

CV-SALTS Effort Tackling Nitrate in Central Valley



Photo courtesy of CV-SALTS

The stakes are always high in the Central Valley, where the epicenter of California's agricultural economy encompasses 40% of the land mass of the state and provides 25% of the nation's food. Where there are challenges, you'll find ACWA member agencies working within collaborative efforts to find a solution. One of those challenges is addressing nitrate accumulations in groundwater from historical and ongoing discharges stemming from accepted agriculture, municipal and industrial activities. ACWA member agencies belong to a broad-based initiative working on this challenge through an effort better known as CV-SALTS.

History

In 2006, the Central Valley Regional Water Quality Control Board initiated a forward-thinking and collaborative stakeholder initiative known as Central Valley Salinity Alternatives for Long-Term Sustainability – CV-SALTS – to develop a Central Valley-wide Salt and Nitrate Management Plan (SNMP).

The SNMP complied with the requirements in the State Water Resources Control Board's Recycled Water Policy. Stakeholder membership included representatives from regional and the state water boards along with agriculture, municipalities, industry, water supply, environmental justice, state and federal regulatory agencies, as well as the public. Today it provides a comprehensive regulatory and programmatic approach for the sustainable management of salts and nitrate in groundwater and surface water.

How it Works

The Central Valley's Basin Plans were amended to include the Nitrate Control Program through the establishment of management zones. In general, a management zone consists of multiple permittees from various sectors working collectively to first ensure safe drinking water, then to achieve balanced loadings within the management area, and ultimately to develop a long-term plan for managed restoration of groundwater to

meet applicable water quality objectives. The Nitrate Control Program is an innovative, collaborative approach because it shifts from traditional one-size-fits-all regulations to a flexible, community-driven model that prioritizes public health.

The Nitrate Control Program also establishes a long-term management strategy for addressing nitrate pollution in the Central Valley's drinking water aquifers. Nitrate at high levels can reduce the blood's ability to carry oxygen, which can result in brain damage and death. Infants and pregnant women are most at risk of nitrate toxicity.

High resolution groundwater quality mapping was conducted for the Central Valley floor and was the basis for prioritizing nitrate management in the identified basins. There are multiple management zones funded by permitted dischargers from various industries, including irrigated agriculture, dairy, oil and gas, publicly-owned treatment works, wine, poultry and food processors.

Applying Outreach

Management zones have provided assistance such as free domestic well testing, interim safe drinking water through bottled water delivery, and free water fill stations available to residents with nitrate impacted domestic wells who are not connected to a public water system.

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“Effective water management and the provision of safe drinking water for Central Valley residents requires more than just technical solutions; it requires broad, stakeholder-driven collaboration,” said David Cory, Board Director of the Grasslands Drainage District, member of the San Luis & Delta Mendota Water Authority and Chair of the Central Valley Salinity Coalition. “The CV-SALTS initiative is a primary example of past

“Collaboration on salinity and nitrate issues enhances the protection of water

quality and also support a sustainable and thriving agricultural economy for the entire Central Valley,” Cory added.

Ensuring Access to Safe Drinking Water

Management zones are also working on long-term solutions through inter-organizational collaboration needed to get rural communities safe drinking water, such as accelerating actions to install in-home treatment systems to remove nitrate from domestic drinking water supplies, all while simultaneously implementing new management practices and developing

new technologies. Both aim to remove nitrate from discharges that may otherwise leach to groundwater, such as connecting a neighborhood of well-dependent homes to a nearby water system or consolidating smaller water systems to expand their capacity.

Management zones facilitate the finding of long-term drinking water solutions for rural communities within their service areas. This includes working with nitrate-impacted rural communities to explore what solutions will work for their area. Such collaboration involves county

governments, water systems, area residents, local nonprofits and others. It is the kind of partnership ACWA members are practiced at and understand the value of.

Ultimately, the Nitrate Control Program recognizes the complexity of addressing nitrate issues and takes a realistic phased approach, which includes providing safe drinking water to residents in the Central Valley while the program is being implemented. It also underscores the value and importance of collaboration amongst agencies, industry, agriculture and regulatory agencies. ♦

MEMBER NEWS

Carpinteria Breaks Ground on Historic Water Purification Project

The Carpinteria Valley Water District (CVWD) and Carpinteria Sanitary District (CSD) broke ground recently on the Carpinteria Advanced Purification Project (CAPP), a landmark initiative designed to provide a drought-proof, locally controlled water supply for the community.

The project will recycle over 1 million gallons of water per day, meeting approximately 25% of Carpinteria’s annual water needs. By treating wastewater with proven, advanced technology and injecting the purified water into the Carpinteria Groundwater Basin, CAPP will create a reliable, year-round source that is resilient to drought conditions and climate change.

“I’m excited for the opportunity to serve the Carpinteria community and construct the water purification project for improved water management in the future,” CVWD General Manager Kelley Dyer stated in a news release. “CAPP represents a critical step in strengthening our local water supply by helping recharge the groundwater basin. Following recent



drought conditions that reduced basin levels, this project will help maintain more stable groundwater supplies during future dry periods.”

The May 28 groundbreaking ceremony was attended by local, state and federal representatives. The \$90 million project is supported by over \$35 million in state

and federal grants, including funding from the U.S. Bureau of Reclamation, State Water Resources Control Board and the California Department of Water Resources. The remainder of funding will be met by a low-interest loan from the State Water Board. ♦