



Interagency Ecological Program 2024 Work Plan Element San Francisco Bay Study (Bay Shrimp)

Project Manager and Affiliation

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Principal Investigator and Affiliation

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Costs (thousands) and Funding Sources

\$125k DWR; \$125 USBR



Figure: *Bay Study Otter Trawl Sample*

Description

The San Francisco Bay Study (Bay Study) started sampling in 1980, conducting monthly trawls from a research vessel. We currently sample 52 stations from South San Francisco Bay to the western Delta. Bay shrimp are sampled with an otter trawl, which effectively collects juvenile and adult shrimp. The primary objective of this program element is to determine the effects of freshwater outflow and outflow related mechanisms on the abundance and distribution of estuarine and marine shrimp. Note that fish and crabs are the subject of a separate, but complementary, IEP program element (2024-011).

Project Need

Provides data and knowledge used to inform and set water quality standards for the protection of Bay shrimp in the San Francisco Estuary, primarily downstream of the Delta. This study was mandated by State Water Resources Control Board's Water Rights Decisions 1485). In addition, it may inform the 2020 CDFW Incidental Take Permit for Long-term Operation of the State Water Project (IEP Core Long-Term Monitoring Elements, Table 3.13.1).

Project Objectives

- What are the annual abundance trends of the major shrimp species in the estuary?
- What are the changes in the estuary's shrimp communities over time?
- How does freshwater outflow and outflow related mechanisms affect the abundance and distribution of shrimp species and groups of species?
- How do other physical and biological factors affect the abundance and distribution of shrimp species and groups of species?
- Have recently introduced shrimp in the upper estuary displaced or otherwise impacted other shrimp species or fishes?

Schedule of Milestones

- January to December 2024 Monthly sampling at 52 stations.
- April 2024 2022 sample and data QAQC completed, data edited.
- October 2024 2021 sample and data QAQC completed, data edited.
- November 2024 2023 shrimp sample processing completed.
- November 2024 to July 2025 2024 shrimp samples processed.
- November 2024 2023 sample and data QAQC completed, data edited.
- December 2025 1980-2023 shrimp catch matrix completed and copied to the Bay Study FTP site.
- December 2024 Shrimp abundance indices through 2023 calculated.
- February 2025 1980-2023 shrimp data released to public (FTP site and EDI).
- Spring 2025 2023 shrimp Status and Trends Report completed, submitted to IEP Newsletter.
- Summer 2025 2024 shrimp data finalized, released.

Project Reports and Publications

- 2023 Shrimp Status and Trends Report (IEP Newsletter) - in progress