# EDI Metadata Template (2022)[[1]](#footnote-2)

## Purpose of this document

This template can help you organize your metadata for a data package submission. To submit data to EDI, consider using ezEML (<https://ezeml.edirepository.org>). For more information, contact [support@edirepository.org](mailto:support@edirepository.org) .

## Introduction

Data packages can include data tables, images, documents, code, raster/vector, and more. In all cases, data entities should be in an open access format commonly used in the research field. Examples are: csv, pdf, GeoTIFF, shapefile, R code, zipfiles.

**Tabular data:** Submit data tables as .csv files. 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.

## Dataset Title

(Include **what, where,** and **when** in the dataset title. An example of a good title is: “Monthly Water Quality Data from Horsetooth Reservoir, Colorado: 2010-2019”)

Weekly Phytoplankton and Water Quality in Frenchman Bay, Maine

## Abstract

(Include **what, why, where, when,** and **how.**)

The Community Environmental Health Lab at the MDI Biological Laboratories has monitored phytoplankton and water quality in Frenchman’s Bay for the past few decades. Our goal was to understand how climate change and local changes in anthropogenic activity, including cruise ship activity, have altered the water quality and phytoplankton dynamics in the bay. This data provides information on target harmful algae bloom species as well as a few measures of phytoplankton biodiversity. Our data were collected by a varitety of field technicians and citizen scientists who perform weekly sampling throughout the year at Bar Harbor town pier and during the summer months at the MDIBL pier and cruise ship anchorages.

## Creators

**(These are the people who will show up as authors in the dataset citation.** These are the individuals who have provided intellectual or other significant contributions to the creation of this dataset, much like the authors of a research paper.)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| First Name | Middle Initial | Last Name | Organization | e-mail address | ORCID ID (optional) |
| Alexis | C | Garretson | MDI Biological Laboratory | [agarretson@mdibl.org](mailto:agarretson@mdibl.org) | <https://orcid.org/0000-0002-7260-0131> |
| Jane |  | Disney | “ | [jdisney@mdibl.org](mailto:jdisney@mdibl.org) |  |
| Anna |  | Farrell | “ |  |  |
| Cait |  | Bailey | “ |  |  |
| Jonathan |  | Matt | “ |  |  |
| Uma |  | Arora | “ |  |  |
| Madison |  | Armstrong | “ |  |  |
| Samia |  | Pratt | “ |  |  |
| Nathan |  | Dorn | “ |  |  |
| Faye |  | Durand | “ |  |  |

**This a list of currently active collectors, but there are likely others in the older dataset that have collected consistently enough over long enough time to be included as authors.**

## Other personnel names and roles

(Who should a data user contact with questions about these data? You **must** enter a person or organization name to serve as the **contact** for this dataset. You may also list other personnel who participated in the project (such as field crew, lab tech, data entry etc.) in this table with optional fields e-mail addresses, organization and ORCID ID.)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| First Name | Middle Initial | Last Name | Organization | e-mail address | ORCID ID (optional) | Role in project |
| Alexis |  | Garretson | MDI Biological Laboratory | [agarretson@mdibl.org](mailto:agarretson@mdibl.org) |  | Contact |
| Jane |  | Disney | MDI Biological Laboratory | [jdisney@mdibl.org](mailto:jdisney@mdibl.org) |  | Contact |
|  |  | Anecdata.org | MDI Biological Laboratory | [anecdata@mdibl.org](mailto:anecdata@mdibl.org) |  | Contact |
|  |  | Community Environmental Health Laboratory | MDI Biological Laboratory | [CEHL@mdibl.org](mailto:CEHL@mdibl.org) |  | Contact |

## License

(Select a license for release of your data. We have 2 recommendations: [CCO – most accommodating of data reuse](https://creativecommons.org/publicdomain/zero/1.0/), & [CCBY – requires attribution](https://creativecommons.org/licenses/by/4.0/)).

CCBY – for now, we are having a discussion abuot how we want to release our data going forward.

## Keywords

(**List keywords below 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 a good source for keywords. [Access the LTER CV here](http://vocab.lternet.edu/vocab/vocab/index.php). Also, please determine one or two keywords that best describe your lab, station, and/or project (e.g., Trout Lake Station, NTL LTER).)

MDI Biological Laboratory, Organization of Biological Field Stations, Anecdata.org, phytoplankton, microbial, seawater, oceans, ecology, oceanography

## Funding of this work:

List only the **main PI of a grant** that supported this project, starting with the main grant first. Add rows to the table if several grants were involved.

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

## Timeframe

* Begin date: **2004-05-13**
* End date: **2022-05-26**
* Data collection ongoing/completed: **Ongoing**

## Geographic location

(Use **decimal degrees** to define a point or a bounding box. Use a negative symbol (-) to indicate a west longitude. Copy this block to add multiple points or areas.)

* Verbal description: **Frenchman Bay, Maine**
* North bounding coordinate: **44.43355**
* South bounding coordinate: **44.39152**
* East bounding coordinate: **-68.1813**
* West bounding coordinate: **-68.29037**

## Taxonomic species or groups

(Does your data focus on particular taxa? If so, please list them here.)

Dinophysis, Pseudo-nitzschia, Alexandrium

## Methods

(Be specific about the study design and field and lab methods for collecting and processing the data. Include instrument descriptions and protocol citations.)

**Air Temperature**

Press the big button to turn the thermometer on.

