IEP Data Management Plan

Basic Information

Year: 2020; PEN: 325; Date Updated: 2019-10-18; Start Date: 2016-12-14

Study Title

Enhanced Delta Smelt Monitoring (EDSM) Program

Principal Investigator

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

Catherine Johnston, Lodi Fish and Wildlife Office, U.S. Fish and Wildlife Service; catherine_johnston@fws.gov, 2019-329-8029

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."

Catherine Johnston, Lodi Fish and Wildlife Office, U.S. Fish and Wildlife Service; catherine_johnston@fws.gov, 2019-329-8029

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.

Data collection occurs year-round via Kodiak trawls and 20 mm gear to support the goal of sampling Delta Smelt at all life stages. The objective of EDSM is to enhance the data available for calculating life stage-specific estimates of abundance and distribution for Delta Smelt at management-relevant time scales. Sampling sites are chosen at random and geographic information is recorded for all sites. All fish collected are identified (in field when possible, in lab for early life stages) and recorded. In addition to fish information, environmental data are collected for each sampling event (including DO, conductivity, temperature, and turbidity).

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.

Other sampling programs exist that yield estimates of Delta Smelt abundance, distribution, survival, and proportional entrainment risk: the Spring Kodiak Trawl, 20-mm Survey, Summer Townet, and the Fall Midwater Trawl (CDFW). At times, paired

samples with EDSM may be taken as part of additional research projects. For example, samples of zooplankton, chlorophyll-a, harmful algal constituents, otolith, fish health, and stomach contents may be collected at EDSM sites as part of the Directed Outflow Project (Bureau of Reclamation, California Department of Water Resources).

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).

A metadata file lists the details of sampling design, methods, frequency, units, species abbreviations, and other pertinent information concerning EDSM operations. The metadata file documents changes to EDSM that have occurred over time. The file is available on the [Environmental Data Initiative (EDI) Data Portal](#), where the EDSM data set through March 2019 is posted.

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.

The EDSM Kodiak trawl data are located on a SQL server housed at US Fish and Wildlife Service offices in Denver, CO. The 20 mm data are located on the shared server housed in the Lodi Fish and Wildlife Office. Physical data sheets are stored in binders in the Lodi Fish and Wildlife Office. Data sheets are scanned after entry and saved onto an external hard drive and into a folder on the shared server in the Lodi Fish and Wildlife Office.

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.

An archive is maintained at the Lodi Fish and Wildlife Office containing originals and copies of datasheets. The online Kodiak trawl database is backed up by the server administrators in the Denver, CO US 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 US Fish and Wildlife Service. Archived copies of the 20 mm database are saved weekly on the shared server in the Lodi Fish and Wildlife Office. Copies of the local and online databases are saved monthly on the shared server in the Lodi Fish and Wildlife Office. The shared server is backed up daily and once a month the backup is transferred to a fire proof safe on site.

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.

Daily summary reports (including catch information for species of management concern) are available on the Lodi Fish and Wildlife Office website (https://www.fws.gov/lodi/). Weekly, a report is posted to the website that summarizes preliminary Delta Smelt abundance analyses. The EDSM daily reports and other EDSM data can be found on the online web portal Bay Delta Live. The EDSM data set from December 2016 through March 2019 is posted (with full metadata) on the Environmental Data Initiative Data Portal. Other reports and publications associated with EDSM will be announced and/or available on the Lodi Fish and Wildlife website and by contacting the POC.

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).

Data are recorded on data sheets in the field and upon return to the office are entered into a database. For Kodiak trawls, data are entered into an online portal, which is connected to a SQL server. Data are then accessed and retrieved through a Microsoft Access application (.accdb). Database size is ~73 MB. For 20 mm data, entry and retrieval occur via Microsoft Access (.accdb). Database size is ~36 MB. Data are made available on the Lodi Fish and Wildlife Office website in .csv and .pdf files, and upon request can be available in other file formats. When accessed via the website Bay-Delta Live, EDSM data can be downloaded as .csv, Excel (.xlsx), or .pdf. When accessed via EDI, EDSM data can be downloaded as .csv.

Quality Assurance

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

Data are collected following the EDSM Standard Operating Procedure (SOP), which every employee is trained on prior to commencing work. A QA/QC program exists to ensure accurate identification of fish species in the field and accurate collection of environmental data. For early life stage fish identification, two or more experienced identifiers examine every fish until consensus is reached on species. Data is entered into online or Microsoft Access forms with customized error-checking and data validation checks. When a mismatch is found, the field data sheet is reviewed and errors are corrected in the main and/or the duplicate database. Additional data quality checks are performed by the data manager using custom queries and ArcGIS (to check coordinates).

Rights and Requirements

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

[Data use rights and requirements for federal government datasets](#) can be found online.