



# California Agriculture Regulatory Update:

Water Supply, Nitrate and Salinity



July 2024

PREPARED BY:



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## Introduction

California agriculture continues to face regulations on water quality and quantity, and potentially on water rights. Growers, collectively represented by third parties, respond to expanded monitoring, reporting, and management requirements. This update focuses on activities between February 2024 and July 2024 related to water supply and quality regulations.

- **SGMA**  
groundwater basin management
- **ILRP**  
on-farm groundwater nitrate contamination prevention
- **CV-SALTS**  
salt and nitrate control
- **Bay-Delta Plan**  
surface water quality management

## Sustainable Groundwater Management Act - SGMA

### Background

California passed legislation to formally regulate groundwater in 2014. To this end, the California Department of Water Resources (DWR) assigned priority to each of California's 515 groundwater basins, based on factors such as groundwater pumping, population, and groundwater level history. Ninety-four groundwater basins were assigned high or medium priority. Together with adjudicated areas (where legal judgments negate the need for a GSP), the area represented by high and medium priority basins represents 98% of all pumping (20M ac-ft/year); 83% of the California's population (25M people) and 88% of irrigated land (6.7M ac)..

### Groundwater Sustainability Plans

California DWR empowered local agencies, called **Groundwater Sustainability Agencies (GSAs)**, within the 94 high and medium priority basins to plan how to balance their overdrafted groundwater basins by 2040. These plans, called **Groundwater Sustainability Plans (GSPs)**, were submitted to DWR for approval in 2020 and 2022 depending on subbasin priority and overdraft status.



## SGMA GSP Alternatives

Local agencies were allowed to submit alternatives to GSPs if they already had a groundwater management plan, were adjudicated, or could prove that their groundwater basin was operating sustainably for at least 10 years. In June, 2024, California DWR completed periodic reviews of alternatives for the first time and approved nine alternative plans, including: Pajaro Valley Subbasin, Coastal Plain of Orange County Basin, Llagas Area Subbasin, Santa Clara Subbasin, Mission Creek Subbasin, Niles Cone Subbasin, Livermore Valley Basin, Indio Subbasin, and Tahoe South Subbasin.

### Status of GSPs

- ➡ **Approved:** GSPs that were approved are implementing their projects and management actions to maintain or reach sustainability.
- ➡ **Incomplete:** Seven GSPs given an “incomplete” status in January 2024 have been revised and are now open to public comment through the DWR SGMA Portal. These GSPs are in Modoc, Merced, Fresno, Siskiyou, Stanislaus, Tuolumne and Ventura counties.
- ➡ **Inadequate:** The State Water Resources Control Board is intervening in GSAs from six basins, whose GSPs were classified as inadequate. The hearings for these basins are planned for November 2024 (Tule and Kaweah) and January 2025 (Kern). Hearings for Delta- Mendota and Chowchilla are planned for the first and second quarter of 2025, respectively.

The Tulare Lake hearing took place on April 16, 2024, when the State Water Resources Control Board designated the Subbasin as probationary. Though the State Water Board required all groundwater extractors in this subbasin to track their groundwater use beginning July 15, 2024 and pay fees, a Kings County judge temporarily blocked these requirements with a court order.



Source: <https://recharge.ucdavis.edu>

## Groundwater Recharge Partnerships & Programs

California is seeing more cooperation between various State and local agencies and non-profit organizations to coordinate and expedite flood diversion and groundwater recharge.

- In April 2023, DWR introduced the **Temporary Flood Diversion Equipment and Recharge Enhancement Initiative** to help local agencies use flood diversions for groundwater recharge while reducing flood risk.
- Currently, DWR is piloting a **Rip and Chip** program, which supports local agencies that acquire and fallow agricultural lands to develop floodwater/recharge basins. Permanent crops are removed, chipped, and the soil is deep tilled to expedite water infiltration.
- DWR also provides **funding to local agencies** for temporary pumps for flood management and groundwater recharge, supports modeling to predict benefits of recharge, funds aquifer storage and recovery wells, works with other state agencies to expedite permit allowances to capture excess winter flows, and partners with non-profit organizations like The Nature Conservancy to implement groundwater recharge projects.



Source: <https://recharge.ucdavis.edu>

**Learn More**



California Department of Water Resources

[https://water.ca.gov/programs/groundwater-management/  
sgma-groundwater-management](https://water.ca.gov/programs/groundwater-management/sgma-groundwater-management)





## Irrigated Lands Regulatory Program - ILRP

### Background

The ILRP is a complex regulatory program with many components. Initially, its focus was on developing and implementing **Irrigation and Nitrogen Management Plan (INMP) Summary Reports**. Farmers report on how much irrigation and nitrogen they are applying and submit this information to their water quality coalitions, who then summarize this information in a report to the Regional Water Quality Control Board. This information informs the overall strategy to manage nitrogen inputs to groundwater, which is an overarching program that everything else fits into called the **Management Practices Evaluation Program (MPEP)**. The MPEP is supported by the recent development of Groundwater Protection Targets.

