought. Improved groundwater management will put us in a better position to recharge our groundwater basins in future wet years and will make communities more resilient to climate change and future droughts. The drought has highlighted groundwater’s importance in California’s overall water supply, as well as the vulnerability of the resource. This drought has led to an increased demand for groundwater and is expected to worsen overdraft in some areas. The problem is not new, however, and overdraft has been occurring in some basins for decades.

Q. What is overdraft?

A. A basin is in overdraft when the amount of groundwater pumped from the basin exceeds the amount of water recharging the basin over a period of time. When overdraft continues for a number of years, significant impacts may occur, including land subsidence, water quality degradation, dry wells, seawater intrusion and increased extractions costs.

Q. What is long-term overdraft?

A. Long-term overdraft means the condition of a groundwater basin where the average annual amount of water extracted for a long-term period, generally 10 years or more, exceeds the long-term average annual supply of water to the basin, plus any temporary surplus.

Q. How is limited state intervention consistent with local control?

A. First and foremost, groundwater should be managed at the local and regional level. This new law ensures that local and regional agencies have the tools they need to sustainably manage their groundwater resources. Locally derived solutions are often the most successful because they can best account for local conditions and needs, but some local areas have found it difficult to solve groundwater problems for a variety of reasons. Where local and regional agencies have been unable or unwilling to manage their groundwater sustainably, the state is authorized to step in to ensure that our precious groundwater resources are around for future generations. In all cases, the goal will be to develop long-term, sustainable groundwater management at the local or regional level – not management in Sacramento.

Q. What about surface water?

A. Surface and groundwater are interconnected and must be managed together. This groundwater legislation is one component of the California Water Action Plan, which is a comprehensive approach to both ground and surface water management. In places where local agencies manage groundwater sustainably, they generally have developed a broad range of strategies, including conservation, replenishment projects, stormwater capture and water recycling. Groundwater management plans and programs for specific areas will need to be integrated with surface water management within their regions, depending on the overall make-up of local water supplies.

Q. Why are you not talking about new reservoirs?

A. Expanding water storage capacity, both on the surface and underground, is one of the key elements identified in the California Water Plan. When it comes to groundwater, however, there are no easy fixes. In addition to more surface storage, we need to consider a broad range of management options, including recharging groundwater with surface water, conservation, increased use of recycled water, capturing and re-using stormwater, and better integration among regional projects. Local agencies that manage groundwater successfully typically use a variety of these tools. In areas where groundwater overdraft and water quality concerns have been mounting for decades, local agencies can probably only resolve them through a diverse set of solutions.

Q. How will the water bond benefit groundwater?

A. The water bond will provide \$100 million for competitive grants for preparation of sustainable groundwater plans and implementation of groundwater management projects. The bond also provides billions more for groundwater cleanup, storage projects and other actions that will help local agencies manage groundwater sustainably.

Key Dates

- **January 31, 2015:** Department of Water Resources (DWR) establishes groundwater basin priorities. This will determine which basins require groundwater sustainability plans.
- **2015 to 2016:** DWR identifies basins subject to critical conditions of overdraft.
- **January 1, 2016:** DWR adopts regulations to revise basin boundaries.
- **June 1, 2016:** DWR adopts regulations for evaluating groundwater sustainability plans.
- **December 31, 2016:** DWR publishes report on water available for replenishment of groundwater in the state.
- **January 1, 2017:** DWR publishes best management practices for the sustainable management of groundwater.
- **June 30, 2017:** Local agencies must establish groundwater sustainability agencies.
- **July 1, 2017:** State may designate probationary basins where groundwater sustainability agencies are not established.
- **January 31, 2020:** Groundwater sustainability plans are adopted and implementation is under way for basins in critical overdraft. Plans are submitted to DWR for adequacy review upon adoption.
- **January 31, 2022:** Groundwater sustainability plans are adopted and implementation is under way for high and medium priority basins not in critical conditions of overdraft. Plans are submitted to DWR for adequacy review upon adoption.
- **January 31, 2040:** Groundwater sustainability agencies in critically over drafted basins achieve sustainability goal.
- **January 31, 2042:** Groundwater sustainability agencies in basins not in critical condition of overdraft achieve sustainability goal.

Water Quality Control Policy for Siting, Design, Operation and Maintenance of Onsite Wastewater Treatment Systems (OWTS Policy)

General OWTS Policy Information

What are we regulating?

- Onsite wastewater treatment systems (OWTS) commonly known as septic systems that primarily treat domestic wastewater and employ subsurface disposal.
- There are an estimated 1.2 million OWTS in California

When does it take effect?

- The effective date of the Policy was May 13, 2013.
- Except for Tier 3, local agencies may continue to implement their existing OWTS permitting programs for 60 months after the effective date of the Policy.
- Owners of OWTS with projected flow over 10,000 gallons per day (gpd) or receives high-strength wastewater shall notify the Regional Water Boards. These OWTS may be required to submit a Report of Waste Discharge for coverage of Waste Discharge Requirements (WDR) or a Waiver of WDR.

Why was the Policy adopted?

- To allow continued use of OWTS, while protecting water quality and public health
- Assembly Bill 885 amended California Water Code section 13290, which required the State Water Board to develop statewide standards or regulations for permitting and operation of OWTS.

Who is impacted?

