



Interagency Ecological Program 2023 Work Plan Element San Francisco Bay Study (Fish and Crabs)

Project Manager and Affiliation

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Principal Investigator and Affiliation

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Costs (thousands) and Funding Sources

\$250 DWR; \$250 USBR



Figure: Bay Study Otter Trawl Sample

Description

The San Francisco Bay Study (Bay Study) started monthly sampling in 1980, conducting trawls from a research vessel from South San Francisco Bay to the western Delta. Demersal and pelagic fishes and crabs are sampled with an otter and midwater trawl; the nets are designed to collect smaller, age-0 fish and crabs. The primary objective of the Bay Study is to determine the effects of freshwater outflow and outflow related mechanisms on the abundance and distribution of estuarine and marine fishes and crabs. Note that shrimp are the subject of a separate, but complementary, IEP program element.

Need

Provides data and knowledge used to inform and set water quality standards for the protection of fishes and invertebrates in the San Francisco Estuary, primarily downstream of the Delta. This study was mandated by SWRCB's Water Rights Decisions 1485 and 1641 and CDFW's March 2020 Incidental Take Permit for the operations of the State Water Project.

Objectives

- What are the annual abundance trends and seasonal abundance patterns of the major fish and crab species in the estuary?

- How does distribution of the major fish and crab species change seasonally and annually?
- What are the changes in the estuary's fish and crab communities over time?
- How does freshwater outflow and outflow related mechanisms affect the abundance and distribution of fish and crab species and groups of species?
- How do other physical and biological factors affect the abundance and distribution of fish and crab species and groups of species?

Schedule of Milestones

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|----------------------------|--|
| • January to December 2023 | Monthly sampling at 52 stations |
| • February and March 2023 | 2022 data entered and edited |
| • April 2023 | Fish and crab catch matrices updated |
| • May 2023 | 2022 fish abundance indices calculated |
| • June 2023 | 2022 crab abundance indices calculated |
| • Summer 2023 | 2022 data released to public |
| • Fall 2023 | 2022 Status and Trends reports completed |
| • April 2023 – March 2024 | 2023 data entered (approximately) |