



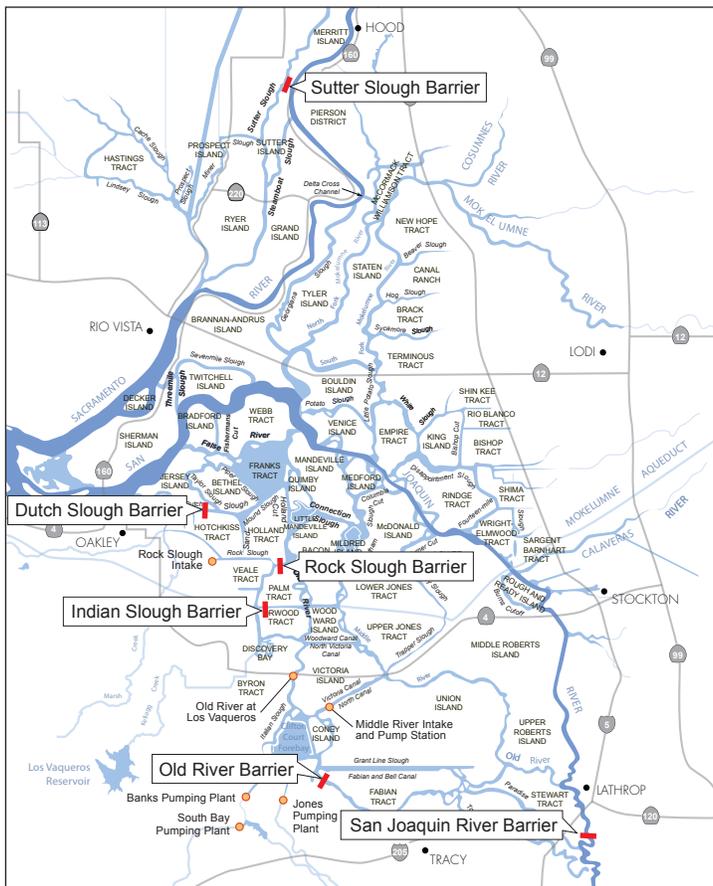
Protecting Water Supplies and Delta Water Quality with Emergency Drought Barriers

The Sacramento-San Joaquin Delta is an estuary where freshwater from rivers that drain much of California meet with salty ocean water pushing east with the tides. Salt water incursion from San Francisco Bay into Delta channels can make the Delta water unsuitable for drinking, irrigation, and other purposes. Normally, outflow from the Sacramento and San Joaquin rivers is sufficient to prevent San Francisco Bay's saline water from migrating eastward into the Delta with each tidal pulse.

Extreme drought conditions have altered this normal pattern of river interaction with the tides. Calendar year 2013 was California's driest 12-month period on record, and precipitation in the first months of 2014 has been far below normal. As a result, flows from rivers have been reduced. Salinity levels in the Delta could reach levels unsuitable for drinking or irrigation later this year. The construction of temporary emergency drought barriers at strategic locations can help repel and minimize saltwater intrusion into the Delta and thus help to conserve limited fresh water resources in upstream reservoirs.

Reservoir levels are very low this year, and multiple demands must be balanced, including the need to provide water for people, farms, and wildlife. Water must be released from upstream reservoirs to reduce salinity in the Delta for fish and supply purposes, while later in the year water also is needed in rivers upstream for populations of fish growing there. We must manage existing supplies to ensure we can meet multiple needs through the fall or even next year, should conditions stay dry.

