

# IEP Data Management Plan

## Basic Information

Year: 2020; PEN:077; Date Updated: 2019-05-30; Start Date: 2019-05-23

## Study Title

Upper Estuary Zooplankton Sampling

## Principal Investigator

*Individual(s) responsible for the project. Include name, agency, e-mail, & phone.*

April Hennessy

California Department of Fish and Wildlife

April.Hennessy@wildlife.ca.gov

## Point of Contact

*Individuals who data users should contact for access to the data or questions about the data. Include name, agency, e-mail, & phone number or write "same as above."*

Same as above.

## Data Description

*A very brief description of the information to be gathered; the nature and scale of the data that will be generated or collected. Include approximate size (in MB) of the resulting data set.*

The Zooplankton Study monitors zooplankton densities in the Upper San Francisco Estuary using 3 gear types to target different sizes of organisms. Zooplankton sampling and water quality data is conducted monthly at 23 stations. Field data is collected on datasheets and entered into an Access database monthly. Zooplankton samples are processed in the laboratory by identifying and enumerating organisms under a microscope, and directly entering data into an Access database. For some organisms more information is recorded such as life stage, sex, length, egg stage, and egg count. Field and lab data is quality checked for accuracy and catch-per-unit-effort, calculated as number of organisms per cubic meter of water, is made available in 3 flat file matrices, with 1 matrix per gear type. The 3 flat file CPUE matrices are currently a total of 20MB.

## Related Data

*Optional. Existing datasets that you incorporate into analysis and reporting for this program element, existing data that are relevant to your study, or data that are collected simultaneously.*

[IEP Environmental Monitoring Program Discrete Water Quality Monitoring](#)

[IEP Environmental Monitoring Program Phytoplankton](#)

[Dayflow](#)

[Fall Midwater Trawl and Summer Townet Zooplankton](#)

[20-mm Zooplankton](#)

IEP Fish Diet and Condition- Randy Baxter, CDFW (Randy.Baxter@wildlife.ca.gov)

## **Metadata**

*A description of the metadata to be provided along with the generated data, including the metadata standards used. Provide the file name and information on how users can access the metadata (e.g., a link).*

Metadata for each data matrix file is found on the first spreadsheet of each Excel file on our [ftp site](#). More detailed metadata and metadata tables are located on the ftp site.

## **Storage and Backup**

*A description of the short-term storage methods and backup procedures for the data, including the physical and electronic resources to be used for the short-term storage of the data.*

Historical field and lab data sheets are stored in plastic tote bins in our warehouse in the Stockton office. Field data sheets are scanned monthly. Original field sheets are kept in the Stockton office and scanned copies are maintained on a desktop computer and the network server onsite in Stockton, as well as a flash-drive for off-site storage.

Laboratory data is entered on the network server in Stockton. A weekly backup is made to a desktop computer onsite in Stockton. A monthly backup is made to a flash-drive for off-site storage. Annually data is quality checked and uploaded to the tier 3 server in Sacramento for permanent storage as mandated by AB2408 (not available for public download, but drives [data visualization bubbleplot maps](#) available online). A backup copy of the quality checked data is maintained on a desktop computer onsite and a flash-drive off-site.

## **Archiving and Preservation**

*The procedures for long-term archiving and preservation of the data, including succession plans for the data should the expected archiving entity go out of existence.*

The long-term dataset is permanently archived and stored on the tier 3 server in Sacramento as mandated by AB2408 (database not available for public download, but drives [data visualization bubbleplot maps](#) available online).

## Access and Sharing

*A description of how data will be shared. Include (1) access procedures, (2) embargo periods, (3) technical mechanisms for dissemination (e.g., website addresses, listserv information), (3) whether access will be open or granted only to specific user groups, and (4) a timeframe for data sharing and publishing.*

Data are publicly available on our [ftp site](#). Annually, data matrices are updated and uploaded to the ftp site. Data from the previous year is usually available by March or April, depending on when sample processing is completed and data QAQC'd for the year. An email list of data users is maintained and users are notified via email when new data is posted or edits are made.

## Format

*Formats in which the data will be generated, maintained, and made available. Include BOTH general data type (e.g., spreadsheet, relational database) and file format (extension).*

Field data is collected using datasheets, entered into a relational database in Access 2016 (.accdb) that is designed to collect annual data. After QAQC is complete, data is uploaded into a relational database in Access 2016 (.accdb) that is designed to manage the long-term dataset and calculate catch per unit effort matrices. Quality checked data is uploaded into a relational database in Sequel server on the tier 3 server in Sacramento as mandated by AB2408 (database not available for public download, but drives [data visualization bubbleplot maps](#) available online). Data is publicly available for download in Excel 2016 spreadsheets (.xlsx). The CB matrix is 10.8MB, pump matrix is 5.9MB, and the mysid matrix is 3.1MB.

## Quality Assurance

*Brief description of procedures for ensuring data quality. Provide links to Quality Assurance Project Plan and/or QA/QC Standard Operating Procedures.*

Field data is line-by-lined for entry errors, then queries, pivot tables, and pivot charts are used to look for outliers in both field and laboratory data. Project lead then follows up with field and lab staff to double-check values that are questionable, corrections are made where possible and commented in the database.

## Rights and Requirements

*A link to or instructions to locate the agency's rights and requirements for data use.*

Data is preliminary and may be subject to revision.

Scientific data shall be shared both internally and externally. Data must be shared in locations that allow for the easy discovery and use by the most people. All Departmental data used or displayed by others require proper citations and credits.