

# Interagency Ecological Program 2023 Work Plan Element Upper Estuary Zooplankton Sampling

## Project Manager and Affiliation

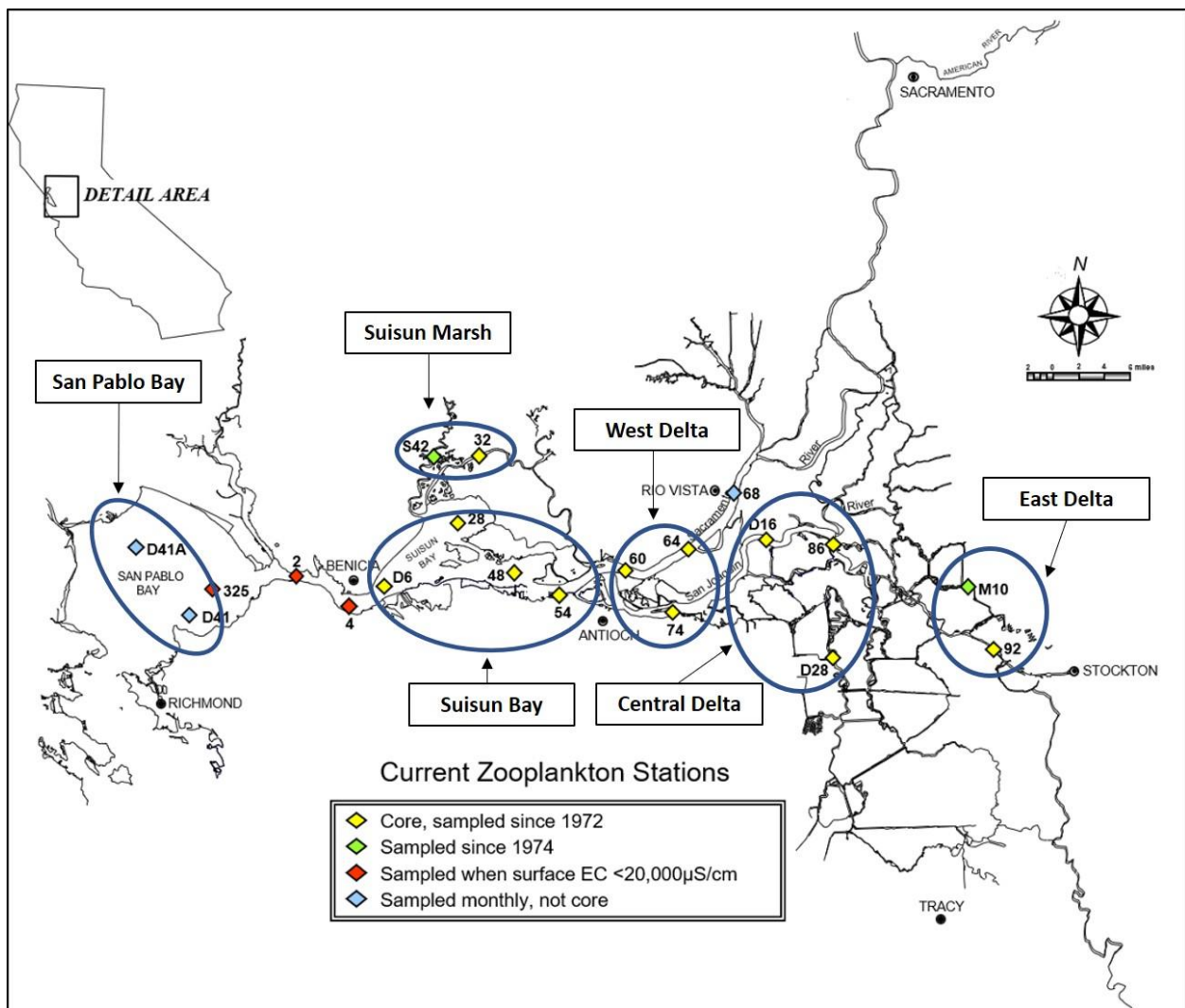
Kathy Hieb CDFW

## Principal Investigator and Affiliation

Arthur Barros CDFW

## Costs (thousands) and Funding Sources

USBR: \$171; DWR: \$171



Map of Upper Estuary Zooplankton Sampling stations.

## **Description**

The Zooplankton Study has estimated the abundance of zooplankton taxa in the upper San Francisco Estuary since 1972. Sampling occurs monthly at 22 stations located throughout San Pablo Bay, Suisun Marsh, Suisun Bay, and the Delta. Zooplankton provide an important trophic link between primary producers and fish. The Zooplankton Study provides abundance estimates and distributional data for fish food resources in the upper San Francisco Estuary. This information is used by aquatic ecologists to understand the lower food web and biological drivers of the Delta Smelt population.

## **Need**

The Zooplankton Study is part of the D-1641 mandate to monitor water quality and related parameters (see element #72). It is conducted in compliance with D-1485 (Term 10a) and D-1641 (Term 11a). This study may also help inform CAMT (Fall Outflow Processes and Restoration Processes), FLOAT, and POD.

## **Objectives**

- Monitor the abundance and distribution of zooplankton in the upper San Francisco Estuary.
- Determine long-term abundance trends of zooplankton species and determine if trends show significant declines or increases.
- Determine the relationships between species abundance and temperature, salinity, turbidity, and chlorophyll.
- Determine if introduced species are becoming established in the estuary.

## **Schedule of Milestones**

January – December 2023:	Zooplankton samples collected monthly
January – April 2023:	Complete 2022 zooplankton sample processing
May 2023:	2022 data released
June 2023:	Zooplankton Status and Trends Report