



Introduction to Cedar Creek LTER Information Management

You will be working hard to collect new data, but have you considered how you manage these data so they are secure and accessible now and into the future? Cedar Creek LTER's information management program is dedicated to supporting the research conducted at Cedar Creek. We also help facilitate future synthesis efforts to conduct new analyses that address novel questions and enable broader generalization. Cedar Creek's information management team is available to assist researchers throughout the scientific process, from developing data plans through publication, and to help ensure data is usable now and in the future.



	<p>Dan Bahauddin <i>Information Manager</i></p> <p>612-301-2603 danbaha@umn.edu</p>	<p><i>Cedar Creek Ecosystem Science Reserve</i> 117 Lindeman Lab</p>
	<p>Kally Worm <i>Research Coordinator</i></p> <p>612-301-2616 wormx0043@umn.edu</p>	<p><i>At Cedar Creek Ecosystem Science Reserve</i> 101B Lawrence Lab</p> <p><i>UMN St. Paul campus</i> Room 416 EEB building</p>

Here to help

Our information management team is available to support the data and metadata collection needs of the Cedar Creek research community. We can

- Help you design your data collection strategy.
 - Provide you with technical support and data collection technologies (such as tablets with data collection forms for field work or barcodes for sample tracking).
 - Offer guidance in organizing and structuring your metadata.
 - Help you meet the requirements of NSF and publishers.
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Benefits

Cedar Creek, funding agencies, and publishers recognize the need for researchers to independently confirm scientific conclusions, as well as reuse data in novel ways. Well documented, accessible data is vital for the scientific process, and an obligation to the public who funds much of this work.

- NSF's timelines mandate data availability in an appropriate repository within two years (with protections for student thesis data). We can meet these requirements for data submitted to Cedar Creek's systems for most datasets.
- Submitted datasets are assigned a Digital Object Identifier (DOI) from the Environmental Data Initiative. DOIs are typically required by publishers.
- Our data systems, and those of our approved repositories, ensure your data is secure, accessible, discoverable, and reusable over time.

“As much as 80 percent of the raw scientific data collected by researchers in the early 1990s is gone forever”

www.theatlantic.com/national/archive/2013/12/scientific-data-lost-forever/356422/



What happens to your data

Once submitted, we will determine the most appropriate repository for storage and distribution.

- For tabular datasets, we run quality assurance checks to ensure consistency of data, as well as congruity between

data and metadata. This data is then uploaded to the Environmental Data Initiative (environmentaldatainitiative.org/) data repository, where it is assigned a DOI.

- While our core data are made available two years after the date of collection, we can tailor this to protect graduate student thesis data.
- For non-tabular data, we will work with you to determine the most appropriate data repository.
- In all cases, your data will be listed in Cedar Creek's data catalog, with links for access.



First steps

- Stop in and say hello. We'd love to chat about your research!
- Read and follow “*Some Simple Guidelines for Effective Data Management*” (Borer, Seabloom, Jones, Schildhauer)
<https://esajournals.onlinelibrary.wiley.com/doi/full/10.1890/0012-9623-90.2.205>
- Create your data plan early.
 - Develop protocols that can be shared with field technicians, be included in publications, and be used to document your data.
 - Keep records of observations of field, lab, and sample conditions, and how these affect your protocol implementation.
 - Use the template workbook at z.umn.edu/ccdata to organize and submit your data.

Additional Resources available at
z.umn.edu/ccdata