Periodic Review of the 1995 Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary

Deltakeeper Chapter of Baykeeper
California Sportfishing Protection Alliance
San Joaquin Audubon
Committee to Save the Mokelumne

We thank the Exchange Contractors and the San Joaquin River Group for graphically defining the issues in this workshop.

According to the Exchange Contractors

- DMC water contains salt (Frequently above standards).
- Irrigation causes further accretion of salt.
- Salts must be removed to prevent salinization of soil.
- The only available drain is the San Joaquin River.

Consequently, in order to protect agriculture:

- The domestic/municipal beneficial uses should be de-designated.
- The San Joaquin River should be recognized and operated as an agricultural sewer.
- The Schwarzenegger Wasteway?

Eastside interests have a slightly different twist

- Recent modeling information (which hasn't been peer-reviewed, calibrated or verified) indicates that the problem isn't as severe as previously believed.
- Therefore: Water quality flows from New Melones can be reduced (this would also require that the Stanislaus River dissolved oxygen compliance point be move upstream).

Before we rush to de-designate beneficial uses, relax water quality objectives or reduce instream flow, this Board must resolve several fundamental questions.

Given the fact that:

- Source water exceeds standards.
- Accretion of salt from irrigation is inevitable.

Can irrigating lands prone to leaching salts with water that already exceeds salinity standards be a beneficial use of water under the California Constitution?

Given the fact that:

- The Friant Water Users Authority, City of San Francisco and SSJID/OID operate peripheral diversions around the lower reaches of the San Joaquin, Tuolumne and Stanislaus Rivers.
- Water must be employed to meet the highest multiple beneficial uses.

Is the diversion of assimilative capacity around lower reaches of impaired waterways an unreasonable method of diversion under the California Water Code?

Since:

- The cumulative total of pre-1914, riparian and appropriative water rights within the San Joaquin Basin exceeds available water.

Isn’t it now time for the State Board to adjudicate the Basin?

It’s more than just salt

- The San Joaquin River is impaired by Boron, Chlorpyrifos, DDT, Diazinon, Electrical Conductivity, Group A Pesticides, Mercury, Selenium and Unknown Toxicity.
- The Merced River is impaired by Chlorpyrifos, Diazinon and Group A Pesticides.
- The Tuolumne River is impaired by Diazinon, Group A Pesticides and Unknown Toxicity.
- The Stanislaus River is impaired by Diazinon, Group A Pesticides, Mercury and Unknown Toxicity.
- Stockton Ship Channel is impaired by Chlorpyrifos, DDT, Diazinon, Group A Pesticides, Mercury, Low Dissolved Oxygen, Unknown Toxicity, Dioxins, Furans, pathogens and PCBs.

Water Quality Control Plans Must Consider:

- That all promulgated water quality objectives must be met.
- Compliance is required throughout the water column and river reach.
- Reduction or increases in flow (i.e., assimilative capacity) inevitably results in a decrease or increase in pollutant concentration.

Given the fact that:

- SJR TMDL proceedings demonstrate that source control, by itself, cannot achieve compliance with water quality standards.
- Increases in assimilative capacity (i.e., flow) are also necessary.
- Water quality standards must be met throughout an impaired waterway – not simply at a low point on the watershed.

Shouldn't the burden of restoring assimilative capacity be equitably distributed between all upstream diversions/storage?

Given the fact that:

- Region 5 has blatantly refused to implement the State Board's explicitly 1999 direction to immediately move the salt compliance point upstream on the SJR.

The State Board should immediately adopt upstream salinity compliance points that are protective of the entire impaired reach of the San Joaquin River?

It should also be remembered that:

- Fishable, swimable beneficial uses exist on the San Joaquin River.
- Water quality standards must protect aquatic life beneficial uses.
- Sensitive life stages of aquatic life are present in the San Joaquin River all twelve months of the year.

