

# CV SALTS

## CENTRAL VALLEY SALINITY ALTERNATIVES FOR LONG-TERM SUSTAINABILITY

### SALT & NITRATES

#### *Threat to Water Quality and the Economy*

The Central Valley (Valley) is the epicenter of California's economy—encompassing 40% of the state and providing water for people and businesses from San Francisco to San Diego, as well as food for California, the nation, and the world. Over the last 150 years, increased agricultural, industrial, and municipal activities, coupled with population growth, have resulted in dramatic increases in salts and nitrates in groundwater, soils, and surface waters. In some communities, the nitrate concentrations have caused unsafe drinking water. Salt accumulations have resulted in 250,000 acres being taken out of production and 1.5 million acres have been declared salinity impaired. If not addressed, the economic impacts of salts and nitrates on the Valley are estimated to exceed \$3-billion per year.

### COMPLIANCE

#### *With Regulation is a Challenge*

Salt and nitrate discharges by agriculture, municipal, and industrial activities are regulated by the Central Valley Water Quality Control Board (Central Valley Water Board). New and improved management practices have already been implemented to reduce salt and nitrate discharges into surface and ground waters, but compliance with current regulations is difficult and, in some areas of the Valley, even impossible. New, updated, flexible regulations are needed that address the Valley's natural diversities (e.g. climatic, hydrologic, geologic) while protecting water quality and maintaining a strong economy.

### COLLABORATION

#### *To Develop Solutions*

In 2006, a coalition of stakeholders, including federal, state and local agencies, permitted dischargers (growers, ranchers, municipalities, food processors, etc.), and environmental justice groups, started discussing how to balance maintaining a strong economy while ensuring safe



drinking water. This initiative is called the Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS). To help fund the technical and scientific studies necessary to support the development of alternative regulatory approaches, the Central Valley Salinity Coalition (CVSC) was established in 2008.

### NEW PLAN

#### *Underway to Manage Salts & Nitrates*

The Central Valley Salt and Nitrate Management Plan (SNMP) was released in January 2017. The SNMP is built on a strong regulatory, technical, and policy foundation. The SNMP recommends that the existing Basin Plans be amended (see page 4) to include the new and revised regulations that would allow more flexibility to manage salts and nitrates locally while providing safe drinking water supplies.

### GOALS

*The SNMP establishes three primary management goals to guide implementation.*



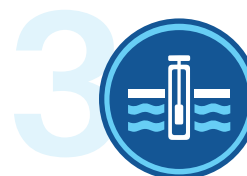
PROVIDE SAFE DRINKING  
WATER SUPPLIES

*Short & long term solutions*



REDUCE SALT &  
NITRATE IMPACTS

*Timeframe & costs vary*



RESTORE GROUND  
WATER QUALITY

*Where reasonable & feasible*

# A CLOSER LOOK

## Salt Management Plan

### NEW APPROACH TO SALT MANAGEMENT

#### *A Long-Term Focus*

The current high level of salt in portions of the Valley is a result of a combination of agricultural, industrial, municipal, and water supply activities. Dams and imported water supplies have reduced the natural flushing of salt and increased the amount of salt brought into the Valley. Salt concentrations in the groundwater are naturally high in some areas and increasing in most. For example, in the San Joaquin Valley, **6 million tons of salt accumulate every year.** The recent drought increased the used of groundwater with higher concentrations of salt.

Technical studies conclude that a long-term strategy for managing salinity is necessary. Current management activities only address about 15% of the annual salt load; long-term solutions are needed to address the remaining 85%. While this strategy is developed, a permitting approach is recommended to facilitate immediate solutions.

