SWAMP
Surface Water Ambient Monitoring Program

Fact Sheet | Region 5

Central Valley
Regional Water Quality Control Board

Overview

The Central Valley Regional Water Quality Control Board oversees the largest and most diverse region in California, spanning from the Oregon border to the northern tip of Los Angeles County and encompassing all or part of 38 of the 58 California counties. The region comprises nearly 40 percent of the state, provides over 50 percent of the state's total water supply, and contains 77 percent of the irrigated agriculture. Three major watersheds delineate the region: the Sacramento River Basin, the San Joaquin River Basin, and the Tulare Lake Basin.

The Sacramento River Basin

Sacramento River Basin

The Sacramento River is the largest river in California, draining a 27,000 -square mile watershed and carrying 31 percent of the state's surface water runoff. Primary tributaries to the Sacramento River are the McCloud, Pit , Feather, Yuba, and American Rivers. Other key tributaries include Battle Creek, Stony Creek, Cache Creek, Putah Creek, and the Colusa Basin Drain. The health of the Sacramento River and its tributaries is critical to anadromous fish species, including salmon, steelhead, and sturgeon.

Regional Facts

- Approximately 59,300 square miles in size
- 805 square miles of lakes, ponds, and reservoirs
- Around 63,500 miles of rivers and streams
- 19,812 miles of constructed agricultural drains[1]
- 1,512 miles of waterways dominated by agricultural discharge[2]

CALIFORNIA Water Boards

www.waterboards.ca.gov/swamp

Updated 2018

Fact Sheet | Region 5

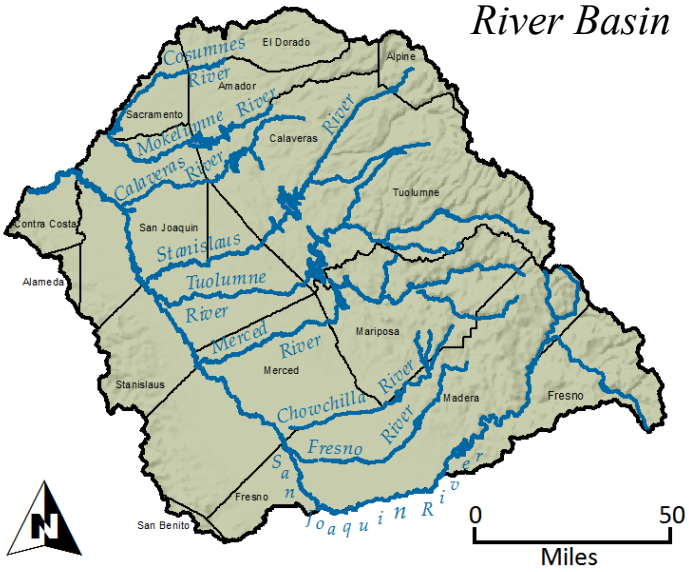
Central Valley Region

In the mountainous part of the watershed, the area is generally rural and much of the land is federally owned. Past and current mining, timber harvest, agriculture, livestock grazing and road construction practices play an important role in determining water quality and watershed condition. Most of the Sacramento Valley is intensely cultivated, with over 3,000 square miles of irrigated farmland. The Sacramento Basin is also home to about 2 million people, almost half of whom live in the Sacramento metropolitan area.

San Joaquin River Basin

The San Joaquin River Basin covers roughly 16,000 square miles and has had highly managed hydrology since implementation of the Central Valley Project. Following completion of the Friant-Kern Canal in 1951, most of the San Joaquin River flow was diverted, leaving approximately 60 miles of downstream river channel dry. The Delta-Mendota Canal replenishes the river near the town of Mendota. Since 2009, the San Joaquin River Restoration Program has been working to restore flows to the San Joaquin River from the Friant Dam to the confluence of the Merced River in order to restore and maintain fish populations in the river. Major tributaries to the San Joaquin River include the Cosumnes, Mokelumne, Calaveras, Stanislaus, Tuolumne, Merced, Chowchilla, and Fresno Rivers. All of these eastside tributaries are dominated by snowmelt from the Sierra Nevada. Westside discharges are dominated by agricultural drainage. Agriculture is the major land use along the valley floor. Urban growth along the Interstate 5 corridor is rapidly converting historically agricultural land to urban use.

The San Joaquin River Basin



Tulare Lake River Basin

The Tulare Lake Basin comprises the drainage area of the San Joaquin Valley south of the San Joaquin River and encompasses approximately 16,400 square miles. Major rivers include the Kings, Kaweah, Tule, and Kern. During normal water years the Kings, Kaweah, and Tule drain into the historic Tulare Lakebed.

