**Earth Systems Science**

***Final Florida Project Paper (due 4/25)***

* Your paper should be as long as it needs to be to adequately cover the topic. Three pages of text are reasonable. (Pictures, graphs, and tables do not count towards the length of text.) Keep in mind that good scientific writing is concise – making your paper longer by repeating yourself or through convoluted sentences and paragraphs will result in a lower grade.
* The topic of your paper should be the question that you proposed on March 10. (You may adjust your topic based on discussions with your instructor.)
* Your argument should be based on quantitative data that you found in the spreadsheets of data collected by previous classes, or that you retrieved from reliable sources on the Internet. (The Colorado Division of Water Resources, the US Geological Survey, the National Weather Service, and the US Department of Agriculture are good sources for the purpose of this paper.)
* You must support your argument with appropriate diagrams, graphs, and tables.
* All images should be numbered in the order that they are used (Figure 1, Figure 2, etc.) and should be referred to in the text:

The concentration of sodium increases downstream (Fig. 4).

* All figures should have captions that explain what is shown:

**Figure 4.** The concentration of sodium (ppm) increased downstream during October, whereas the concentration of potassium (ppm) did not change significantly.

* If your figures include images or information that you did not collect, you should cite the source of your data. (This includes information and images that you found on the internet.)

**Organization of the paper**

***Introduction***

State your question, any relevant background information pertaining to this research, and the big question – “who cares and why is this important?” You may use material that you wrote for the question (due March 10), but you should revise it to become an appropriate introduction to the question that you focus on in the paper.

***Methods***

What data were used to conduct the research? When were the data collected? Where were the data collected? Who collected any data that you did not collect? If you used data collected by the class, describe the procedures that were followed during lab. This portion of the paper should be as brief and concise as possible.

***Data***

Describe the data that are relevant to your question, both the data that you collected and the data collected by other organizations or previous classes. This is not the place in the paper where any interpretations are made concerning the data – that belongs in the discussion.

You must present your data both in words (organized in sentences and paragraphs), and in appropriate tables and graphs. Use appropriate captions for the tables and graphs, and refer to the tables and graphs in the text of your paper.

***Discussion***

What does all that data mean? Is there one clear answer to the question that you posed, or are there multiple possible explanations? Discuss the strengths and weaknesses of each explanation. You may also discuss problems with the data.

***Conclusions***

Summarize the work done (briefly). You may also suggest further work and implications of your study.

***Acknowledgements***

Everyone who contributed to the project (including your classmates who helped collect data) deserves mention in this portion of the text if they assisted you in any way.

***References Cited***

End your paper with a list of all sources cited within your paper. You may use any citation format that you have used before (for instance, in Comp 150). Make sure to cite internet sources as well as books and articles. If you didn’t collect the data or think of the idea yourself, you need to cite a source. Class lectures are not appropriate sources to cite in a paper; however, you may cite your textbook. (Because you are a student in an introductory course, you should cite sources for information that may be common knowledge amongst experts, but not in the general public.)