### Groundwater Protection Targets

A 3-phase process was required by the State Water Board in areas that are considered highly vulnerable to nitrate concentration:

- **Phase 1** - Groundwater Protection Formula – method for estimating current nitrogen loading to groundwater from commercial irrigated agricultural lands.
- **Phase 2** - Groundwater Protection Values – estimated nitrogen loading rate for each township calculated with Groundwater Protection Formula.
- **Phase 3** - Groundwater Protection Targets – estimated nitrogen loading for Receiving Water Limits to be met.

Agricultural coalitions used a groundwater flow and transport model to simulate groundwater nitrate loading (including non-ILRP sources) under different scenarios and management practices to develop the GWP draft targets. The GWP targets were approved in June 2023, on the condition that a workplan be developed to evaluate model uncertainties and describe future validation efforts. The agricultural coalitions were required to submit the workplan by April 2024 and recommend improvements to modeling and N load estimating to be used in the 5-year update of the targets due by June 2028. Agricultural coalitions were required to update their Groundwater Management Plans with the GWP targets by July 1, 2024.

**Learn More**



California Department of Water Resources

[www.waterboards.ca.gov/centralvalley/water\\_issues/irrigated\\_lands/ilrp\\_decision\\_tree.pdf](http://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/ilrp_decision_tree.pdf)



## Central Valley Salinity Alternatives for Long-term Sustainability - CV-SALTS

### Background

CV-SALTS is a collaborative initiative between industry, government, agriculture, and communities to address and control nitrate and salt accumulation in California water supplies. While the CV-SALTS salt control program is implemented at the Central Valley wide scale, the nitrate control program is administered by local organizations called Management Zones. Both programs apply to all industries and local governments, but the nitrate program is implemented by prioritizing areas according to nitrate exceedances (above the drinking water standard) in groundwater.

Currently, the initial phase of the salt control program is under way, Priority 1 Management Zones are implementing their plans, and Priority 2 Management Zones have formed following a notice to comply in late 2023.

### Salt Control Program Prioritization and Optimization Study

The Prioritization and Optimization (P&O) Study began in December 2021 and is expected to take 10 to 15 years. The first task of this study was to complete a Baseline Characterization Report, which compiled data including land use, water quality, salt sources, and other information relevant to both science and policy of salt management. The information in the Baseline Characterization Report will be used as foundational information for the remainder of the study, which aims to predict how different management approaches will affect salt accumulation in different parts of the Central Valley under various scenarios, such as drought, and natural factors such as soil type and climate. This report was finalized in early 2024.

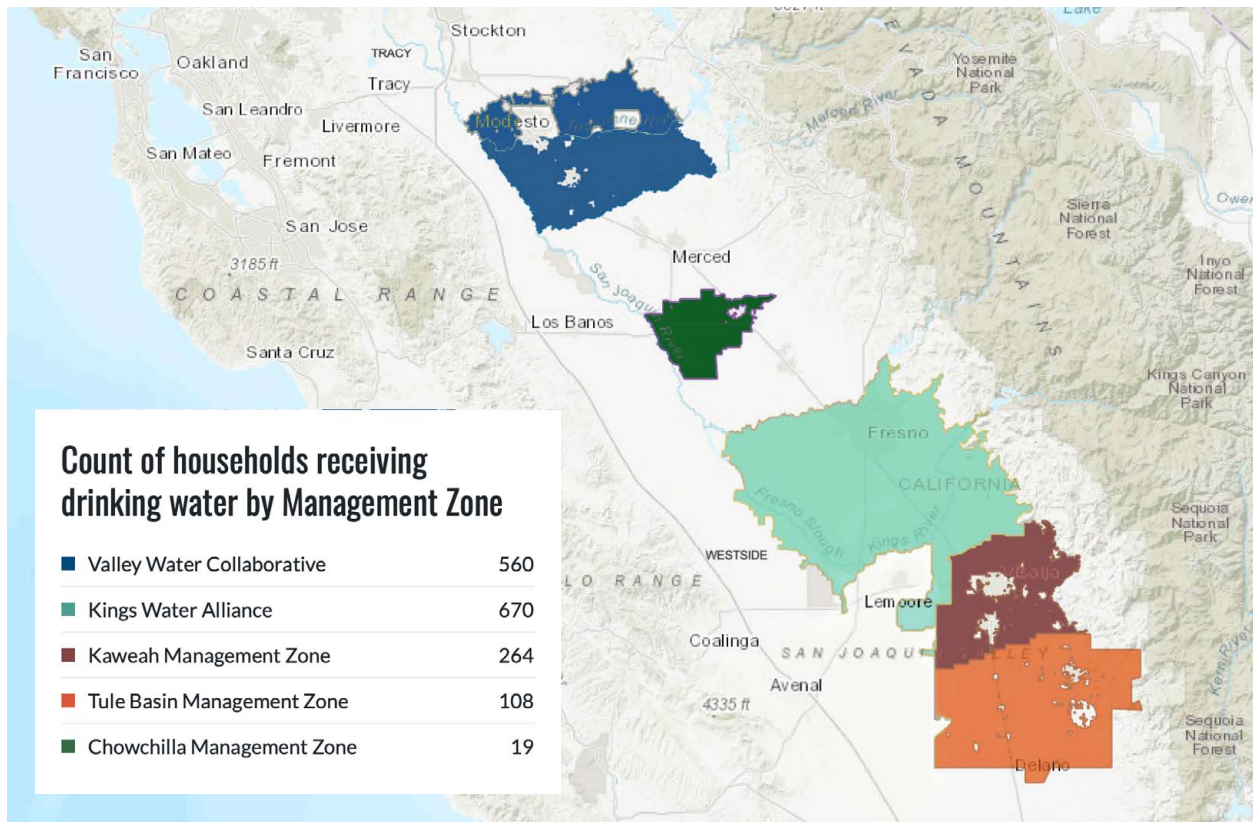
Recently, the P&O Study completed a large effort to collect and summarize pertinent data from all GSPs in the Central Valley. The results ensure that the Salt Control Program accounts for groundwater supply and recharge projects. They will also help validate model inputs and provide context for modeling scenarios used in the archetype studies.