Fact Sheet | Region 5

Central Valley Region

The Kern River drains into Buena Vista Lake. Both the historic Tulare Lakebed and Buena Vista Lake are natural depressions on the valley floor. The Tulare Lake Basin is a closed basin except during high water years. During high water years the Kings River can drain north into the San Joaquin River through the Fresno Slough. The Tulare Lake Basin also receives imported surface water from the north via various canals. Approximately 5,500 square miles of the upper Basin are federally owned and consist in part of Kings Canyon and Sequoia National Parks and substantial portions of Sierra, Sequoia, Inyo, and Los Padres National Forests. The majority of urban development is in the foothills and along the valley floor. The dominant land use in the valley floor is agriculture, with approximately 7,000 square miles under irrigation.

Vision and Goals for Monitoring

SWAMP is tasked the assessing water quality in all of California's surface waters. The overall vision of Central Valley SWAMP is to provide ambient water quality assessments through a combination of long-term trend monitoring, rotational watershed monitoring, and water quality investigations of priority issues.

The Central Valley Water Board has four overarching goals for its SWAMP efforts:

- Evaluate ambient water quality, beneficial use protection, and potential sources of impairment.
- Evaluate effectiveness of Water Board water quality improvement policies.
- Coordinate internal and external monitoring efforts to leverage limited resources.
- Ensure timely availability of monitoring results.

Fact Sheet | Region 5

Central Valley Region

Program Activity

SWAMP conducts water quality monitoring directly and through collaborative partnerships, and provides numerous reports, fact sheets and tools, all designed to support water resource management in California. During the first seven years of the program, the Central Valley Water Board coordinated with and built off of existing frameworks within each river basin in order to leverage limited resources. Separate approaches were developed based on each basin's unique characteristics, existing monitoring programs, and water quality issues.

Since 2007, SWAMP has worked to create a region-wide program that still addresses local watershed needs. The revised focus aims to better coordinate internal monitoring efforts and data assessments and ensure regional efforts are aligned with the statewide strategy and assessment framework.

Monitoring efforts have included:

- Monitoring for indicator bacteria in recreational streams, rivers, and lakes. Since 2007, SWAMP has conducted a series of studies to assess the protection of recreational beneficial uses in fifteen watersheds throughout the Central Valley Region.
- Trend monitoring in the Sacramento and San Joaquin River Basins.
- Investigating reports of harmful algal blooms (HABs). SWAMP staff help to coordinate with local agencies to tracks blooms and conduct initial bloom response monitoring as needed.
- Rotational watershed monitoring to assess water quality condition. In recent years the Kings, Kern, Tule, Kaweah, and Battle Creek watersheds have been monitored.
- Coordinating with other Water Board programs to investigate data gaps.

For more information on program activities and access to water quality reports, visit the Central Valley Water Board SWAMP website at:

https://www.waterboards.ca.gov/centralvalley/water_issues/swamp/

Collaborative Efforts

Coordination continues to be one of the primary goals of the Central Valley Water Board's SWAMP efforts. SWAMP collaborates with agencies, local watershed groups, and citizen volunteers to maximize limited resources.

Fact Sheet | Region 5

Central Valley Region

Key coordination efforts have included:

- Support for the Sacramento-San Joaquin Delta Regional Monitoring Program, including staff support and funding for targeted toxicity monitoring to assess impacts of current use pesticides.
- The Sacramento Watershed Coordinated Monitoring Program is a collaborative effort with the Department of Water Resources, Northern Region to monitor water quality trends in the Sacramento River Basin. Since 2008 water samples have been collected quarterly at as many as 56 sites throughout the watershed and analyzed for a wide range of constituents.
- Collaborating with local agencies to investigate the sources of elevated bacteria in the lower American River.
- Data management support for the Irrigated Lands Regulatory Program to streamline data transfers to CEDEN and improve data quality.

For More Information on SWAMP in the Central Valley Region, Please Contact:

Sacramento Office: Alisha Wenzel, (916) 464-4717
Alisha.Wenzel@waterboards.ca.gov
Central Valley
Regional Water Quality Control Board
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670-6114

Fresno Office: Mike Grill, (559) 445-6083
Mike.Grill@waterboards.ca.gov
Central Valley
Regional Water Quality Control Board
1685 "E" Street
Fresno, CA 93706-2007

Redding Office: Guy Chetelat, (530) 224-4997
Guy.Chetelat@waterboards.ca.gov
Central Valley
Regional Water Quality Control Board
364 Knollcrest Drive, Suite 205
Redding, CA 96002

https://www.waterboards.ca.gov/centralvalley/water_issues/swamp/

***The methods used to obtain the "Regional Facts" statistics can be found at: Calculations for Regional Facts**
[1,2]These values are from a 1992 staff report for the Central Valley Water Board responding to requirements set forth in the 1991 Inland Surface Water Plan. Region 5 is in the process of updating these figures, but still uses them in the mean time.