

## Introduction

Significant declines in Delta smelt, striped bass, longfin smelt, and threadfin shad have been documented since 2000. These fish population problems, known as the “*Pelagic Organism Decline*” (POD), are being studied intensively by numerous entities, including the Interagency Ecological Program (IEP), the State Water Resources Control Board, and the Central Valley Regional Water Quality Control Board (CVRWQCB).

The possible causes for the POD are many and some have been proven to be quite significant:

- Degraded habitat due to flow diversions and dam operations;
- Increased predation;
- Entrainment on Delta fish screens or losses at unscreened intakes;
- Invasive species impacts on Delta food webs;
- Contaminant concentrations that cause toxicity or other adverse impacts.

Representatives of the Department of Water Resources (DWR) and others have raised questions regarding the potential impact of ammonia discharges from the Sacramento Regional County Sanitation District (SRCS D) wastewater treatment plant on fish populations in the Sacramento-San Joaquin Delta; however, none of these hypotheses have been adequately studied, and none have been confirmed.

Although no existing data demonstrates that discharges from SRCS D’s treatment facility is adversely impacting Delta fish, SRCS D supports more research to yield definitive answers.

### SRCS D Policy Principles

#### ***Any proposed Delta solution must:***

- ✓ Be conclusively supported by science to identify relevant and cost effective solutions.
- ✓ Ensure everyone who benefits pays their fair share.
- ✓ Provide real and measurable benefits to the Delta ecosystem.
- ✓ Be developed only through transparent public processes and robust stakeholder involvement.

### Key Contact

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## Summary of Past and Ongoing Ammonia Studies

### Studies by SRCS D

- SRCS D has been monitoring ammonia in its effluent and in the Sacramento River for years and has good knowledge of the concentrations that occur downstream of its discharge point near Freeport.
- SRCS D has invested in the development of sophisticated mathematical modeling tools to provide the capability to understand and predict the impact of its discharge on beneficial uses in the Sacramento River and Delta. These tools have been peer reviewed and field validated.
- Using these tools, in combination with effluent and river monitoring data, USEPA aquatic life criteria for ammonia, and results from routine effluent toxicity tests, SRCS D has determined that its discharge has no adverse toxicity impacts on sensitive aquatic organisms in the Delta, including both fish and invertebrate species.

## Studies by DWR

- To explore a working hypothesis that ammonia levels near the SRCSD discharge *may* be impacting Delta smelt and other fish species, DWR performed an ammonia toxicity study in 2006 which led them to conclude that ammonia may be impacting Delta smelt. However, follow-up studies performed by DWR in 2007 failed to validate the 2006 results.
- San Francisco State University (SFSU) researchers have asserted that ammonium concentrations may be contributing to the infrequency of spring phytoplankton blooms and impacting the food web in Suisun and San Pablo bays, the saline areas downstream from the Delta. Although the SFSU research team has only started to study SRCSD effluent and surrounding watershed, DWR and others continue to assert that ammonia is impacting Delta fish species through food web disruption. No definitive information exists to support that hypothesis.

## Studies by CVRWQCB

- According to the Central Valley Regional Water Quality Control Board (CVRWQCB), “current Delta ammonia concentrations are far lower than concentrations that US EPA guidance indicates would be toxic.” However, in response to the ammonia impact hypotheses raised by DWR and IEP, the CVRWQCB has sponsored two studies in the Delta in 2008 to determine:
  - (1) Whether Delta smelt are especially sensitive to ammonia toxicity and are being directly impacted by ammonia in the Delta. Results from this study indicate that SRCSD’s effluent is ***not*** acutely toxic to Delta smelt even at concentrations four times greater than that found in the Sacramento River.
  - (2) Whether the levels of ammonium in the Delta are inhibiting phytoplankton growth, or altering the species composition of phytoplankton, which might affect the Delta fishes’ food chain. Results are expected in 2009.

## SRCSD’s Position on the Ammonia Issue

- Today, the District meets its regulatory and water quality requirements at a high rate of compliance, including attainment of US EPA aquatic life criteria for ammonia in the Sacramento River, and provides reliable environmental protection at a reasonable cost to its ratepayers.
- Prudent policy and fiscal management dictate the largest Delta impacts be tackled first – namely reduced flow effects and fish losses associated with SWP and CVP project operations – instead of expending significant resources to nibble around the edges of the problem. Otherwise millions more dollars will be spent on “solutions” that will not fix the problem.
- If scientific analysis finds that, under current conditions, SRCSD’s discharge is adversely impacting the Delta environment and that ammonia reduction is the best course of action, we will expect to pay our fair share
- Sacramento residents and businesses should not have to subsidize new water supply infrastructure, or bear the costs of unwarranted advanced treatment at SRCSD’s wastewater plant, simply because of pressure from water agencies from Southern California, Bay Area and South Central Valley that want to move their intake facilities further north up the Sacramento River as part of a “new” Peripheral Canal.