

**DRAFT - WATER QUALITY CONTROL PLAN**

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## U.S. EPA WATER QUALITY STANDARDS

The Clean Water Act requires development of water quality standards to protect all beneficial uses of our natural resources. The EPA released draft standards in December 1993. The final standards reflect input from scientists, policy makers, interest groups and the public.

The federal standards are designed to restore those aquatic habitats and ecosystem processes most critical to the survival of a diverse array of resident and migratory fishes. Once implemented, and when combined with regional and statewide watershed protection efforts, the standards will serve as the cornerstone for the recovery of the estuarine ecosystem.

The final rulemaking establishes four sets of water quality standards for the Bay/Delta Estuary:

- Salinity Criteria for Suisun Bay
- Salmon Smolt Survival Targets
- Fish Spawning Criteria for Lower San Joaquin River
- Suisun Marsh Tidal Wetlands Criteria

### Salinity Criteria

Saltwater from San Francisco Bay and fresh water from the Sacramento and San Joaquin Rivers comeingle in a "mixing zone" in the Delta. When this mixing zone moves upstream due to reduced fresh-water flows, fish and other species are confined to the deeper river channels and become vulnerable to entrainment at Delta pumping plants.

To protect the fish nursery area in Suisun Bay, a salinity limit of 2 parts per thousand (ppt) must be maintained from February through June. This standard will be measured at Roe Island, Chipps Island and Collinsville, depending upon the amount of runoff. In wet years, the standard must be met further downstream for longer periods. In drier years, the standard would need to be maintained further upstream and for shorter periods. This approach reflects natural cycles.

### Smolt Survival Targets

To protect migrating fall-run chinook salmon from April through June, a flexible set of survival criteria has been established for young salmon, or "smolts," in the Sacramento and San Joaquin Rivers. Successful migration depends on temperatures, export rates, river flows and main channel diversions.

### **Fish Spawning Criteria**

To protect fish spawning habitat on the lower San Joaquin River, salinity criteria have been established for the months of April through June. The maximum acceptable salinity level to ensure survival of eggs and adult upstream migration is 0.44 millimhos per centimeter EC. This is a measure of electrical conductivity taken at various locations depending on water-year type and natural conditions.

### **Suisun Marsh Tidal Wetlands Criteria**

To protect the 154 species supported by the unique ecosystem in Suisun Marsh, a set of narrative criteria has been established. The criteria describe conditions to prevent conversion of brackish marsh to salt marsh, pending further biological study of the needs of endangered plant and wildlife communities.