The archetype study effort identifies and categorizes distinct geographical areas that represent larger parts of the Central Valley, which are used to evaluate salinity targets for protecting agricultural and municipal water uses. The first archetype study focuses on the Delta-Mendota subbasin. This archetype area was selected because it is a high priority for salinity management and has adequate groundwater data with which to perform modeling, among other variables.

## Nitrate Control Program

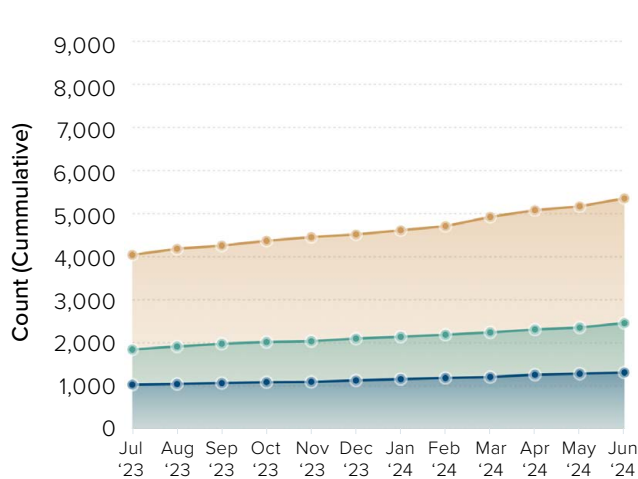
Priority 1 Management Zones completed their Management Zone Implementation Plans, required by September 5, 2023, and continue to implement these plans and deliver outreach and safe drinking water to communities throughout the Central Valley. These Management Zones are also coordinating execution of their Implementation Plans to learn from each other and realize efficiencies. Priority 2 Management Zones received their notices to comply in December 2023, and there was a public webinar in February 2024 on Nitrate Control Program requirements.

### Total households receiving water (1,621) from Priority 1 Management Zones



Accessed January 10, 2024. Source: <https://cvsalts.mljenv.com>



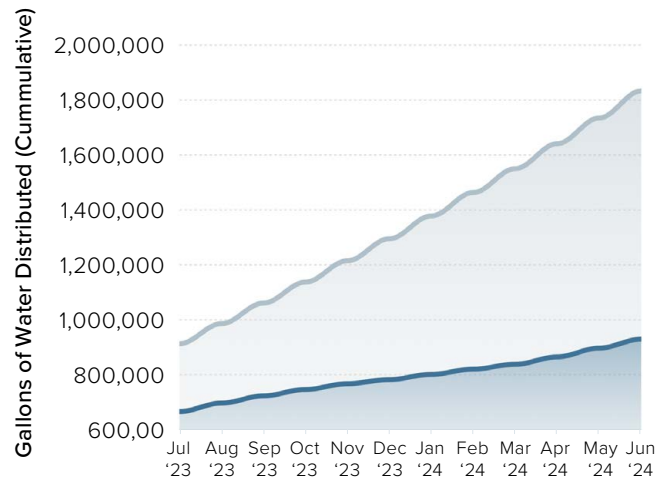


Monthly Data (Last 12 Months)

