

IEP Data Management Plan

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Study Title

Smelt Larva Survey

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Data Description

The Smelt Larval Survey collects fish and environmental data at fixed locations ('stations') through the upper San Francisco Estuary annually from December through March. The survey describes the temporal distribution and relative abundance of young-of-the-year Longfin Smelt. The survey samples 59 stations every other week. The sampling frequency has changed as needed or by request of Management or our stakeholders. The data are stored in a Microsoft Access database that is 14 MB in size. The gear targets larval fish less than 20 mm in size. Data collected include collection date, geographic location, water temperature, water clarity, turbidity, specific conductance (at 2 depths), channel depth, tidal stage, fish species, catch, and fish length.

Related Data

N/A

Metadata

[Metadata documentation](https://filelib.wildlife.ca.gov/Public/Delta%20Smelt/) is available on the CDFW public file library at the link shown: <https://filelib.wildlife.ca.gov/Public/Delta%20Smelt/>

For current information (as of 2024) on the database structure, format, and calculation procedures for key survey metrics, please refer to: [SLS_Metadata.pdf](#)

The metadata also provides information on the database changes and key field methodology since its inception in 2009.

Storage and Backup

The Smelt Larva Survey (SLS) 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 SLS 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. Data sheet information are later key entered into a computer database. Data is currently stored as a relational database (SLS_query.mdb) locally and on a SQL server using an Microsoft Access 2010 (.accdb). The MS Access database can be downloaded in its entirety (SLS.accdb = 87/8 MB) from our webpage or a subset of the data can be made available in a .csv flat file upon request. In addition, [catch data](#) is available in a flat file via the EDI data portal at the link: <https://portal.edirepository.org/nis/mapbrowse?packageid=edi.534.4>)

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 Smelt Larva

Survey Standard Operating Procedures document that is available upon request to the Point of Contacts.

Access and Sharing

[Data](https://filelib.wildlife.ca.gov/Public/Delta%20Smelt/) are publicly available for downloading online at the link shown below: (<https://filelib.wildlife.ca.gov/Public/Delta%20Smelt/>). 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 [Smelt Larva Survey web pages](https://wildlife.ca.gov/Conservation/Delta/Smelt-Larva-Survey) at <https://wildlife.ca.gov/Conservation/Delta/Smelt-Larva-Survey>

Additionally, a complete set of base tables and a flat file containing commonly used data are available at the [Environmental Data Initiative](https://portal.edirepository.org/nis/mapbrowse?packageid=edi.534.4) web page (link shown below): (<https://portal.edirepository.org/nis/mapbrowse?packageid=edi.534.4>)

[Annual reports and publications](https://wildlife.ca.gov/Conservation/Delta/Smelt-Larva-Survey/Bibliography) are available for downloading on the link shown below: <https://wildlife.ca.gov/Conservation/Delta/Smelt-Larva-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 Smelt Larva Survey and the Interagency Ecological Program for the San Francisco Estuary.