Central Valley Chinook Salmon

Sacramento - San Joaquin River Systems

= Adult Migration =Young of the Year Emigration

= Adult Spawning = Yearling emigration

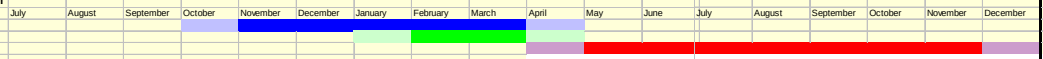
Fall-run

July August September October November December January February March April May June July August September October November December

Adult fall-run migrate into the river system from July through December and spawn from early October through late December. Peak spawning occurs in October and November, although the timing of runs varies from stream to stream.
Egg incubation occurs from October through March, and juvenile rearing and smolt emigration occurs from January through June. Although the majority of young Fall-Run chinook salmon migrate to the ocean during the first few months following emergence, a small number may remain in fresh water and migrate as yearlings. *

Late-fall-run

July August September October November December January February March April May June July August September October November December



Late-fall-run chinook migrate into the Sacramento and San Joaquin rivers from mid-October through mid-April and overlaps the fall-run chinook spawning migration of mid-October through December. Late-fall-run chinook spawn from January through mid-April. Incubation occurs from January through June, and rearing and emigration of fry and smolts occurs from April through mid-October. Significant emigration of naturally produced juvenile late-fall-run occurs through November and December, and possibly January. Emigration of hatchery produced late-fall-run juveniles occurs well into February. *

Winter-run

July August September October November December January February March April May June July August September October November December January February March April May June

Most winter-run chinook migrate into the Sacramento River system at age 3, and the majority spawn in the main stem of the river and some spawning occurs in Battle Creek. Adult winter-run salmon pass under the Golden Gate Bridge from approximately Novembe
Dam from December through early August. Winter-run chinook spawn in the upper main stem Sacramento River from mid-April through mid August. Adult winter-run chinook first appear in the Sacramento River near Red Bluff in December and often spend a rela
Emigration of fry and smolts extends from July through March at the Red Bluff Diversion Dam and from September through June in the Delta. **, ***

Spring-run

July August September October November December January February March April ***PEAK*** May June July August September October November December January February March April May June

Spring-run chinook leave the ocean and begin upstream migration enter the Sacramento river from late January / early February through August; enter natal tributaries mid-Fe thru July. Many early arriving adults hold in cool water habitats through summer
mid-August through October with the peak in September. Incubation occurs from mid-August through mid-March, emigration of fry and smolts beginning in November and c continue through May. Migration of yearlings from upper tributary watersheds occurs in

* Information from: Restoring Central Valley Streams: A PLAN FOR ACTION, Department of Fish and Game, 129 pp., December 1993
** Information from: Guidelines for Recommended Time Periods for In-Channel Activities for Winter-run Chinook Salmon
*** National Marine Fisheries Service proposed Recovery Plan for The Sacramento River Winter-run Chinook Salmon, August 1997
**** Report to The Fish and Game Commission: A Status Review of The Spring Run Chinook Salmon (Oncorhynchus tshawtscha) In the Sacramento River Drainage. Candidate Species Status Report 98-01, June 1998, CDFG

Graphics provided by Ron Camacho

Central Valley Steelhead Life Stage Periodicty

Sacramento - San Joaquin River Systems

Adult Migration Incubation & Emergence Juvenile Emigration

Adult Spawning Rearing

CV Steelhead

January February March April May June July August September October November December

n Proceedings of the Central Valley Salmonid Symposium, 1997.
Fish and Game Fish Bull. accepted for publication.

Graphics provided by Ron Camacho

There are no “painless” solutions. Any meaningful control plan must include:

- Upstream compliance points.
- Source Control (including targets, compliance schedules, milestones and consequences for noncompliance.
- Flow augmentation (elimination or reduction of bypass of assimilative capacity and a fair-share contribution from all diverters).