

EDI/IEP Metadata Template (2020)¹

This template follows the Ecological Metadata Language schema for generation of standardized metadata. Additional notes or examples for Interagency Ecological datasets are noted separately as IEP Notes.

Data should be in csv text file. If starting with an Excel spreadsheet, please make sure it does not contain any formulas and comments on cells. If you need comments put them in their own column. If data were used in a database and major table linking is necessary to analyze, please de-normalize into a flat file, not just database table exports. This will often be several flat files, especially for large, complex data sets.

IEP Notes: Replace any empty cells with “NA”.

Dataset Title

Be descriptive, more than 5 words.

IEP Notes: This should include IEP in the title, for example “Summer Townet Survey” should become “Interagency Ecological Program Sacramento-San Joaquin Delta Summer Townet Survey for Juvenile Fish 1969-2018”, or something similar:

Interagency Ecological Program:

Short name or nickname you use to refer to this dataset:

IEP Notes: Start all IEP data sets with “IEP-“ For example the Yolo Bypass Fish Monitoring Program, could be IEP-YBFMP.

Abstract

Include what, why, where, when, and how.

IEP Notes: This may be copied directly from the IEP workplan checklist, but will likely need edits to make sure it is readable for a wider audience.

¹ This document liberally borrows from similar documents at EDI, SBC and GCE

Investigators

List in order as for a paper with e-mail addresses, organization and preferably ORCID ID, if you don't have one, get it, it's easy and free: <http://orcid.org/>.

IEP Notes: IEP should be included as a creator with the roll of "Organization". Pl's are not required and will be listed under a project tab, a creator is required. You can manipulate the way the text will appear as seen in the table below.

First Name	Middle Initial	Last Name	Organization	e-mail address	ORCID ID (optional)	Role in project
		Interagency Ecological Program (IEP)				creator
						Principal Investigator
						Data manager

Other personnel names and roles

Field crew, associate, data entry etc. with e-mail addresses, organization and ORCID ID.

First Name	Middle Initial	Last Name	Organization	e-mail address	ORCID ID (optional)	Role in project
		Data Manager	California Department of Water Resources	First.last@water.ca.gov		contact

License

(Select a license for release of your data. We have 2 recommendations: [CCO – most accommodating of data reuse](#), & [CCBY – requires attribution](#))

Licensing and distribution (any legal limitations or requirements for use and distribution of the data).

IEP Notes: The IEP DUWG recommends the "CCBy" license, similar to the one below:

This information is released under the [Creative Commons license - Attribution - CC BY](https://creativecommons.org/licenses/by/4.0/) URL - <https://creativecommons.org/licenses/by/4.0/>. The consumer of these data

("Data User" herein) is required to cite it appropriately in any publication that results from its use. The Data User should realize that these data may be actively used by others for ongoing research and that coordination may be necessary to prevent duplicate publication. The Data User is urged to contact the authors of these data if any questions about methodology or results occur. Where appropriate, the Data User is encouraged to consider collaboration or co-authorship with the authors. The Data User should realize that misinterpretation of data may occur if used out of context of the original study. While substantial efforts are made to ensure the accuracy of data and associated documentation, complete accuracy of data sets cannot be guaranteed. All data are made available "as is." The Data User should be aware, however, that data are updated periodically, and it is the responsibility of the Data User to check for new versions of the data. The data authors and the repository where these data were obtained shall not be liable for damages resulting from any use or misinterpretation of the data. Thank you.

Keywords

(List keywords and separate with commas. Using keywords from a controlled vocabulary (CV) will improve the future discovery and reuse of your data. The LTER CV is effective at describing ecological and environmental data. Access this online [LTER CV](#) site and try this [text mining service](#) to extract LTER CV keywords from your abstract or methods. Additionally, please determine one or two keywords that best describe your lab, station, and/or project (e.g., Trout Lake Station, NTL LTER). This will help others discover your data by site/project).

IEP Notes: Include "Interagency Ecological Program for the San Francisco Bay Delta Estuary" as one of the key words.

