



San Joaquin River at Vernalis, a key salinity monitoring location
Photo courtesy of US Bureau of Reclamation

Where can I learn more?

More information on the CV-SALTS effort is available from the Central Valley Salinity Coalition's web site: www.cvsalinity.org. Find current information on the progress stakeholders are making towards developing sustainable salt management plan at this site. Background information on CV-SALTS, technical reports, and Board presentations are available at www.waterboards.ca.gov/centralvalley/water_issues/salinity.

How can I get involved?

CV-SALTS invites you to become involved in developing and implementing a comprehensive salinity management plan for the Central Valley. For more information contact:

Central Valley Salinity Coalition

Daniel Cozad
dcozad@cvsalinity.org
www.cvsalinity.org
888-826-3635

Central Valley Regional Water Quality Control Board

Gail Cismowski
gcismowski@waterboards.ca.gov
916-464-4608

Jim Martin
jmartin@waterboards.ca.gov
916-464-4685



Developing a Comprehensive Salinity and Nutrient Management Plan for the Central Valley

CV-SALTS Initiative



CV-SALTS Stakeholders Take Salt Management Into Their Own Hands

CV-SALTS Initiative

Developing a Comprehensive Salinity and Nutrient Management Plan for the Central Valley

Salinity Threatens Water Reliability

A reliable water supply is critical to California's continued prosperity and the health of its residents and environment. Maintaining water quality is the key to ensuring that existing supplies are protected. Salinity, including nitrate, threatens the long-term water reliability for all users of Central Valley waters throughout California.

Salts in Central Valley Basins

The Central Valley is divided into three basins: the Sacramento River Basin, the San Joaquin River Basin, and the Tulare Lake Basin.

The Sacramento River Basin generally receives enough precipitation to dilute surface water salinity. There are areas where groundwater is at risk from specific saline discharges, but viewed as a whole, the basin does not experience problem salinity. However, salts originating in the Sacramento River Basin reach the Delta pumps of the state and federal water projects and contribute to salinity problems in the San Joaquin Valley and other regions of the State.

The San Joaquin River Basin receives considerably less rainfall than the Sacramento River Basin. Supplemental irrigation is needed to support the regions noted multi-billion dollar agricultural industry. Irrigation water is pumped from the Delta and contains Sacramento and San Joaquin River flows with their respective salt loads. Some of the imported salt is discharged back to the Delta and out to the ocean, but more salt is pumped in than leaves, resulting in a chronic salt imbalance in the basin.

The Tulare Lake Basin is also home to a world-renowned agricultural economy supported in part by water deliveries from the Delta. Except in very wet years, the basin has no natural drainage so imported salts build up in the groundwater unless captured and sequestered (a temporary storage solution).

Which Salts Cause Problems?

CV-SALTS focuses on major ionic compounds including nitrate, calcium, sodium, magnesium, potassium, bicarbonate, sulfate and/or chloride. In the right amounts, some of these materials are considered essential for good health, but in excessive amounts cause problems. Once dissolved in water salts cannot be easily be removed.

Beneficial use of Water

Agriculture is a major industry in the Central Valley and is also the sector where problem salinity is often first observed. Other uses of water that can be affected when salinity, including nitrate, increases beyond acceptable levels include municipal use, environmental use, and industrial use. High salt concentrations can impact crop growth, cause health and taste problems for municipal users, and decrease the life of water delivery, conveyance and treatment systems both at the community level and in individual homes. The environment is also vulnerable to salt impacts. Thousands of acres of land in the Tulare Lake Basin are no longer farmable due to salinity.

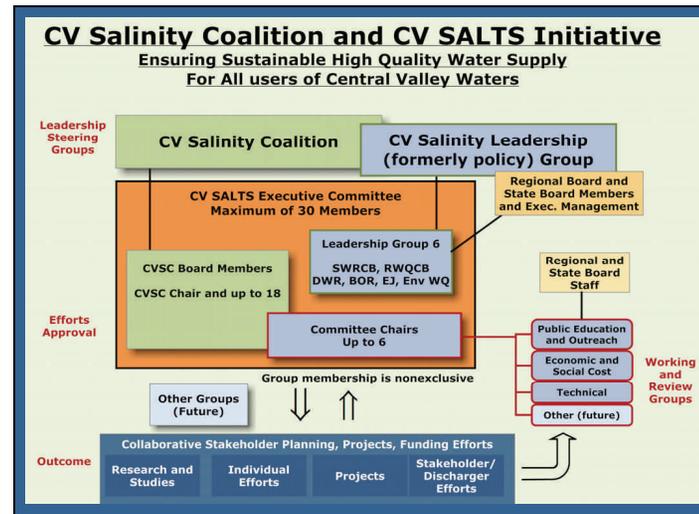
Salt Sources

In addition to salts that are brought in with imported water, we import salts, including nitrate, in the fertilizers and compost, water softener salts, detergents and the other salt-containing chemicals we use on a regular basis. Some Valley soils are naturally high in salts. Precipitation over the millenia and irrigation over the past century has caused some of these salts to be released from native rocks and soil to enter groundwater. Salts being added or dissolved are only part of the picture, though. Evaporation and consumptive use both result in water being removed and salts being left behind.

What is CV-SALTS?

CV-SALTS (Central Valley Salinity Alternatives for Long-Term Sustainability) is a strategic initiative to address salinity, including nitrates, throughout the region in a comprehensive, consistent and sustainable manner.

The Central Valley Regional Water Quality Control Board and the State Water Resources Control Board in cooperation with stakeholders and the Central Valley Salinity Coalition work together (see chart) to review and update the Water Quality Control Plans for the Sacramento and San Joaquin River Basins, the Tulare Lake Basin and the Delta Plan for salinity management. CV-SALTS engages stakeholder for more efficient



and effective salinity and nutrient management from both regulated discharges and unregulated sources. Examples of regional collaborative projects might include: regional salt storage or conveyance systems, treatment facilities, real-time management, water or salt trading, or other actions that the Water Boards can't require but which could facilitate sustainable salinity management.