Metadata template for datasets of *L&O-Letters* articles

**Instructions:**

Metadata provides sufficient structured information for other scientists to understand and use your data. To prepare your metadata, you will need to fill in the information in the tables below and take the followings steps:

1. Fill in the 2 tables below for your dataset that you will be making available. If you have more than one dataset, then fill both tables for each dataset separately, although, most of the information will be the same for Table 1.
2. Save this word file in either Word format and upload your metadata to the *L&O-Letters* website when you submit your manuscript.
3. Timing of depositing your data in a repository: You should plan on submitting your data to a repository at the time of submission, however, you do not need to provide the link to the data until the manuscript has received a decision of major or minor revision. During the review process, we will review your metadata. In some circumstances, reviewers may ask for the data during the review stage, at which point you need to make it available.

[PLEASE DELETE THESE INSTRUCTIONS ONCE YOU FILL THIS FORM IN]

**Table 1.** Description of the fields needed to describe the creation of your dataset.

|  |  |
| --- | --- |
| **Title of dataset** | *Mississippi River annual discharge and bicarbonate export* |
| **URL of dataset** | <https://doi.org/10.6084/m9.figshare.5753049.v1> |
| **Abstract** | The alkalinity data are provided by the New Orleans water treatment facilities (Carrollton Street Sewage and Water Engineering Plant in New Orleans LA and the Algiers Water Treatment Plant in Algiers, LA). The data prior to 2005 are presented and explained in Raymond et al. 2008. The newer data are publicly available. The discharge reconstruction for annual discharge prior to 2005 are also presented in Raymond et al. 2008 and are publicly available. For this study the monthly Mississippi River Basin flow was summed from the USGS stations “Mississippi River at Tarbert Landing” and “Old River Outflow” for the water years 1967-2015. It was found that for the period of 1968-1990 the Raymond et al. 2008 paper underestimated discharge by 3%, and these years were adjusted. For years prior to 1968 data from Raymond et al. were used. To access the data for Figure 2 go to <https://doi.org/10.6084/m9.figshare.5753049.v1> |
| **Keywords** | *Mississippi River, discharge, alkalinity, bicarbonate* |
| **Dataset lead author** | *Peter Raymond* |
| **Position of data author** | *Professor* |
| **Address of data author** | *Yale University School of Forestry and Environmental Studies* |
| **Email address of data author** | *Peter.raymond@yale.edu* |
| **Primary contact person for dataset** |  |
| **Position of primary contact person** |  |
| **Address of primary contact person** |  |
| **Email address of primary contact person** |  |
| **Organization associated with the data** | *USGS,* Carrollton Street Sewage and Water Engineering Plant in New Orleans LA and the Algiers Water Treatment Plant in Algiers, LA |
| **Usage Rights** | *Publicly avaialable* |
| **Geographic region** | *Mississippi River* |
| **Geographic coverage** | *Mississippi River watershed* |
| **Temporal coverage - Begin date** | *1900* |
| **Temporal coverage - End date** | *2015* |
| **General study design** | *Historical reconstruction* |
| **Methods description** | The alkalinity data are provided by the New Orleans water treatment facilities (Carrollton Street Sewage and Water Engineering Plant in New Orleans LA and the Algiers Water Treatment Plant in Algiers, LA). The data prior to 2005 are presented and explained in Raymond et al. 2008. The newer data are publicly available. The discharge reconstruction for annual discharge prior to 2005 are also presented in Raymond et al. 2008 and are publicly available. For this study the monthly Mississippi River Basin flow was summed from the USGS stations “Mississippi River at Tarbert Landing” and “Old River Outflow” for the water years 1967-2015. It was found that for the period of 1968-1990 the Raymond et al. 2008 paper underestimated discharge by 3%, and these years were adjusted. For years prior to 1968 data from Raymond et al. were used. To access the data for Figure 2 go to <https://doi.org/10.6084/m9.figshare.5753049.v1> |
| **Laboratory, field, or other analytical methods** | *See USGS for discharge description. Alkalinity was measured by simple titrations* |
| **Quality control** |  |
| **Additional information** |  |

**Table 2.** Description of the variables (i.e., columns) in EACH dataset in sufficient detail for another user to understand and use the data. If there are 10 variables (i.e., columns) in the dataset, then there should be 10 rows in this column that describe each column.

Dataset filename: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |
| --- | --- | --- |
| **Column name** | **Definition** | **Units** |
| *Discharge* | *Volume of water flowing past a point for a unit of time* | *Km3/yr-1* |
| [Bicarbonate] | Determined from alkalinity titrations, assuming all alkalinity is in the form of bicarbonate | mg C l-1 |
| Bicarbonate flux | Bicarbonate X Discharge | Tg yr-1 |
|  |  |  |

Dataset filename: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |
| --- | --- | --- |
| **Column name** | **Definition** | **Units** |
| *The name of the variable in the dataset* | *A detailed definition of the variable* | *Units the variable is measured in* |
|  |  |  |
|  |  |  |
|  |  |  |