ENV 4417: WATER QUALITY & TREATMENT

Department of Civil & Environmental Engineering

University of South Florida

Semester Project — Prof J A Cunningham

Stage 8 — Fall 2015

The final stage of the group project is to prepare your final paper.

- The final paper will count for 40% of your project grade.
- Due date: Tuesday, December 8, by 4:45 PM.
- Turn in your paper to the departmental office for the Department of Civil and Environmental Engineering. Time stamp your paper and have the student assistant put it in my mailbox. Turn in one hard copy.
- In your paper, the key questions that you want to answer are:
  - What *processes* does our treatment plant employ?
  - How do those processes allow the plant to meet their *treatment objectives*?
  - How does the selection and operation of those processes depend upon the *quality or attributes of the influent water* and upon the *required quality of the final product*? (e.g., why did your plant select those particular processes, not some other processes?)
- As you work on answering these questions, please refer to the *ENV 4417 writing rubric* to see what elements constitute an effective paper. I will grade your paper using the writing rubric. Each of the 8 elements will be scored between 0.0 and 5.0 (in increments of 0.5), so a perfect score would be $8 \times 5.0 = 40$ (though I do not expect any group to be perfect – it is quite difficult, or more likely impossible, to be perfect).
- Papers should be prepared in a standard word-processing software program (e.g., Microsoft Word) and printed on a high-quality printer. Single-sided or double-sided printing is acceptable.
- Students should use 1-inch margins and a standard font such as 12-point Times New Roman. Papers should be double-spaced. That includes the references at the end of the paper.
- For the purposes of formatting citations, tables and table headers, figures and figure captions, reference lists, and section headers, students should mimic the style of one of the following five journals: *Environmental Engineering Science*, *Environmental Science & Technology*, *Journal of the American Water Works Association*, *Water Research*, or *Water Environment Research*. Those are prominent peer-reviewed scientific journals that publish papers related to water and wastewater treatment.
- There was some confusion over this point for the rough drafts, so let me elaborate. Pick one of the five journals listed above. Find a paper in a recent issue. In *your* paper, mimic the journal's style for things like author list, abstract, keywords, section headers, figure captions, table headers, style of tables, citations, and references. However, do *not* mimic the journal in terms of font size or spacing – use double-spacing and standard font size, as indicated above.

- The first page of your paper should be a cover page that mimics the title section and the author list of the journal you selected. The second page should contain the abstract (and, if applicable, key words), again in the style of your selected journal. Main text should begin on page 3. Pages should be numbered, starting with the title page as page 1.
- Tables and figures either can be embedded in the text of the paper, or can be provided separately at the end of the paper. You can choose. In either case, use the journal's style for figure captions, table headers, table style, etc.
- There is no set length requirement. Your goal is to be simultaneously thorough and concise. The best paper is one that is short and easy to read, but still includes all the key elements. The next-best paper is one that includes all the key elements but is long-winded or contains extraneous elements. The weakest paper is one that is missing key elements. Actually, I guess the *worst* paper is one that is missing key elements but is also very long and difficult to read.

If you have questions, please ask.