Hold the electric thermometer by the plastic body in the shade (you can use your body for shade).

Wait for the numbers to stabilize. If they’re the numbers are jumping between two numbers, just pick one.

**D.O. and Water Temperature**

Put the black cage on the YSI probe.

Turn on the meter using the green button a couple minutes before you put it in the water.

There are four readings on the screen. We use the top and bottom ones:

Top: water temperature

Bottom: dissolved oxygen in ppm.

Submerge the probe fully beneath the water surface while holding the meter in your hand. Wait a minute or so until the numbers stabilize.

Write down each variable down on the data sheet.

Troubleshooting: If the DO is above 13, try moving the probe around in the water or move it to a different spot. If it’s still above 13, let Anna know. When it’s time to change the probe, the DO readings skew high (as high as 16!).

**Macronutrients**

Rinse the syringe: Fill syringe with sea water and squeeze it out. Repeat 2x. (The filter should not be on.)

Screw the filter casing on to the bottom of the syringe and slowly squeeze out a couple drops to ensure the casing is seated correctly.

Rinse the vial: Open nutrient vial and fill ¼ of the way with filtered water. Hold the cap in your hand. You can pick up excess nutrients if it’s placed on the dock/ground. Cap, shake, and dump water. Repeat 2x.

Fill the sample bottle 2/3rds full of filtered water from the syringe.

Cap the bottle and immediately put it in the ice bath in the cooler.

**Phytoplankton Sample**

Spray bottle should be filled with filtered seawater (hold the sieve at an angle over the mouth of the spray bottle for ease of filling). You can use the same filtered water for multiple sites.

Clean any remained particles from the sieve.

Take your bucket and fill it up to the 5 L line.

Pour 5L bucket sample through the 20 μm sieve. DO NOT OVERFLOW OR SPILL.

Repeat with another 5L so you have filtered a total of 10 liters.

When all water has drained, invert sieve over the funnel attached to the 50 mL centrifuge tube.

Backwash using the spray bottle until you have 15ml in the centrifuge tube. If sample is over/under 15 mL, note this on the field sheet.

Put sample in cooler, away from ice, and transport back to the lab.

**Transparency**

This is measured in meters. One volunteer **slowly** lowers the secchi disk into the water while another volunteer lays on his/her belly with the aquascope in the water watching the secchi disk descend.

The volunteer with the aquascope tells the volunteer with the secchi disk when the disk disappears from view and measures the depth (descending depth).

The secchi disk is then **slowly** raised and the volunteer with the aquascope reads where the secchi disk reappears (ascending depth).

Write down both depths on the data sheet. If the disk hits bottom and you can still see it, mark that on the data sheet as an observation and note the depth at which the disk hit bottom.

***Pseudo-nitzschia* Whole-water Samples**

Take the two 500 mL brown Nalgenes and the 1000mL Nalgene.

Fill and rinse each one three times.

Fill to shoulder with seawater and cap.

## Data Provenance

(Were these data derived from other data? If so, you will want to document this information so users know where these data came from. Please specify the source datasets used in the below **provenance table**, preferably with their DOI or URL. An example of a dataset derived from several others is [here](https://portal.edirepository.org/nis/mapbrowse?packageid=edi.101.3).)

|  |  |  |  |
| --- | --- | --- | --- |
| **Dataset title** | **Dataset DOI or URL** | **Creator (name & email)** | **Contact (name & email)** |
| Maine Phytoplankton Monitoring | https://anecdata.org/projects/view/139 | Community Environmental Health Laboratory [CEHL@mdibl.org](mailto:CEHL@mdibl.org) | Alexis Garretson [agarretson@mdibl.org](mailto:agarretson@mdibl.org)  Jane Disney  [jdisney@mdibl.org](mailto:jdisney@mdibl.org) |

## Data Table

(Provide a Table Name and Table Description. Each row in the below table describes one column in your data table. Complete each row as follows:

* **Column name**: This name must be exactly as it appears in the dataset. Please avoid special characters (like & or \), dashes and spaces. Underscores are permissible. Do not begin a column name with a number.
* **Description**: Please give a specific definition of the column name. This can be lengthy.
* **Unit:** Identify units for all numeric variables. Please avoid special characters and describe units in this pattern: e.g. microSiemenPerCentimeter, microgramPerLiter, 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
* **Date format**: ISO date format of "%Y-%m-%dT%H:%M:%S%Z",tz = "Zulu".
* **Missing value code**: If a code for ‘no data’ is used, please specify: e.g., -99999

Our missing value codes are not consistent, but my preference is for NA. Our date format is mm/dd/yyyy in the export, but my preference is for YYYY-mm-dd.

## ~~Scripts/code (software)~~

~~(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~~** |
|  |  |  |

## ~~Other objects (misc.)~~

~~(List any other objects (e.g. .zip, .pdf, etc.) you would like to archive.~~

|  |  |  |
| --- | --- | --- |
| **~~File name~~** | **~~Description~~** | **~~Data type~~** |
|  |  |  |

## ~~Articles~~

~~(List articles citing this dataset)~~

|  |  |  |
| --- | --- | --- |
| **~~Article DOI or URL (DOI is preferred)~~** | **~~Article title~~** | **~~Journal title~~** |
|  |  |  |

## Notes and Comments

1. This document liberally borrows from similar documents at SBC and GCE [↑](#footnote-ref-2)