**Standardizing workflow efficiency in conservation data management**

**Melissa Moreno**

**Research Objectives**

My research will help to inform conservation decisions by improving efficiencies in data capture, archiving of historical data, and synthesizing existing information. These efforts will make data available to inform decision making related to restoration actions and test hypotheses of ecological interest. My work will create an outline for an efficient data management plan that will improve research outputs by promoting reproducibility and long-term data quality in an easy to follow structure. I will learn how to create an easy and reproducible data management workflow/system that will be of use to multiple conservation organizations and projects. By having a better data management plan, conservation groups will be able to create and report more accurate and well developed analysis of the data collected. This in turn, will help create better graphs, maps, reports, for managers, law enforcement, planners, park interpreters, schoolteachers, and the public that will aid in better management decisions. Any group can benefit from making publicly collected data available in formats that allow for learning to inform decision making. The objective of my work is increase the overall efficiency of every conservation agency.

**Preliminary Work** (optional)

My workflow outline does not build on any other work from a lab/student/faculty member. The data I will use for my data management plan example, will be collected by the Oyster Restoration Project members, which I am a part of. Data from other agencies and researchers can be used to show an illustration of how historical data can be incorporated with modern data and used to determine conservation decisions.

Workflow design will be influenced from currently working workflow designs, but specifically targeted to aid in conservation research projects.

In order to determine the most efficient data management workflow, I will collaborate with experts to test and create an efficient workflow data management plan using historic and modern water quality data collected from Cedar Key, FL.

**Research Design – Descriptive**

This description will aid in understanding, conservation of the design of future work, by outlining an efficient way to manage collected conservation data. The description will be a step by step reproducible process that can be implemented by any conservation agency. There will also be descriptive guides on how to create effective tools for interactive data analysis with other conservation members or the public.