

# IEP Data Management Plan

## Project Element Number:

2024-043

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## Start Date:

1/1/2024

## Study Title

Estimation of Pelagic Fish Population Sizes

## Principal Investigator

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## Point of Contact

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## Data Description

Data on catches (counts) of different Delta Smelt and Longfin Smelt life stages by date and location, along with sub-sample information on lengths of caught fish and estimates of volume sampled, come from CDFW's 20mm Survey (1995+, post-larvae), Summer Townet Survey (1990+, juveniles), Fall Midwater Trawl Survey (1990+, sub-adults), Spring Midwater Trawl Survey (1990's, 2000, and 2001, adults), Spring Kodiak Trawl Survey (2002+, adults), and San Francisco Bay Study (1980+) as well as the Enhanced Delta Smelt Monitoring program (December 2016+). Environmental data collected by these sampling programs may also be used in the abundance estimation procedures. Flat files for fish catches and associated environmental variables are relatively small (~10 MB total). Additional compiled datasets used in this program element (including GIS files) are larger (~5 GB total).

## Related Data

Experiment data from a side-by-side gear comparison study (2012-2015) are used for estimating gear efficiency.

Bay-Delta GIS data (raster and shapefiles) and volume estimates, provided by USGS, are used to calculate abundances. The GIS data have been used to calculate new Bay-Delta volumes for custom spatial and depth stratification schemes.

## Metadata

Data documentation is available through the [CDFW website](https://wildlife.ca.gov/Conservation/Delta) (<https://wildlife.ca.gov/Conservation/Delta>), the [Lodi Fish and Wildlife Office](https://www.fws.gov/lodi/) website (<https://www.fws.gov/lodi/>), and the Environmental Data Initiative (for examples, see <https://portal.edirepository.org/nis/mapbrowse?scope=edi&identifier=415>, <https://portal.edirepository.org/nis/mapbrowse?scope=edi&identifier=244&revision=5>, <https://portal.edirepository.org/nis/mapbrowse?scope=edi&identifier=535&revision=2>). Further documentation is available through publications (for example, see Polansky, L., Mitchell, L., Newman K.B. 2019. [Using multistage design-base methods to construct abundance indices and uncertainty measures for Delta Smelt](#). Transactions of the American Fisheries Society, 148:710–724 <https://doi.org/10.1002/tafs.10166>). Technical notes on different aspects of the abundance estimation processes are also available by request through the points of contact while this information is being incorporated into manuscripts.

## Storage and Backup

Copies of data files from external sources as well as EDSM data that are collected by FWS are stored on internal FWS servers. The online database for EDSM is backed up by the server administrators in the Denver, CO U.S. Fish and Wildlife Service office. If the Denver, CO server storing the database becomes unavailable in the future, the database will be transferred to an alternate home within the U.S. Fish and Wildlife Service. The shared server is backed up daily and once a month the backup is transferred to a fire proof safe on site.

## Archiving and Preservation

At the conclusion of this program element, records will be archived following guidance from the Fish and Wildlife Service and the Department of Interior.

## Format

Data from related projects and programs are recorded on data sheets in the field and upon return to the office are entered into an online data entry portal, which is connected to a SQL server. Data is then accessed and retrieved through a Microsoft Access application. Most survey datasets are available as spreadsheets (either .xlsx or .csv) through their respective offices' websites or the EDI website (see the section "Accessing and Sharing" above for links). Abundance estimates are available in spreadsheet format (.csv) by request. Abundance estimates based on EDSM data are also available in MS Word reports (.docx) posted through the Lodi FWO website.

## Quality Assurance

CDFW and USFWS personnel screen the data that we use for this program element. For details on QA/QC documentation for these surveys, please see the DMPs for the datasets listed in the "Data Description" section above.

## **Access and Sharing**

Raw survey data are openly available through the CDFW website (<https://wildlife.ca.gov/Conservation/Delta>), the Lodi Fish and Wildlife Office website (<https://www.fws.gov/lodi/>), and the Environmental Data Initiative (for example, see <https://portal.edirepository.org/nis/mapbrowse?scope=edi&identifier=415>, <https://portal.edirepository.org/nis/mapbrowse?scope=edi&identifier=244&revision=5>, <https://portal.edirepository.org/nis/mapbrowse?scope=edi&identifier=535&revision=2>). These datasets are updated regularly after undergoing QAQC procedures. Abundance estimates are openly available through publications (for example, see Polansky, L., Mitchell, L., Newman K.B. 2019. Using multistage design-base methods to construct abundance indices and uncertainty measures for Delta Smelt. Transactions of the American Fisheries Society, 148:710–724 <https://doi.org/10.1002/tafs.10166>), the Lodi FWO website, and by request.

## **Rights and Requirements**

Data use rights and requirements for federal government datasets can be found at:

<https://www.usa.gov/government-works>