# **IEP Data Management Plan**

# **Project Element Number:**

033

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**Start Date:** 

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**Study Title** 

20-mm Survey

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# **Data Description**

The 20-mm Survey collects environmental, fish, and zooplankton data at fixed locations ('stations') throughout the upper San Francisco Estuary annually from March through July. The survey describes the temporal distribution and relative abundance of young-of-the-year Delta and Longfin Smelt. Nine routine surveys are conducted every other week and each survey samples 47 stations. Occasionally, additional surveys or stations are sampled as needed or by request of Management or our stakeholders. The data is stored in a MS Access database that is 71 MB. Data collected include date of collection, geography location, water temperature, turbidity, specific conductance (top & bottom of the water column), water clarity, water depth, tidal stage, organism count, species taxa (fish, zooplankton, and jellyfish), and fish length.

#### **Related Data**

N/A

#### Metadata

<u>Metadata documentation</u> is available online. URL location: https://filelib.wildlife.ca.gov/Public/Delta%20Smelt/

For current information (as of 2020) on the database structure, format, and calculation procedures for key fisheries parameters or statistics, please refer to these files: 20mmNew\_ReadMe\_2020.pdf, 20mmMetadata\_New.pdf, and 20mmDataFileFormat\_New\_2020.pdf

The directory also provides metadata on the database changes and key field methodology since its inception in 1995.

### Storage and Backup

The 20-mm Survey data are initially stored and backed up on a tier 3 SQL server located at CDFW Data and Technology Division (DTD). Back up versions of the 20-mm database are stored on an environmental scientist's (ES) computer. All data is regularly uploaded to a CDFW Tier 3 SQL server offsite at the Department's Data and Technology Division (DTD) in Sacramento. Paper data sheets placed in binders, held at the Stockton Office and eventually scanned for electronic backup after the end of each field season.

## **Archiving and Preservation**

Data is currently preserved on paper and digitally. Paper data sheets are placed into binders and stored in the Project ES's cubicles. Digital data are stored temporarily on the local CDFW server, ES computers, and then backed up on the CDFW's Tier 3 servers as soon as reasonably possible, at least once per month. Data sets are archived long-term on the CDFW DTD servers.

The principal investigator (PI) will ensure that study element's data sets and their metadata are maintained or transferred to long-term archiving facility in the rare event that either the Project or DTD servers are not 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. Zooplankton data collected in the laboratory are directly key entered into a computer database. Data sheet information are later key entered into a computer database. Data are currently stored in a database using an Microsoft Access 2010 (.accdb) database. The 20-mm Access database can be downloaded in its entirety (20mm New.mdb) from our webpage or a subset of the data can be made available in a .csv flat file upon request. In addition, a flat file of catch data is also available on EDI data portal. URL location: (https://portal.edirepository.org/nis/mapbrowse?packageid=edi.535.4)

## **Quality Assurance**

Field crew leaders review the field data sheets for legibility, completeness, and accuracy. Data entry accuracy is checked by comparing listings of entered data against

the data sheet entries twice immediately after their entry into the local database. Data entry is checked again after the end of the field season (July or August). Project ESs perform reasonability checks by running computer queries that flag outliers or erroneous entries. Detailed descriptions of QA/QC procedures can be found in the 20-mm Standard Operating Procedures document that is available upon request to the Point of Contacts.

### **Access and Sharing**

Data are publicly available for downloading online at <a href="CDFW's Delta Smelt web page">CDFW's Delta Smelt web page</a>, (https://filelib.wildlife.ca.gov/Public/Delta%20Smelt/) and from the Environmental Data Incitive (EDI)( https://portal.edirepository.org/nis/mapbrowse?packageid=edi.535.4). The site is updated once per year with the most current information along with a log of changes to previous years' data. Catch, CPUE, size distribution data of fish and zooplankton are also publicly available via maps, bubble plots, and table summaries on interactive web pages at: https://www.wildlife.ca.gov/Conservation/Delta/20mm-Survey

<u>Annual reports and publications</u> are available for downloading. URL location: https://wildlife.ca.gov/Conservation/Delta/20mm-Survey/Bibliography

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

## **Rights and Requirements**

All data used for publication should acknowledge CDFW's 20-mm Survey Project and the Interagency Ecological Program for the San Francisco Estuary.