

## **Continental-Limnology Team -- Data Policy**

MSB: A macrosystems ecology framework for continental-scale prediction and understanding of lakes, 2016-2021

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This project has been funded specifically to create data (and code) products for open dissemination to the user community. For this award, we determined that it was important to share data and code in online repositories (i.e., version-controlled, with DOIs, fully documented) once they have been appropriately quality controlled, checked, and documented. We will share data with outside project personnel once the data and metadata are ready to be deposited in an online data repository or made available through a data paper. For this project, we are collecting, aggregating, and harmonizing existing datasets on lake physical and chemical constituents (e.g., nutrients, chemistry, temperature, oxygen) for the conterminous US. We also are calculating numerous spatial metrics linked to lakes and their surrounding landscape (at a range of spatial extents) from existing national-scale geographic datasets. In addition to this large data product, we are also creating tools that contain processing and data analysis scripts and programs. We differentiate data access for project personnel during this project period (2016-2021) versus 'outside researcher' access and describe each below.

### **Access to data and code for project personnel**

We have created a file- and code-sharing system among project personnel using a combination of Dropbox, Github, and Google-drive. Although all project personnel do not have immediate access to all data at any one time (because large datasets are stored outside of these shared drives), we abide by the following principles:

- All project personnel have access to data and code for this project and can request access to any data or completed code at any time for work on this project's efforts. Nevertheless, novel methods, code, and data and the creators of those novel products need to be factored into project manuscripts as described in our authorship guidelines.
- If one of the team members is interested in using code or data from this project for an unrelated project with different collaborators, then we expect this team-member to speak to the person responsible for the data or code, as well as all co-PIs. The lead PI is expected to compile these uses of the project products and make the list available to all project personnel to keep open communication about project activities.

### **Access to data and code for outside researchers**

Full access to our data and code products will be made once the products have been quality-controlled by our team-members and the data are deposited in an online data repository. For examples of the type of data products that we expect from this project, see [www.lagoslakes.org](http://www.lagoslakes.org). However, in some cases, outside researchers may ask us for beta versions of our data products to facilitate their research efforts (i.e., research that is unrelated to any of the project team-members) particularly for other NSF-Macrosystems Biology-funded awards. In these cases, we will try to work with other researchers to provide interim datasets as long as doing so does not conflict with any ongoing project efforts, the researchers recognize that the data may not be the final versions, and that the metadata may not be complete. Because our intent is to create databases and code that are ultimately usable to the research community, we will try to work with researchers as needed.