# EDI/IEP Metadata Template (2019)[1]

This template follows the Ecological Metadata Language schema for generation of standardized metadata. Additional notes or examples for Interagency Ecological datasets can be seen in green color.

*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. Replace any empty cells with "NA".*

## Dataset Title

*Be descriptive, more than 5 words. 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:

*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. 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 should be included as a creator with the roll of "Organization".*

PI'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). The IEP DUWG recommends the "CCBy" license*:

> This information is released under the Creative Commons license - Attribution - CC BY (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 the LTER CV here. 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). *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. *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.*

| | | |
|---|---|---|
| 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.<br><br>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) | REQUIRED – 3yrs |
| 3. Instrument and equipment specifications, including qaqc methods and frequency | May be references to external SOPs instead of included in metadata | REQUIRED |
| 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. | REQUIRED |
| 5. Project history | List of any changes in methods and sampling locations, with dates changes were implemented | REQUIRED – If App. |
| 6. QA/QC – Methods: Data: | Methods: Protocols for quality assurance during data collection<br>Data: Protocols for quality assurance during data entry and analysis | REQUIRED – 3yrs |
| 7. Contractor information | Chain of custody procedures and contact information for any outside labs used to produce the data. | REQUIRED – 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 | REQUIRED – If App. |
| 9. Methods references | Citations for publications from which methods were drawn. | REQUIRED – 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, absoptionPerMolePerCentimeter
- 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 | Empty value code |
|---|---|---|---|
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## 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 |
|---|---|---|
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## 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 |
|---|---|---|
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## 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) |
|---|---|---|---|
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## Notes and Comments