

## Water Quality

**Background:** Adverse water quality may affect ecological habitats and species important to the Bay-Delta. Ecosystem restoration activities which maximize water quality benefits to ecological habitats and species while not adversely impacting other uses such as drinking water are supported by CALFED. Examples of adverse water quality conditions which are the subject for focused actions are: reductions in dissolved oxygen may block upstream migration of anadromous fish and may impact survivability of other resident species of aquatic organisms; selenium can bioaccumulate and can be highly toxic to aquatic life at relatively low concentrations; restoration of 100,000 acres of wetlands in the Delta may provide important organic constituents to support the food web but may generate source material which reacts with disinfectants to form harmful disinfection by-products in drinking water; salinity can cause local and seasonal environmental impacts to fish; unknown sources of toxicity causes both toxic effects and mortality to aquatic life; and pesticide loads from runoff can impair aquatic life beneficial uses but the ecological significance or spatial and temporal extent of the impairment is unknown.

**Eligible Proposals:** Eligible proposals should reflect the goals of the Water Quality Program to provide good water quality for the ecosystem and other beneficial uses. Early implementation actions for the Water Quality Program are listed in the Revised Phase II Report, February 1999. A more detailed description of the actions are described in the Revised Water Quality Program Plan, February 1999, available on the CALFED website, [calfed.ca.gov](http://calfed.ca.gov).

### Focused Actions:

**San Joaquin River Near the City of Stockton.** *Evaluate sources of oxygen depleting substances being discharged to the San Joaquin River and their individual contributions to the dissolved oxygen impairment of the River.* Evaluation should include identifying the source(s), estimating the contribution to impairment, feasibility and cost of treatment or removal. Proposals should include coordination with representatives from agencies such as the City of Stockton, the Port of Stockton, other municipalities up-stream of Stockton, the Army Corps of Engineers, the Central Valley Regional Water Quality Control Board, the Department of Fish and Game, and the CALFED Water Quality Program. Several studies have already been conducted in the area and should not be duplicated. Proposals should explain their relationship to existing studies.

**Sacramento-San Joaquin River Delta.** *Characterize the quantity and quality of total organic carbon (TOC) loading and transformation associated with tidal and non-tidal wetlands, and assess impacts on the foodweb and drinking water quality.* Over 100,000 acres in the Delta may be converted to wetlands for ecosystem restoration. The nature and loads of carbon coming off different types of newly restored tidal wetlands need to be characterized to determine impacts to ecosystem and drinking water. Wetland management strategies need to be identified which can mitigate any impacts. The extent that TOC released from wetlands is altered and consumed by the microbial community and is photodecomposed needs to be addressed. It is desirable that assessments include comparing the quantity and quality of TOC generated from agricultural irrigation runoff to that generated from newly developed wetlands.



# Ecosystem Restoration Projects and Programs

February 1999  
Proposal Solicitation Package



## 1999 Proposal Solicitation

The CALFED Bay-Delta Program invites proposals for ecosystem restoration programs

<http://calfed.ca.gov/current/psp.html>

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