Funding of this work-Optional

Add rows to table if several grants/contracts were involved, list only the main PI, start with main grant first:

PI First Name	PI Middle Initial	PI Last Name	PI ORCID ID (optional)	Title of Grant	Funding Agency	Funding Identification Number

Timeframe

- Begin date:
- End date:
- Data collection ongoing/completed:

Geographic location

- Verbal description (General region where data was collected, e.g., “Suisun Marsh and Grizzly Bay”):
- North bounding coordinates (decimals):
- South bounding coordinates (decimals):
- East bounding coordinates (decimals):
- West bounding coordinates (decimals):

* The above will be used to generate a map with a simple bounding box around your sampling areas. You can also provide a table/list of stations or sampling sites with GPS coordinates that can be used to generate a similar map with specific station locations.

Taxonomic species or groups – *Optional*

Methods

Please be specific, include instrument descriptions, or point to a protocol online, if this is a data compilation please specify datasets used, preferably their DOI or URL plus general citation information.

IEP Notes: If this is a specific IEP data publication, this methods section should include, at a minimum, information similar to the “methods” section of a scientific paper. It may link to other references and/or SOPs. Please be as specific as possible, and include as many of the following elements as are relevant for your program. If this is a data compilation, please specify datasets used, preferably their DOI or URL plus general citation information.

*See below table for descriptions of each method category.

Detailed methodology is as follows:

1.) Data Collection methods:

2.) Link to blank datasheet:

3.) Instrument and Equipment Specifications, including QAQC methods and frequency:

4.) Analysis Methods and SOPs:

5.) Project History:

6.) QA/QC

Methods:

Data:

7.) Contractor Information:

8.) External Review Process:

9.) Methods References:

Example of descriptive methods categories.

Category	Description	Required /optional
1. Data collection methods	Metadata must include enough information on methods to make the data usable. Minimum methods information should be similar to the "methods" section of a scientific paper. This may include diagrams and pictures of sampling equipment. Link to SOPs, if available. Specific SOPs used to generate the data. It is understood that not all programs will have this information available right away, but should be prepared to provide them within three years.	REQUIRED
2. Link to blank datasheet	Available upon request (see data contact information)	Optional

Category	Description	Required /optional
3. Instrument and equipment specifications, including qaqc methods and frequency	May be references to external SOPs instead of included in metadata	REQUIRE D
4. Analysis methods & SOPs	Any analyses done to produce the data set (such as CPUE calculations). This is not analyses done to produce later publications.	REQUIRE D
5. Project history	List of any changes in methods and sampling locations, with dates changes were implemented	REQUIRE D – If App.
6. QA/QC – Methods: Data:	Methods: Protocols for quality assurance during data collection Data: Protocols for quality assurance during data entry and analysis	REQUIRE D
7. Contractor information	Chain of custody procedures and contact information for any outside labs used to produce the data.	REQUIRE D – If App.
8. External review process	Any other review of data done by entities other than the PI to help with quality assurance. We just need a description of the process, not the reviews themselves	REQUIRE D – If App.
9. Methods references	Citations for publications from which methods were drawn.	REQUIRE D – If App.

Data Tables

Include one table of data column explanations for each table in your dataset. Give each table a descriptive title and an overall description of each table.

- Column name: exactly as it appears in the dataset. Please avoid special characters, dashes and spaces.
- Description: please be specific, it can be lengthy
- Unit: please avoid special characters and describe units in this pattern: e.g. microSiemenPerCentimeter, microgramsPerLiter, absorptionPerMolePerCentimeter
- Code explanation: if you use codes in your column, please explain in this way: e.g. LR=Little Rock Lake, A=Sample suspect, J=Nonstandard routine followed
- Data format: please tell us exactly how the date and time is formatted: e.g. mm/dd/yyyy hh:mm:ss plus the time zone and whether or not daylight savings was observed.

- If a code for 'no data' is used, please specify: e.g. -99999

Please add rows as needed and repeat the following section, as needed for the number of tables you have.

Table Description:

Column name	Description	Unit or code explanation or date format	Missing value code

Articles

List articles or reports citing this dataset or have used this dataset in the past.

Article DOI or URL (DOI is preferred)	Article title	Journal title

Scripts/code (software)- *Optional*

List any software scripts/code you would like to archive along with your data. These may include processing scripts you wrote to create, clean, or analyze the data.

File name	Description	Scripting language

Data provenance

Were these data derived from other data? If so, you will want to document this information, so users know where these data come from.

Dataset title	Dataset DOI or URL	Creator (name & email)	Contact (name & email)

Notes and Comments