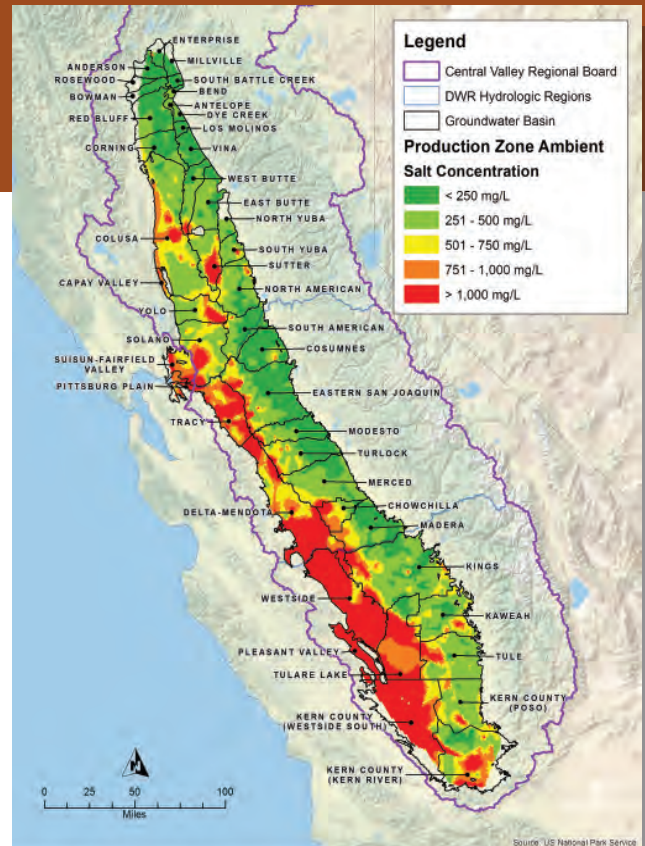


### SHORT-TERM SOLUTION:

#### *Interim Salinity Permitting*

During the development of the long-term plan for salt management, an Interim Permitting Approach will be used. This approach may include actions such as:

- Continued implementation of existing pollution prevention, watershed, and salt reduction plans.
- Continued maintenance of current salinity discharge levels.
- Enforced compliance with Interim Permit Limits.
- Implementation of new salinity management practices and source control activities.
- Monitoring of salinity discharge activities where required.
- Participating in Prioritization and Optimization Study.



### LONG-TERM SALT MANAGEMENT

#### *A Phased Approach*

## 1 Development

Perform a Prioritization and Optimization Study to:

- Define potential regional and subregional projects (e.g., *de-salters, regulated brine line*) and practices (e.g., *new treatment controls, development of new water supplies*).
- Identify funding sources.
- Establish governance structures to implement large-scale projects.

## 2 Funding

Obtain funding and complete environmental permitting and engineering/design for projects identified in Phase One.

## 3 Construct Projects

Construct salt management projects developed in Phases One and Two.

# A NEW APPROACH

## How Nitrate Management Affects You

### WHAT DOES THIS MEAN FOR YOU?

Most of the nitrates accumulating in the groundwater come from sources such as manure, fertilizer, and failing septic systems. In the Valley, 90% of residents rely on groundwater wells for drinking water, and some of this supply is now unsafe. Currently, dischargers (growers, ranchers, municipalities, food processors, etc.) are regulated for nitrate discharge, but in many cases the regulations are difficult or even impossible to achieve. The SNMP is recommending new regulations that encourage dischargers to participate in projects that provide safe drinking water. Those providing safe drinking water may be given an option of having more time to achieve nitrate compliance.



To streamline resources while addressing nitrate management issues, the Valley has been separated into three areas of priority for nitrate management. The highest priority areas have the greatest number of affected drinking water supplies and will be addressed first. The high priority areas are located in these Basins or Subbasins: Kaweah, Turlock, Chowchilla, Tule, Modesto, and Kings.

### What is Different?

A Notice to Comply would be issued to all dischargers located in high-priority areas (see above). Dischargers would have two pathways to choose from:

1. Maintain traditional permitting, OR
2. Follow the new management zone permitting option.

Both options prioritize ensuring safe drinking water.

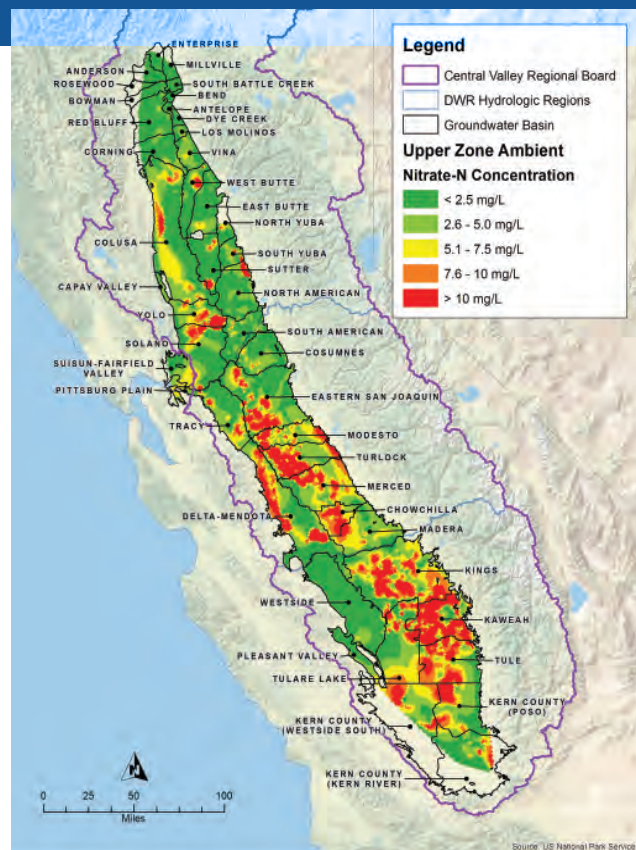
### Traditional Permitting

A discharger may opt to comply under the traditional permit requirements established in the SNMP either as an individual (e.g. a food processing plant) or as a third party (e.g. growers and farmers represented by a third party such as an irrigated lands coalition).

