



Interagency Ecological Program 2023 Work Plan Element

Extracting better information from long-term monitoring data:
estimating occupancy and abundance of near-shore fishes in
the Sacramento-San Joaquin River Delta

Project Manager and Affiliation

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Principal Investigator and Affiliation

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Costs (thousands) and Funding Sources

\$360 (DWR) and \$280 (USBR)



Figure: *Boat electrofishing crew conducting field survey.*

Description

The purpose of this study is to expand IEP monitoring and inference to other dominant near-shore, littoral habitats not sampled by beach seines through the use of boat electrofishing. To accomplish this, we will sample key littoral fish species across various near-shore habitats in order to determine how best to estimate abundance, occupancy, capture probabilities, and related environmental drivers.

Need

Expanding DJFMP sampling to other habitats throughout the Delta will allow our program to detect and monitor fishes and ecological trends through time, alleviating a recognized data gap. Current sampling relies on data collected through non-random fixed-point sampling of unobstructed habitats, which limits the utility of our data to inform management decision.

Objectives

- Design boat electrofishing survey methods to expand DJFMP's monitoring into habitats and locations not sampled by beach seining.
- Design and develop field and data analysis methods for estimating capture probability and abundance using boat electrofishing techniques.
- Predict spatio-temporal distribution of habitats occupied by key littoral species.

Schedule of Milestones

Summer 2023 – Data updated on EDI

Summer 2023 – Annual Report