

cns24

Fall 2008

This semester I am a member of the Automated Design Team. I have been working on the Gracias plant design. I specifically focused on creating [preliminary designs](#) for Gracias with single width sedimentation tanks, and documenting important parameters. I also worked with Tania on an algorithm to determine dimensions of the sedimentation tanks based on an optimal velocity to prevent both flocs from settling and from breaking up. This method was revised, and I have worked with the team on the slopes program that determines sedimentation dimensions based on a set G value.

I have also updated the variable naming guide for the [user inputs](#), [design assumptions](#), and [minor loss coefficients](#). In addition, I am working on documenting the [entrance tank](#) design algorithm.

The second half of the semester I finished all documentation of the [user inputs](#), [design assumptions](#), [minor loss coefficients](#), and [entrance tank](#). This documentation included updating the variable naming guide and adding default values to all of the design assumptions. I also assisted the design team with the slopes program.

Content created by Anonymous

There are no pages at the moment.

Spring 2008

During the first half of the semester, the majority of my work has focused on creating and updating hydraulic design algorithms. More specifically, I created all of the Hydraulic Design function skeletons which specify the inputs and outputs of each algorithm (located on the SourceForge Repository under Hydraulic Design). In addition, I wrote the pipe design and the grit chamber design functions. I also worked with Raul on the plant leveling tank design algorithm.

In addition to this design work, I worked with Becky to write the [Tamara Design Report Fall 2007](#). I wrote all of the necessary equations for the report. I also worked to correct a few errors in calculations and equations to ensure the accuracy of the report.

Throughout the semester, I have worked to keep our progress documented through our meeting minutes. [Hydraulic Design Minutes](#)

During the second half of the semester, I have worked extensively to revise the grit chamber design function. I also worked with Raul to test and document the grit chamber function for a wide range of varying flow rates. I participated in the internal review process by working with Leslie to review the sedimentation function and helped her review the grit chamber by responding to any questions and comments. These comments are documented with in the grit chamber MathCAD file.

I also worked with the entire design team to create the final presentation. I documented my algorithms for the grit chamber function on the [final algorithm report](#) and created a few pictures to help clarify these algorithms. In addition, to creating line by line commenting in the grit chamber MathCAD file. I also offered my suggestions for future work on the grit chamber on the [final report](#).