### New Groundwater Management Zone Permitting

Dischargers that choose to work as part of a collective with other dischargers would form a local management zone. The zone then serves as a discrete regulatory compliance unit for nitrate compliance.

Dischargers would continue implementing best practices and nitrogen management plans while working to provide safe drinking water within the zone. In turn, dischargers may be allowed more time to achieve nitrogen balance and restore affected water bodies.



### Nitrate Management Zone Pathway

#### A Closer Look

**Here's a possible scenario, once the SNMP regulations go into effect:**

A municipal wastewater treatment plant or food processing plant receives a Notice to Comply.

**They have two choices:** (A) comply as an individual permittee under traditional permitting or (B) join a management zone with other dischargers who then work together to assure zone residents have safe drinking water. In exchange, the zone participants are allowed more time and flexibility to achieve nitrate compliance. The Central Valley Water Board provides guidance, oversight, and necessary approvals for management zone creation, planning, and implementation.



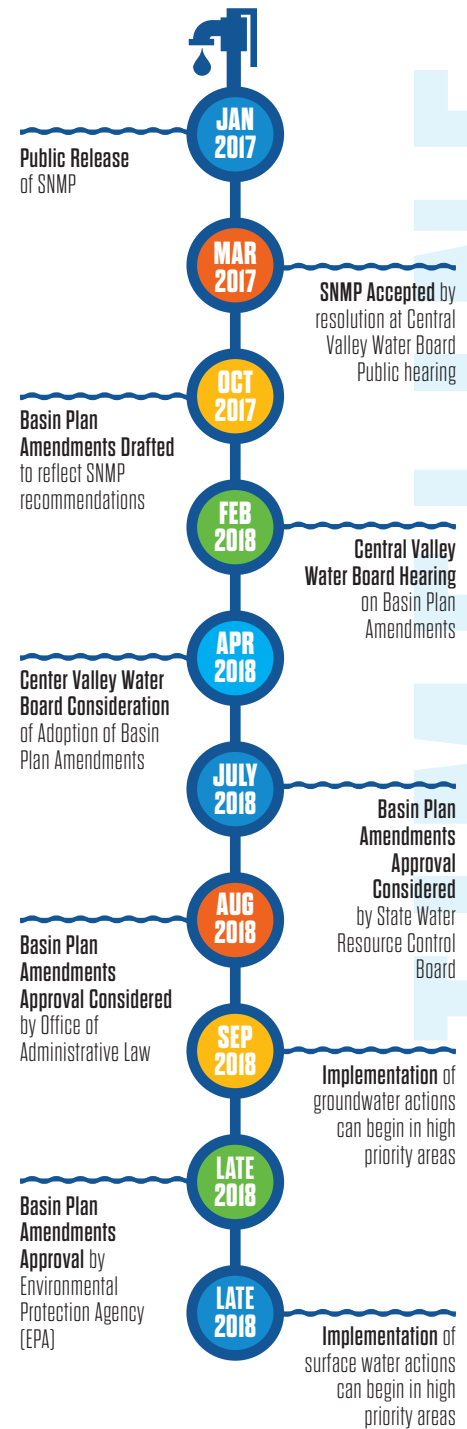
## BASIN PLAN AMENDMENTS IN THE WORKS

The Central Valley Water Board oversees the regulation of agricultural, municipal, and industrial waste discharges of nitrates and salts within the Valley. The Central Valley Water Board uses two Basin Plans as the basis for regulating water quality: the Sacramento River-San Joaquin Basin Plan and the Tulare Lake Basin Plan. Those providing safe drinking water may be given an option of having more time to achieve nitrate compliance. Once amended, the Central Valley Water Board will be able to implement regulations that offer greater flexibility for discharger compliance while ensuring safe drinking water in affected areas and long-term progress toward improved surface and ground water quality.

## LEARN MORE

Visit any of these online resources to learn more about the CV-SALTS effort:

-  [www.cvsalinity.org](http://www.cvsalinity.org)
-  [www.waterboards.ca.gov/centralvalley](http://www.waterboards.ca.gov/centralvalley)
-  **Salt & Nitrate Management Plan**  
[www.cvsalinity.org/docs/central-valley-snmp/final-snmp](http://www.cvsalinity.org/docs/central-valley-snmp/final-snmp)



## GET INVOLVED & LEARN MORE!

Do you use water in the Valley?

Join CV-SALTS to help bring safe drinking water to the entire Central Valley.

Visit [CVSalinity.org](http://CVSalinity.org) to learn how you can help and to receive CV-SALTS updates.