

FACT SHEET

Methylmercury issues and regulations (13-09)

Deliverables: Report on current and emerging issues and regulations regarding methylmercury in the Bay-Delta

Status: Ongoing

Primary Investigator: Stephen McCord

Recipient Organization: McCord Environmental Inc.

Project Cost: \$25,000

SFCWA Funding: \$25,000

Partners: None.

Introduction

Ecosystem restoration and management of the Bay-Delta ecosystem is complicated by mercury contamination from historic mining, mineral springs, and native soil erosion in the Sacramento and San Joaquin River watersheds. Mercury-enriched sediments continue to contaminate streams and rivers, adjoining floodplains, and the Bay-Delta. Concentrations of methylmercury in some resident fish exceed existing fish tissue criteria.

A challenge to scientists and managers involved with restoration of the Bay-Delta ecosystem is to decrease (or at least avoid increasing) exposure of biota to methylmercury, the highly toxic form that readily accumulates in exposed organisms and biomagnifies to high concentrations in fish and wildlife. The Central Valley Regional Water Quality Control Board promulgated a methylmercury TMDL for the Delta and Yolo Bypass that requires “dischargers” (including water managers) to conduct methylmercury control studies by year 2018 and imposes default load reductions that would apply by year 2030.

Objective

To provide SFCWA management and staff with information on the existing and emerging issues and regulations regarding methylmercury in support of SFCWA ecosystem restoration projects.

Results

Drafted White Paper “Development of a SFCWA Mercury Strategy”. The purposes of the paper were (1) to educate SFCWA members on relevant mercury regulations, (2) to summarize ongoing and planned mercury control studies of interest to the SFCWA Science Program, and (3) to frame a strategy for the SFCWA Science Program to address mercury as a pollutant in the environment.

Reviewed CEQA analysis and mitigation measures and responded to public comments for the Lower Yolo Ranch tidal wetland restoration project.

Conclusions

Project conclusions are still in development.

Relevance

Ecosystem restoration under the existing biological opinions and the Bay Delta Conservation Plan must consider the potential for wetland project sites to stimulate methylation of mercury. SFCWA is currently involved in the Lower Yolo Ranch, Knagg's Ranch and Tule Red restoration projects.

Next Steps

For the Lower Yolo Ranch restoration project, support experimental design for manipulating residence time to enhance food production. Alert SFCWA of other emerging mercury policy and regulatory issues that would impact water operations.