

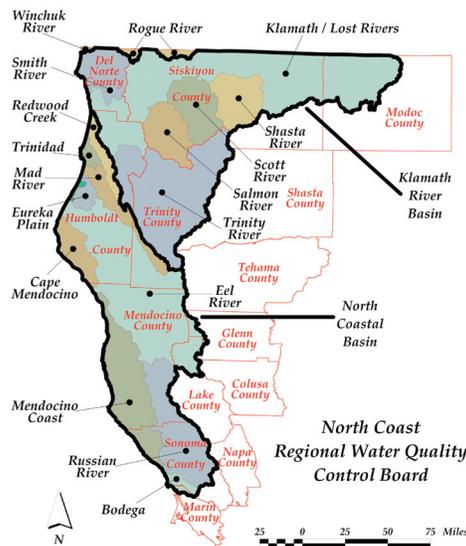
North Coast Regional Water Quality Control Board

Overview

The North Coast Region receives more precipitation than any other part of California. Abundant in surface water and groundwater resources, the North Coast Region constitutes only about 12 percent of the area of California but produces about 40 percent of the annual runoff. Encompassing some 19,390 square miles, including 340 miles of coastline and remote wilderness, urban and agricultural areas, the North Coast Region is divided into two natural drainage basins—the Klamath River Basin and the North Coastal Basin.

Two distinct temperature zones characterize the region. Along the coast, the climate is moderate and foggy, with little temperature variation. Inland seasonal temperatures can exceed 100°F. The numerous streams and rivers of the region contain anadromous fish, including coho and Chinook salmon and steelhead trout. The region's few reservoirs support both cold and warm water fish.

Major components of the economy are tourism and recreation; logging and timber milling; aggregate mining; commercial and sport fisheries; sheep, beef and dairy production; vineyards and wineries.



The Klamath River Basin

The Klamath River Basin covers approximately 10,830 square miles within northern California tributary to the Klamath, Trinity, Smith, Shasta, Scott and Salmon Rivers, as well as the Lost River hydrologic drainage area. The western portion of the Basin is within the Klamath Mountains and Coast Range provinces, characterized by steep, rugged peaks ranging to elevations of 6,000 to 8,000 feet with relatively little valley area. The mountain soils are shallow and often unstable. Precipitation ranges from 60 to 125 inches per year.



Water Facts

Approximately
20,000 square miles in size

340 miles of coastline

27,000 acres of lakes

More than 5,000
"blue-line" streams

Receives more than 35%
of state's annual rainfall

Rainfall varies from 20" to
more than 120"



North Coast Region

The eastern portion of the Basin includes predominantly high, broad valleys ranging from 4,000 to 6,000 feet in elevation. It receives low to moderate rainfall, typically 15 to 25 inches annually.

The North Coastal Basin

The North Coastal Basin covers approximately 8,560 square miles along the north-central coast. Most of the Basin consists of rugged, forested coastal mountains dissected by the Eel, Russian, Mad and Mendocino coastal rivers (Gualala, Noyo and Navarro Rivers), as well as numerous smaller river systems. Soils are generally unstable and erodible, and rainfall is high. Major population areas center around Humboldt Bay to the north and Santa Rosa to the south.

Vision and Goals for Monitoring

Surface Water Ambient Monitoring Program's (SWAMP) primary goal in the North Coast Region is to monitor the region's waters in a consistent manner to ensure protection of beneficial uses via three objectives:

- Assess water quality-related issues on a watershed basis.
- Employ a sampling design that allows the measurement and evaluation of spatial and temporal trends in water quality.
- Use standard sampling protocols, SWAMP quality assurance management plan procedures and the SWAMP database to provide statewide consistency and availability of data.

Program Activity

Region 1 SWAMP has four primary components.

Surface Water Monitoring

Since fiscal year 2000-2001, the regional SWAMP program has established 31 long-term trend monitoring stations and 47 temporary rotating basin stations throughout the region. Sampling crews have made more than 620 site visits and collected thousands of samples. All field data and a large portion of the analytical data currently reside in the SWAMP database, used by numerous agencies. We are currently preparing our first interpretative report.

IBI Development for North Coast Wadeable Streams

We have prepared a draft benthic index of biotic integrity (B-IBI) for wadeable streams in north coastal watersheds that is currently in review. It is the first quantitative index that allows assessment of biological condition of streams in northern coastal California in relation to multiple anthropogenic stressors.

MTBE Monitoring in Drinking Water Reservoirs

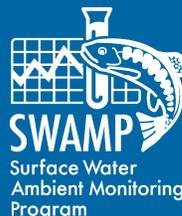
Conducted in Lake Pillsbury and Ruth Lake, North Coast SWAMP found detectable levels of MTBE that generally followed a seasonal pattern consistent with watercraft use. All the detections were well below the State of California's Public Health Goal of 13 parts per billion.

Indicator Development in Surface Waters

The goal of this project is to develop and apply a short exposure and economical method capable of detecting low concentrations of estrogenic endocrine disruptors (EEDCs) in surface waters. Results are encouraging, indicating the ability of the method to detect EEDCs in ambient surface waters at very low levels. The final report will be posted on the SWAMP Web site in November 2006.

Collaborative Efforts

North Coast SWAMP collaborates and shares data with a number of local, state and federal agencies. The EEDC program, for example, is a collaborative effort with the Central Valley Region, the Aquatic Toxicology Laboratory at UC Davis, and the U.S. Environmental Protection Agency (U.S. EPA), National Exposure Research Laboratory, Ecological Exposure Research Division, Molecular Ecology Research Branch in Cincinnati, Ohio. In addition, the U.S. EPA has used regional ambient water quality data in nutrient criteria development. We also make our data available to the Hoopa, Karuk and Yurok tribes the Klamath-Trinity Basin.



For more information on SWAMP in the North Coast Region, please contact:

Rich Fadness
Regional Monitoring Coordinator
North Coast Regional
Water Quality Control Board
5550 Skylane Boulevard, Suite A
Santa Rosa, CA 95403
(707) 576-6718
rfadness@waterboards.ca.gov