

Description of work done by Rebecca Thompson and Narayana Pappu

Nara and Rebecca completed the majority of the work in the second half of the semester together. Therefore, it seems appropriate to write this page together as well. Rebecca and Nara developed the testing procedure for the turbidity profile tests and performed these tests. The data that was collected is very interesting and this experimental procedure will provide a nice metric to compare future flocculator set-ups. This testing method will allow the new team to distinguish the performance of the flocculator from the performance of the sedimentation tank, which will be operating in tandem. It also allows the user to understand in which part of the flocculator the majority of flocculation is happening, which will be useful for further fine-tuning of the set-up.

A lot of time this semester was spent fully understanding the set-up, especially mastering the use of the process controller, and learning and developing the procedure to find the optimal alum dose. Additionally, many experiments were not successful. Reasons for failed experiments ranged from changing environmental conditions, in which alum dose rate determined during the alum increment test was not useful at the time of the flocculation profile test, to turbidimeter lines clogging and reporting false readings.

To see the results from the grab sample test, performed by Rebecca, go to the "Grab Sample" section under "Testing Setup Modifications" of [this page](#).

To see the experimental procedure and results from the flocculator profile testing, performed by Nara and Rebecca, go to the "Developing Turbidity Profiles along the Flocculator" and "Results from Profile Testing of Tapered Flocculator Set-up Spring '08" sections of [this page](#).

We hope that the "Future Work" section also found on [this page](#) will be useful to the new students who work on this project. In addition, written notes were taken during the experiments, and these notes will also be left at the water treatment plant for the use of future students.