

Nitrate Challenge in the Central Valley

Over the last 150 years, increased agricultural, industrial, and municipal activities, coupled with population growth, have resulted in dramatic increases in nitrates in groundwater in the Central Valley. Many small communities in the Central Valley rely on groundwater for drinking water. Some communities can't safely use groundwater for drinking water as nitrate levels present a potential for human health impacts. The Central Valley Regional Water Quality Control Board (Regional Water Board) regulates nitrate discharges to groundwater from these activities. Improved management practices have been implemented to reduce nitrate discharges, but compliance with current regulations is difficult to impossible. New, updated regulations have been developed through the CV-SALTS initiative.

CV-SALTS Initiative

The CV-SALTS (Central Valley Salinity Alternatives for Long-Term Sustainability) was formed more than a decade ago as a collaborative stakeholder group tasked with developing a sustainable salt and nitrate management program for the Central Valley. In 2008, the Central Valley Salinity Coalition was established to help fund the needed scientific and technical studies.

New Nitrate Control Program

On May 31, 2018, the Regional Board approved amendments to the Central Valley's Water Quality Control Plans or Basin Plans which include the new Salt and Nitrate Control Programs. On October 16, 2019, the State Water Resources Control Board (State Board) also approved the amendments. The Office of Administrative Law approved the amendments in January 2020.

The Nitrate Control Program is a prioritized program. The Regional Board will implement the Nitrate Control Program beginning with the identified Priority 1 groundwater basins/subbasins of **Kaweah, Turlock, Chowchilla, Tule, Modesto, and Kings**. In late May 2020, Notices to Comply are expected to be mailed to nitrate dischargers.

Priority 2 groundwater basins /subbasins are Yolo, Merced, Kern County (west side south), Tulare Lake, Kern County (Peso), Delta Mendota, Eastern San Joaquin, and Madera. For these areas, Notices to Comply will be mailed between late 2022 and late 2024.

Nitrate Control Program Goals

1. Provide safe drinking water supplies as the priority.
2. Reduce nitrate impacts to water supplies.
3. Restore groundwater quality.

The Nitrate Control Program provides the Regional Water Board with revised, more flexible authorities for nitrate regulation, including:

- Exceptions for dischargers in meeting the nitrate water quality objective,
- Establishment of management zones to foster collaborative nitrate solutions, and
- Offset Projects for groundwater as an alternative means of achieving compliance with Waste Discharge Requirements (WDRs).

Two Nitrate Compliance Pathways for Dischargers to Choose

Once nitrate dischargers receive a Notice to Comply with the Nitrate Control Program, they have a choice of two pathways for compliance -- Pathway A – Individual Permitting or Pathway B – Local Management Zone. After receiving a Notice to Comply, dischargers must choose a pathway.

New Nitrate Control Program Offers Choices for Compliance



Pathway A: Individual Permitting Approach

A discharger or groups of dischargers subject to a single order may opt to comply under the individual permit requirements that:

- Defines requirements to protect shallow groundwater
- Establishes five discharge categories and associated compliance requirements, and
- Establishes trigger levels for consideration
- Requires, where applicable, that individual permittee provide safe drinking water for those impacted by nitrates

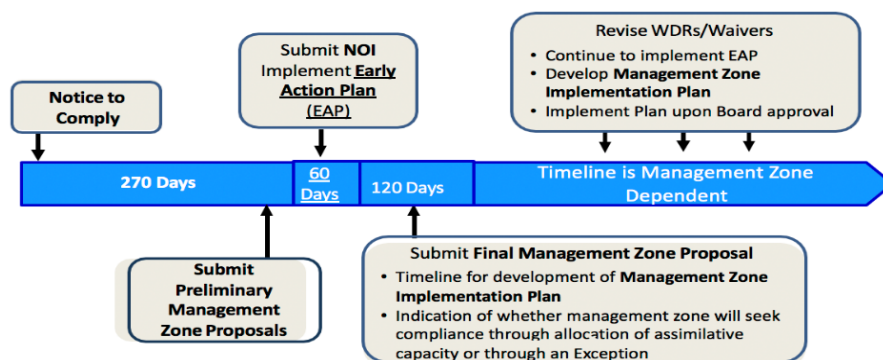
Pathway B: Management Zone Permitting Approach

For those dischargers that cannot meet the Pathway A more conservative approach, they must use Pathway B. Dischargers opt to work collectively with other dischargers through a management zone. The management zone is a defined area, e.g., a portion of a larger groundwater basin/subbasin. A management zone serves as a discrete regulatory compliance unit for nitrate compliance. Dischargers would ensure that those impacted by nitrate have safe drinking water within the zone while continuing to implement best practices and nitrogen management plans. In turn, dischargers may be allowed greater flexibility and more time to achieve nitrogen balance and restore nitrate affected water bodies.

Benefits of Joining a Management Zone

- ✓ Promotes coordinated water resource management among dischargers and others.
- ✓ Promotes prioritization of resource allocation, which translates to more efficient use of funds.
- ✓ Working collectively to ensure that much-needed safe drinking water is provided to those residents adversely affected.
- ✓ Early Action Plan (EAP) (see more below) provide an alternative compliance opportunity for those who cannot comply with nitrate standards or for whom participating in a management zone in their local area is a better business decision than trying to demonstrate compliance alone (Pathway A).

Timeline for Forming Management Zones in Priority 1 Groundwater Basins/Subbasins



Early Action Plans

Regardless of whether choosing Pathway A or Pathway B, **all dischargers must assess nitrate levels** to ensure safe, reliable drinking water by monitoring groundwater used for municipal supplies that may be affected by nitrate discharge(s). If affected, and where the discharger(s) is causing an exceedance of nitrate, then the discharger(s) will submit an EAP. The EAP includes actions and an implementation schedule to address the immediate needs of those with groundwater that exceeds the nitrate drinking water standard. EAPs will ensure that the first goal of the Nitrate Control Program—to address drinking water issues first—is achieved by allowing participants to work together regionally to meet this need, saving money and sharing costs as locally appropriate.