



The San Francisco Bay-Delta: California's Irreplaceable Resource

The San Francisco Bay-Sacramento-San Joaquin River Delta (Bay-Delta) is comprised of two water systems: the Sacramento-San Joaquin River Delta and the San Francisco Bay. Together, they make up the largest natural estuary on the west coast of both North and South America. The estuary covers more than 1,100 square miles and with an ecosystem supporting nearly 750 species of plants, fish, and wildlife. It is also the hub of California's water distribution system, supplying drinking water to more than 25 million people – nearly two-thirds of the California population.



Sacramento-San Joaquin River Delta

Fed by winter rains and spring snowmelt from the Sierra Nevada and southern Cascade mountain ranges, the Delta is formed at the merging of California's two largest rivers: the north-flowing San Joaquin (and adjoining tributaries) and the south-flowing Sacramento (and its adjoining tributaries). The region consists of 700 miles of sloughs, marshes, and waterways that feed into San Francisco Bay and, eventually, the Pacific Ocean.

Because it is located at the convergence of two rivers, the Delta serves as a key migration area for many fish, birds and other wildlife. All Central Valley anadromous fish species, such as Chinook Salmon and Green Sturgeon, migrate through the Delta to survive. Other fish species, including the native delta smelt, longfin smelt, and Sacramento splittail, are year-long Delta residents. The region is also a key area for birds migrating and over-wintering along the Pacific Flyway.



Photos by Department of Water Resources

San Francisco Bay

The Bay-Delta encompasses three major bays– Suisun Bay, San Pablo Bay, and San Francisco Bay. In natural conditions, Delta fresh water flows westward and eventually combines with salt water in Suisun Bay. This mixture then flows through the Carquinez Strait into the San Pablo Bay, which connects to the San Francisco Bay and Pacific Ocean.

The Bay drains water from 40 percent of California. Fish species born in the Delta travel through the Bay to the ocean, and are both a key part of California’s fishing industry and a source of food for marine mammals such as seals and orcas in the Pacific. Wetlands in the Bay house over a million birds annually and are an important food source for migrating species.

A Delta in Decline

For years the Bay-Delta ecosystem has been severely affected by a lack of freshwater flows that has led to loss of natural habitat for species and livelihood for Delta communities.

Fresh water in the Sacramento and San Joaquin Rivers is in high demand. As a result, the federal Central Valley Project and California’s State Water Project – massive water storage and delivery systems operated by federal and state agencies, respectively – function in a manner that increasingly reduces the amount of freshwater flows that make it through the estuary. In fact, from 1986 to 2005, water exports and upstream diversions reduced the average annual net outflow from the Delta into the Bay by nearly 50 percent, and in some months, nearly 65 percent.

This extraordinary level of water diversion from the Delta has nearly driven extinct numerous fish and wildlife species. It has also severely decreased the amount of fresh water for people living in Delta communities to use for drinking, bathing, cooking, and recreating. In recent years, the lack of flow has led to large toxic algal blooms in parts of the Delta.

For more information, go to our website www.sierraclub.org/california/sf-bay-delta-protection or contact Molly Culton, molly.culton@sierraclub.org, 916-557-1100 x 1100