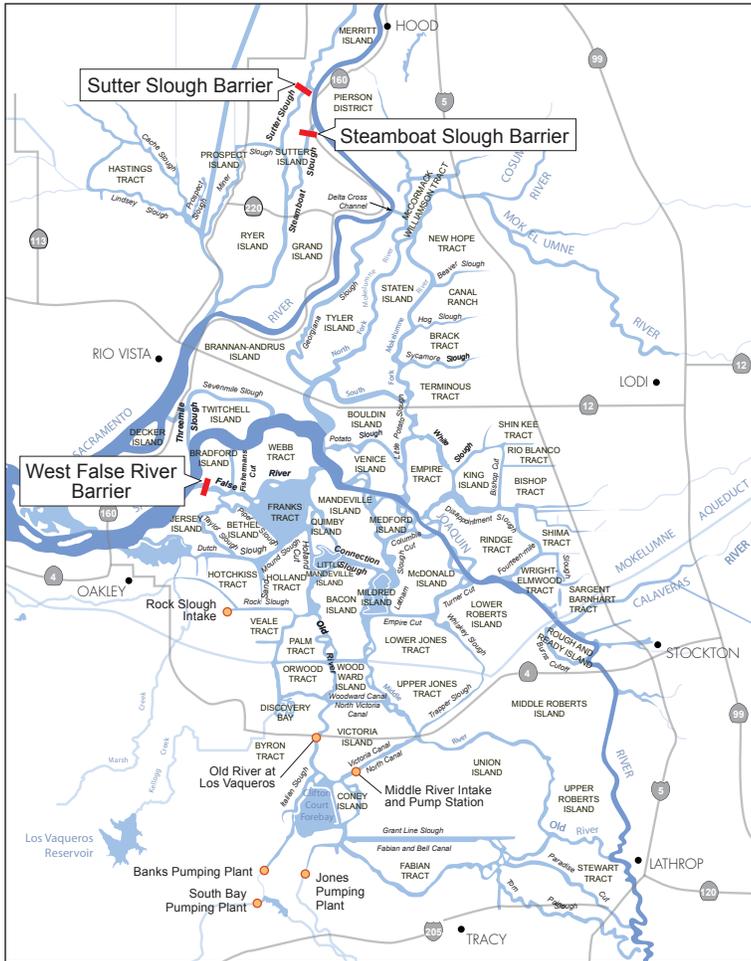
Locations of 1976-77 Drought Emergency Barriers



The Department of Water Resources is considering installation of emergency drought barriers this year to help preserve water quality in the Delta. Much as in 1976-77, temporary rock barriers would prevent tide-driven saltwater from pushing too deeply into the Delta and allow water managers to retain some water in upstream reservoirs for release later in the year. Late summer and fall releases would meet fish needs in upstream rivers and would still be available in part for emergency drinking water supplies from the Delta. Without these barriers, reservoirs could be drained by July to provide flows sufficient to repel saltwater in the Delta. These barriers could allow water project operators to preserve enough water to meet critical demands into November, the start of our normal wet season.

The Delta is highly channelized due to natural and constructed canals and cuts that provide numerous pathways for the tides to push salt water inland. During the 1976-77 drought, rock barriers were placed in several Delta channels, including Sutter Slough and Dutch Slough. These barriers helped protect many Delta water users including the City of Tracy, the Contra Costa Water District, the City of Antioch, Delta farmers, and people served by the South Bay Aqueduct. The barriers fulfilled the purposes for which they were intended by improving water quality in the Delta and allowing water project operators to conserve water supplies in upstream reservoirs for later use.

Locations of Planned 2014 Barriers on Sutter Slough, Steamboat Slough, and West False River



To respond to drought in 2014, DWR is considering installation of emergency drought barriers at Sutter and Steamboat Sloughs. Such temporary barriers would redirect upstream flows to better repel saltwater intrusion. The barriers also would reduce the buildup of salt in the Central and South Delta during the incoming tides on West False River by preventing the dispersion of salt into Frank's Tract. Temporary barriers could potentially benefit a variety of Californians including:

- Water users and residents of upstream communities. Once installed, the barriers would reduce demands on reservoir releases to maintain salinity levels in the Delta, leaving more water in upstream reservoirs for both fishery and community needs during the year.
- Communities, farms, and towns in and adjacent to the Delta that rely exclusively on this source for drinking and irrigation water.
- Customers of the State Water Project and Central Valley Project. Water project operators would be better able to maintain water supplies for human health and safety throughout the State.

The barriers would be constructed primarily with rock fill. Four 48-inch culverts would be operable at Sutter and Steamboat Sloughs to allow fish passage and downstream flow when needed to improve water quality and stage. A boat portage facility would be

operated at the Steamboat Slough barrier to allow boats less than 22 feet long to cross the barrier. Water quality and stage would be continuously monitored.

Key next steps include completion of barrier designs, a public informational open house, coordination with potentially impacted landowners and reclamation districts, and facilitation of regulatory approvals from numerous State and federal agencies, including those that protect fish and wildlife.

For more information and project updates please visit:

<http://www.water.ca.gov/waterconditions/emergencybarriers.cfm>.

For more information, please contact Ted Thomas, Chief of the Media & Public Information Branch at Ted.Thomas@water.ca.gov, (916) 653-9712, or Doug Carlson, Information Officer, at Paul.Carlson@water.ca.gov, (916) 653-5114. For questions or concerns regarding potentially impacted parcels, contact Linus Paulus, Sr. Right of Way Agent, at Linus.Paulus@water.ca.gov, (916) 653-3947.