- OWTS owners
- Local agencies that permit OWTS (county environmental health dept., etc.)
- Regional Water Boards
- State Water Board

OWTS Policy Tiers

The OWTS Policy establishes a statewide, risk-based, tiered approach for regulation and management of OWTS installations and replacements, and recognizes the effectiveness of local permitting agencies. Tiers are briefly summarized below, refer to the OWTS Policy for a complete discussion of the requirements.

Tier 0: Existing OWTS (OWTS Policy Section 6)

- Applies to properly functioning systems that do not need corrective action and are not near an impaired water body subject to TMDL, local agency's special provisions, or located within 600 feet of a water body listed on OWTS Policy Attachment 2.
- Maximum flow rate is 10,000 gpd.

Tier 1: Low Risk New or Replacement OWTS (OWTS Policy Sections 7 & 8)

- Applies to new or replacement OWTS that comply with conservative siting and design standards described in the OWTS Policy.
- Tier 1 applies when a Local Agency Management Program (LAMP) has not been approved by the Regional Water Board.
- Maximum flow rate is 3,500 gpd.

Tier 2: Local Agency Management Program (LAMP) for New or Replacement OWTS (OWTS Policy Section 9)

- Applies to new or replacement OWTS that comply with the siting and design standards in an approved LAMP. LAMPs are developed by Local Agencies based on local conditions; siting and design standards may differ from Tier 1 standards.
- Maximum flow rate is 10,000 gpd.

Tier 3: Advanced Protection Management Program (OWTS Policy Section 10)

- Applies to OWTS located near impaired surface water bodies that are subject to a Total Maximum Daily Load (TMDL) implementation plan, a special provision contained in a LAMP, or is located within 600 feet of a water body listed on OWTS Attachment 2.
- Supplemental treatment requirements may apply to a Tier 3 system.
- Maximum flow rate is 10,000 gpd.

Tier 4: OWTS Requiring Corrective Action (OWTS Policy Section 11)

- Applies to systems that are not properly functioning (failing).
- Failure may be indicated by surfacing effluent, wastewater backing up in plumbing fixtures, OWTS component/piping structural failure, or significant groundwater or surface water degradation

The Policy and Substitute Environmental Document are available on the Internet at:

http://www.waterboards.ca.gov/water_issues/programs/owts/index.shtml

For more information please contact:

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Alameda County OWTS Local Agency Management Program (LAMP) Fact Sheet

Educational Outreach

- Regulatory oversight: permitting and approval process
- Operations, maintenance and reporting requirements
- OWTS Service Provider Certification Program
- Areas of Concern

Septic Tank Cleaning Registration Program

- Assessment of existing and proposed disposal locations for septage, the volume of septage, anticipated, and whether adequate capacity is available.
- Septage pumper reporting & registration requirements

OWTS's Requiring Corrective Action

- Has affected or will affect groundwater or surface water to a degree that makes it unfit for drinking or other uses
- Is causing a human health or public nuisance condition by waste water discharging to surface or backing up into plumbing fixtures
- Requires repairs in substantial conformance to the greatest extent practicable
- Owner unable to comply with corrective action requirements due to financial hardship

OWTS Service Provider Certification

- Educational, training, certification and/or licensing requirements required of OWTS Service Providers: Site Evaluators, Surveyors, Designers, Installers, Pumps, Maintenance Contractors

Identification of Areas of Concern

- Requires complete inventory of OWTSs
- Areas with parcels where there is insufficient area for OWTS expansion in case of failure
- Areas with high domestic well usage
- Areas with surface water & groundwater vulnerability to OWTS due to:
 - Hydrogeological conditions
 - Proximity to surface water bodies
 - High OWTS density
 - High density of failing OWTSs and OWTSs predating adopted standards of design and construction
- Parcel size and susceptibility to hydraulic mounding

Lamp Elements Required by the State

- Development and maintenance of a Water Quality Assessment Program to evaluate OWTS impacts to ground and surface water
- Implementation of Salt and Nutrient Management Plan and Groundwater Sustainability Program Requirements
- Coordination with watershed management groups (Groundwater Basin Managers and Groundwater Sustainability Agencies)
- Monitoring & analysis of water quality data (nitrates and pathogens) in surface & groundwater
- Annual & 5-Year Reporting and Program Evaluation Requirements to RWQCB
- Regulatory Options

Draft Special Septic Tank Permit Requirements Inside Special Septic Permit Areas

OWTS Scenario	Parcel Size	New Requirement	Max Nitrogen Loading Rate ¹
<i>New, upgraded or replacement OWTS required by County OWTS Ordinance</i>	≤ 7 acres	<i>Must install/upgrade/replace with code-compliant nitrogen-reducing system(s).</i>	<i>23.8 lbs/year Per Parcel</i>
	> 7 acres	<i>Must install/upgrade/replace with code-compliant nitrogen-reducing system(s)</i> OR <i>Prepare hydrogeologic study that assesses current groundwater nitrate conditions beneath the site and demonstrates that nitrate concentration of total onsite recharge² does not exceed 36 mg/L (80% of MCL) or the maximum concentration at the site, whichever is lower.</i>	<i>3.4 lbs/year Per parcel Acre</i> <i>6.8 lbs/year Per Parcel Acre</i>

- **Scenarios with No Requirements**
 - Existing Systems
 - Failed Systems – no flow increase to replace