

# IEP Data Management Plan

## Project Element Number:

352

## Year:

2024

## Date Updated:

2023-05-24

## Start Date:

2023-05-24

## Study Title

Larval Entrainment Monitoring

## Principal Investigator

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## Point of Contact

Morgan D. Gilbert, [morgan.gilbert@wildlife.ca.gov](mailto:morgan.gilbert@wildlife.ca.gov)

## Data Description

Data collected by the LEP include environmental variables, tow variables, and fish counts and fork lengths. In the field, environmental variables include temperature(C), secchi depth (cm), turbidity (in FNU), and both surface and bottom conductivity (microsiemens/cm). A flowmeter total, start/end time (military time), and start/end coordinates (DMS) are also collected. Any juvenile or larger fish are identified and released in the field. The remaining larval fish are identified at CDFW-Stockton to the lowest taxonomical level possible, and a subset (30-50, depending on species) from each sample are fork length measured to the nearest mm.

## Related Data

Hydrologic data, such as that provided by Dayflow and CDEC, will be utilized in future analyses. Data collected by other CDFW or IEP surveys, such as Smelt Larva Survey and 20-mm Survey, may be used to inform sampling during the pilot year and may be incorporated in future analyses.

## Metadata

Metadata summarizing the database structure and defining individual columns (including units and data format) is available in tabular form upon request. Metadata will be released alongside data in a format accessible to data users. Metadata includes a complete description of all database columns, notes on procedural changes, and a data glossary.

## **Storage and Backup**

Data is collected in an SQL database hosted by CDFW. Backup copies of the database are made monthly. Scanned datasheets are stored on the ES's computer and on the CDFW network. The original datasheets are stored in a filing cabinet by the PI.

## **Archiving and Preservation**

Data will be preserved on paper and digitally. Paper datasheets will be stored in binders in the Stockton office. Digital data will be stored temporarily on the local CDFW server, ES computers, and archived on the CDFW's Tier 3 server as soon as reasonably possible.

The principal investigator (PI) will ensure that study element's datasets and their metadata are maintained or transferred to long-term archiving facility in the rare event that either the Project or DTD servers are no longer viable. Although the methods of digital archiving of data has evolved through time, CDFW is a long-established agency with no anticipated end date of existence.

## **Format**

Field and larval fish data are recorded on paper data sheets. Data from data sheets are later key entered into a computer database. Data will be stored as a relational database locally and on a SQL server using Microsoft Access (.accdb). The MS Access database will be made available in its entirety from the FTP webpage or EDI data portal.

## **Quality Assurance**

Field crew leaders will review the field data sheets for legibility, completeness, and accuracy. Data entry accuracy will be checked by comparing listings of entered data against the data sheet entries twice immediately after their entry into the local database. Data entry will be checked again after the end of the Native Fishes field season (July or August). Project ESs perform reasonableness checks by running computer queries that flag outliers or erroneous entries.

## **Access and Sharing**

Data collected during the pilot year will be made publicly available either through the Environmental Data Initiative (EDI) data portal or CDFW Bay Delta Region website.

Requests for customized data files, queries or formats should be directed to the PI or point of contact listed above.

## **Rights and Requirements**

All data used for publication should acknowledge CDFW's Fish Facilities and Entrainment Unit and the Interagency Ecological Program for the San Francisco Estuary.