■ Applications Submitted   
 ■ Eligible Wells Tested   
 ■ Wells Above Nitrate Standard

**2,456**

Wells tested since 2021



Monthly Data (Last 12 Months)

■ via filling stations   
 ■ via bottles

**2,762,724**

Gallons of water distributed since 2021

Accessed January 10, 2024. Source: <https://cvsalts.mljenv.com>

[Learn More](#)

**CV-SALTS**

[www.cvsalinity.org](http://www.cvsalinity.org)

**Valley Water Collaborative (Modesto and Turlock subbasins)**

<https://valleywaterc.org>

**Chowchilla Management Zone**

<https://www.maderacountywater.com/cv-salts>

**Kings Water Alliance**

<http://kingswateralliance.org>

**Kaweah Water Foundation**

<http://www.kaweahwater.org>

**Tule Basin Management Zone**

<https://www.tulemz.com>



## Bay-Delta Plan

### Lower San Joaquin River Flow/Southern Delta

**Lower San Joaquin River flows** - The draft regulation and EIR is currently in development to implement 40% unimpaired flow in each tributary (Merced, Tuolumne, and Stanislaus). The draft regulation and EIR for public review is expected in early 2025, with expected adoption in 2026.

**Tuolumne River Voluntary Agreement** - Includes January-June flow and other non-flow habitat restoration commitments. Because the proposed voluntary agreements do not fully meet Lower San Joaquin River objectives, they require amendments to the Bay-Delta Plan, which the State Board has not yet decided to approve. A draft Scientific Basis Report and public workshop are expected in fall 2024, with potential release of proposed amendments to the Bay-Delta Plan and State Board consideration of approval in 2025.

### Sacramento/Delta

**Updates** - State Water Board has not decided how to move forward with alternatives to updates released in September 2023. The regulatory protection pathway includes flow and non-flow objectives with monitoring, evaluation and reporting provisions. Proposed voluntary agreements include flow, habitat restoration and other actions on Sacramento, Feather, American, Yuba, and Mokelumne Rivers, Putah Creek, and in the Delta.

**Tribal and subsistence fishing beneficial uses** - Includes tribal tradition and culture, tribal subsistence fishing, and subsistence fishing beneficial uses. Incorporation of tribal beneficial uses would provide for recognizing them as they relate to reasonable protection of fish and wildlife within the context and purview of the Bay-Delta Plan, but would not act as a formal “designation” of the uses as applying to specific waterbodies.

**Traditional ecological knowledge (TEK)** - Tribal knowledge and resource management practices may inform possible components of the Bay-Delta Plan, such as:

- Adaptive implementation of flows
- Habitat restoration
- Monitoring activities
- Future changes to the Bay-Delta Plan and its implementation

**Tribal engagement** - Includes formal government-to-government consultation, tribal engagement meetings on Bay-Delta Plan updates, and possible development of a tribal working group to facilitate incorporation of TEK and tribal feedback on Bay-Delta Plan documents and updates

**Timeline** - Release of specific draft Sacramento/Delta updates to the Bay-Delta Plan (including program of implementation language) for public review and comment and public workshop are expected in fall 2024, with adoption by mid-2025.

### Learn More

#### Bay-Delta Watershed

[www.waterboards.ca.gov/waterrights/water\\_issues/programs/bay\\_delta/](http://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/)

#### Bay-Delta Plan Update and Implementation

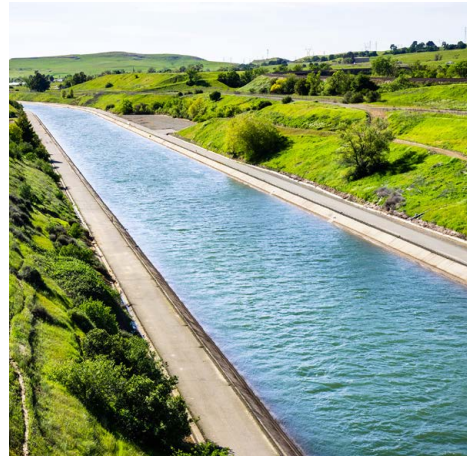
[https://www.waterboards.ca.gov/waterrights/water\\_issues/programs/bay\\_delta/bay\\_delta\\_plan/water\\_quality\\_control\\_planning/](https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/bay_delta_plan/water_quality_control_planning/)



*Land IQ provides these regulatory updates to help our clients stay informed about regulatory programs related to agriculture and water in California. To learn more about the regulatory and technical support that Land IQ provides to irrigation and water supply districts, GSAs, commodity groups, and private and public agencies, please visit our website at [www.landiq.com](http://www.landiq.com) or contact:*

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