Bit x Bit Part Two: Creating a Data Management Plan for Ecology Lab Data

Kailee Hilt, MLIS Candidate, Western University; Bev Raimbault, Coordinator, Ecology Lab; Anne Grant, Manager, Ecology Lab; Sandra Keys, Liaison Librarian; Marian Davies, Liaison Librarian; University of Waterloo Library

Overview:

The University of Waterloo Library and the Ecology Lab in the Faculty of Environment has been collaborating on a Data Management Plan to integrate their datasets into the Scholars Portal Dataverse platform.

The Portage Data Management Plan Assistant was used to develop a "Best Practices Guide for Sharing and Archiving Datasets." This guide serves to facilitate effective data management practices for data collectors and data managers.

It is through these guidelines that the research data will:
1. Be accessible
2. Be reusable for novice users
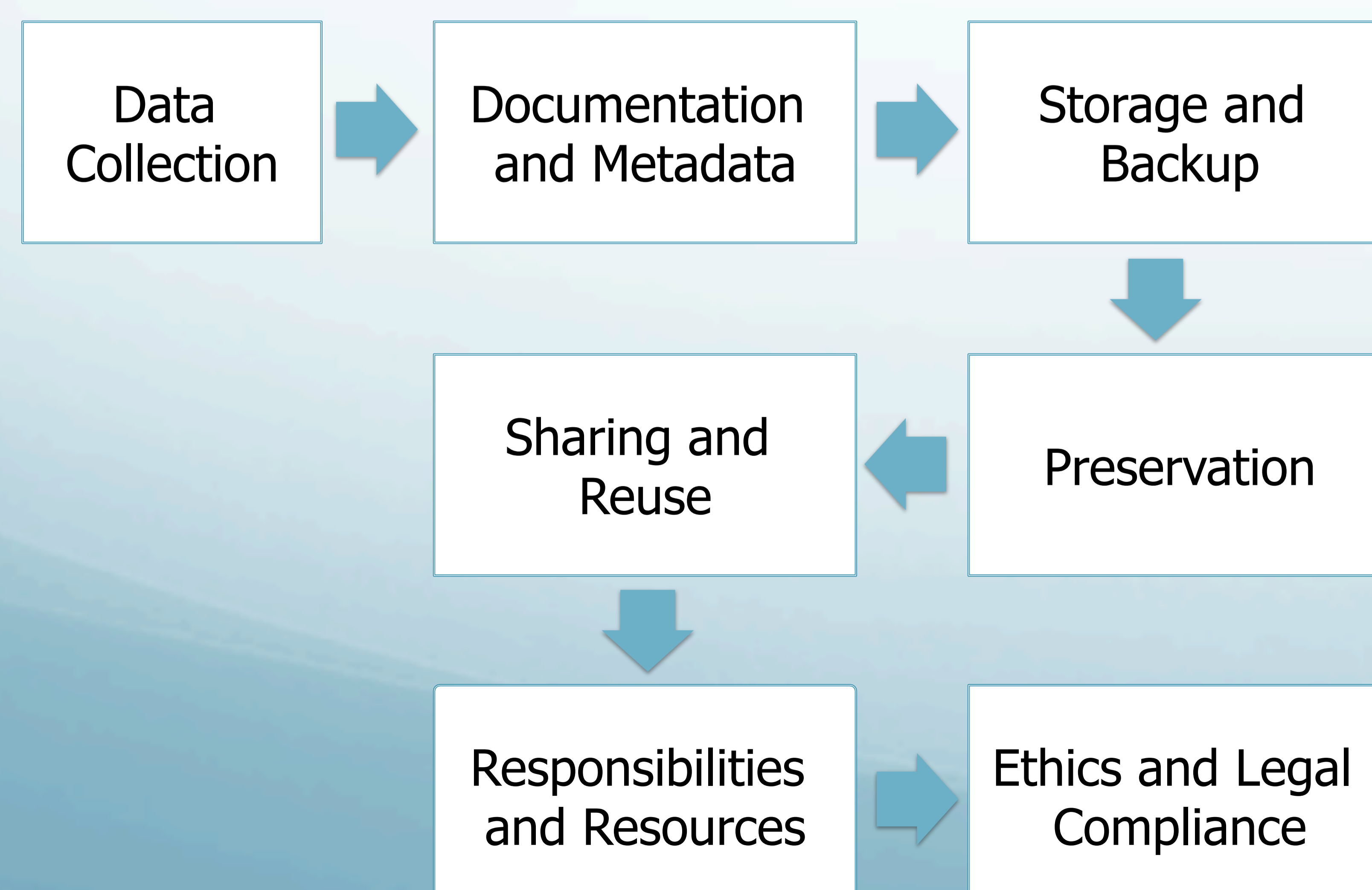3. Stimulate new questions
4. Encourage innovation

Highlights:

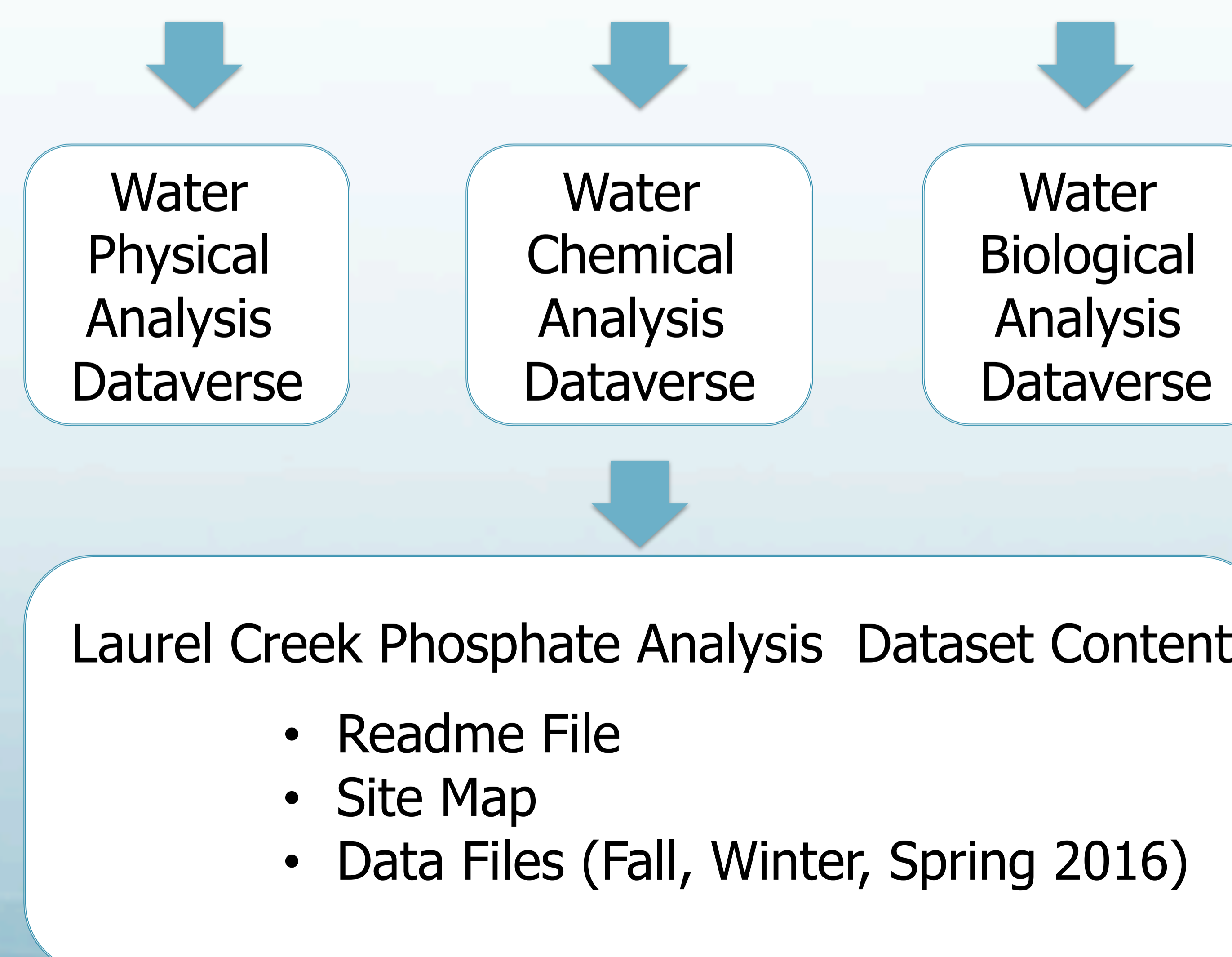Steps to follow when preparing the data files for upload:

1. Use open file formats that can be opened and read by various software applications, and operating systems (i.e. .csv, .txt).

2. Assign descriptive file names that do not include spaces or special characters. For example:
Location_NameofAnalysis_TermYYYY.csv
LaurelCreek_Phosphate_Analysis_F2016.csv

3. Use consistent file organization. For example, lab experiments containing physical, chemical, and biological analyses have separate Dataverses.

4. Include metadata to describe the what, where, when of the data, and by whom it was collected.

5. Include a "readme file" that describes the lab experiment at the project, file, and variable level, This provides the project context.

6. Perform basic quality assurance by noting any errors or missing values.

7. Provide a citation for the dataset to ensure users will assign proper credit.

Data Management Plan Organization:

Data Collection → Documentation and Metadata → Storage and Backup → Preservation → Sharing and Reuse → Responsibilities and Resources → Ethics and Legal Compliance

University of Waterloo Ecology Lab Dataverse

- Water Physical Analysis Dataverse
- Water Chemical Analysis Dataverse
- Water Biological Analysis Dataverse

Laurel Creek Phosphate Analysis Dataset Content:
- Readme File
- Site Map
- Data Files (Fall, Winter, Spring 2016)

Challenges:

➢ Organizing the labs into topic specific Dataverses.

➢ Capturing all the methodology and measurement details in the metadata and readme file to ensure that the data will be reusable in the future.