

eeg53

Eric Grohn's Individual Contribution Page

Spring 2013 Contributions

This semester I am a member of the [StaRS Filter Theory](#) team. Our goal is to better understand the process of sand filtration in the AguaClara filter and to examine possibilities for improvement. Our primary focus is the difference between Depth Sand Filtration and Surface Sand Filtration. We will conduct a literature search and perform laboratory experiments to determine which form of filtration occurs within the AguaClara filter and to determine differences in particle capture efficiency and head loss between the two forms. We hope that through this research we can increase the AguaClara filter efficiency and reduce filter head loss.

For the first half of the semester, my primary goal within the team was to construct the testing apparatus. I helped assemble all of the parts, wrote the process controller method, and troubleshooted the apparatus to ensure it worked properly. I also worked with the rest of the team to develop the subsurface-injection fitting necessary for our tests.

For the second half of the semester, I worked with the rest of the team to perform tests with different influent turbidities, coagulant dosages, and filter velocities. Our tests and conclusions are described in detail on our team's wiki page.