

Ieb39

Leah Buerman's Individual Contribution Page

Info



Meng student in Biological and Environmental Engineering, Dec. 2008

Research team member working with the Automated Plant Inflow System and focusing on the Linear Flow Orifice Meter.

Semester Fall 2008 Contributions

Fall 2008 is my last semester with the AguaClara team. I have been working to finish up my research on the Linear Flow Orifice Meter, LFOM. This semester I conducted research into the assumptions and constraints concerning the Sutro Weir, in order to effectively mimic the Sutro Weir one must have a thorough understanding of the Sutro Weir. The research is available on the [sutro weir research page](#). This semester I also conducted an experiment on the point of failure for the LFOM. The LFOM riser pipe diameter is currently based solely on stability, the [point of failure experiment](#) evaluated results of overloading the system. It was hypothesized that at each diameter riser pipe has a maximum flow rate that it can accommodate and when the flow rate through the LFOM exceeds that value then the water will back up in the riser pipe. The results were contrary to the hypothesis and further research is needed. Also this semester I worked on updating the code that creates the LFOM design for the water treatment plants. there were several issues to pursue in code, the questions are addressed on the [LFOM Entrance Tank Code Page](#). The new code calculates the optimal diameter of the orifices based on the area required for the orifices in the top row of the LFOM the information is available on the [Linear Orifice Flow Meter Entrance Code Documentation and Drill size Determination Page](#). I also documented the code that creates a sutro weir, created by Monroe, [available here](#). The final posting was the set of LFOM designs for pre-set flow rates. This can ensure quality designs for immediate implementation (having a LFOM designed for a larger flow rate than necessary doesn't have a detrimental effect), this is available on the [LFOM preset designs page](#).

- [Quiz Questions](#)
- [challenges for Spring 2009](#)

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There are no pages at the moment.