# EDI Metadata Template (2016)[[1]](#footnote-1)

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.

## Dataset Title

(be descriptive, more than 5 words): Raw eddy covariance time series data from sonic anemometer and gas analyzer located on pole at end of Picnic Point, Lake Mendota.

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

Lake Mendota Picnic Point raw data

## Abstract

(include what, why, where, when, and how)

We collect 3-D wind components and CO2 and H2O gas concentration at 10 Hz for the calculation of eddy covariance based fluxes of CO2, H2O, heat, and momentum to study lake-atmosphere exchanges since 2012. These data were collected by Ankur Desai and David Reed from fall 2016 to present using a CSAT-3 sonic anemometer, LI-7500A gas analyzer, and HMP45C T/RH probe.

## 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/>) add table rows as needed

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| First Name | Last Name | Organization | e-mail address | ORCID ID (optional) |
| Ankur | Desai | University of Wisconsin-Madison | desai@aos.wisc.edu | 0000-0002-5226-6041 |
| David | Reed | University of Wisconsin-Madison | dereed@wisc.edu  |  |

## Other personnel names and roles

(field crew, data entry etc. with e-mail addresses, organization and ORCID ID)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| First Name | Last Name | Organization | e-mail address | ORCID ID (optional) | Role in project |
| Jonathan | Thom | University of Wisconsin-Madison | jthom@ssec.wisc.edu  |  | Field tech |
|  |  |  |  |  |  |

## Keywords

(list and separate by comma, please check out these resources <http://vocab.lternet.edu>, ) Please determine one or two keywords that best describe your lab, station, and/or project (e.g., Trout Lake Station, NTL LTER, UW Center for Limnology).

Eddy covariance

## Funding of this work:

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| PI First Name | PI Last Name | PI ORCID ID (optional) | Title of Grant | Funding Agency | Funding Identification Number |
| Emily | Stanley |  | NTL-LTER | NSF | DEB-1440297 |
| Ankur | Desai | 0000-0002-5226-6041 | Ameriflux Cheas core site cluster | DOE LBL Ameriflux Network Management Project | 7073056 |

## Timeframe

* Begin date 6/28/2016
* End date 6/30/2017
* Data collection ongoing/completed ongoing

## Geographic location

* Verbal description: Lake Mendota picnic point
* North bounding coordinates (decimals) 43.089929, -89.415366
* South bounding coordinates (decimals)
* East bounding coordinates (decimals)
* West bounding coordinates (decimals)

## Taxonomic species or groups

n/a

## 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)

Sonic anemometer: Campbell Scientific, Inc. CSAT-3

Gas analyzer: Licor, Inc. LI-7500A

R/TH: Vaisala, HPM45C

Methodology: Reed, D.R., Dugan, H., Flannery, A., and Desai, A.R., 2017. The carbon sink and source see-saw of a eutrophic deep lake Limnology and Oceanography Letters, #LOL2-17-0040, submitted.

## Data 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

Columns are not lableled with header row, comma-saved, two files per 15 minutes, in ZIP file

Filename: PicnicPoint\_met\_data\_YYYY\_MM\_DD\_HHMM.dat (5 second average)

|  |  |  |  |
| --- | --- | --- | --- |
| Column name | Description | Unit or code explanation or date format | Empty value code |
| TIMESTEMP | Date and time stamp | “YYYY-MM-DD HH:MM:SS.SS” UTC | “NaN” |
| RECORD | Record ID | Number (internal code) | N/A |
| AirTc | Air temperature | DegreesCelcius | “NaN” |
| RH | Relative Humidity | Percent | “NaN” |
| windsp | Wind speed | MetersPerSecond | “NaN” |
| winddir | Wind direction (From) | Degrees | “NaN” |
| Batt\_volt | Battery Voltage | Volts | “NaN” |

Filename: PicnicPoint\_ts\_data\_YYYY\_MM\_DD\_HHMM.dat (10 Hz sample)

|  |  |  |  |
| --- | --- | --- | --- |
| Column name | Description | Unit or code explanation or date format | Empty value code |
| TIMESTEMP | Date and time stamp | “YYYY-MM-DD HH:MM:SS.SS” UTC | “NaN” |
| RECORD | Record ID | Number (internal code) | N/A |
| Ux | Wind into sensor | MetersPerSecond | “NaN” |
| Uy | Wind across sensor | MetersPerSecond | “NaN” |
| Uz | Wind vertical to sensor | MetersPerSecond | “NaN” |
| Ts | Speed of sound derived air temperature | DegreesCelcius | “NaN” |
| CO2 | Atmospheric CO2 mass density | MilligramsPerMeterCubed | “NaN” |
| H2O | Atmospheric H2O mass density | GramsPerMeterCubed | “NaN” |
| Press | Air pressure in gas analyzer | kiloPascals | “NaN” |
| Diag\_csat | Sonic diagnostic flag | See CSAT-3 manual | “NaN” |
| Diag\_irga | Licor diagnostic flag | <= 14 ok | “NaN” |

## Notes and Comments

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