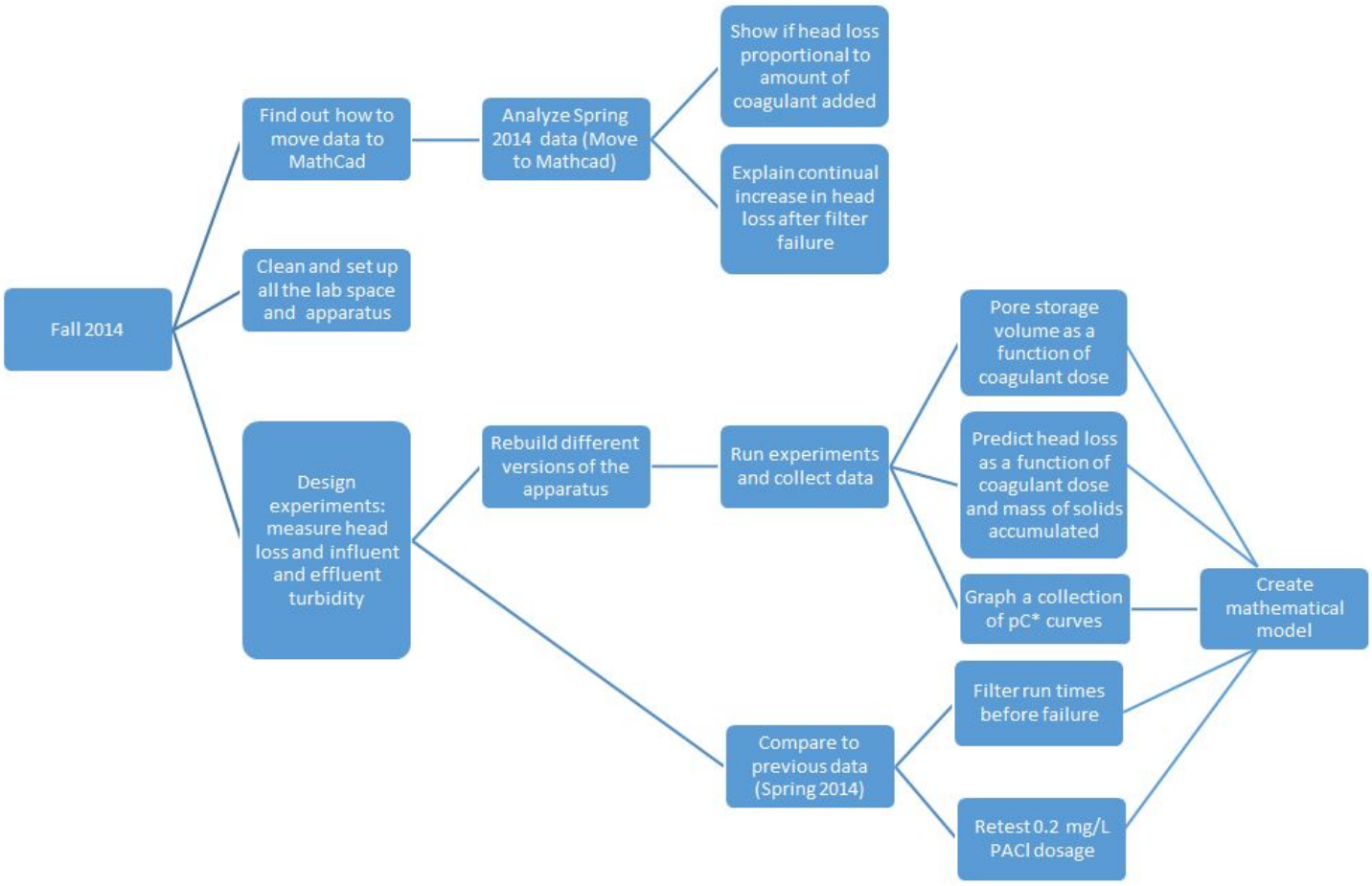
Stacked Rapid Sand Filtration Theory

Task List

Fall 2014

Task List

Task Map



Task Details

1. Process Spring 2014 data/9/17/14 - 9/26/14 Theresa

Assess the analysis of Spring 2014 - is all relevant data there? Does the data tell a complete story? What parts are missing?

Record experimental conditions (flow rate, influent turbidity, PAC dosages).

Read and assess the results.

Build off of the hypotheses and research already done. Try to explain the continual increase in head loss after filter failure. Show whether head loss is proportional to the amount of coagulant added. Hypothesize why the filter bed did not lift at expected head loss levels.

Make the data easy to read and access quickly, if feasible and practical. Discuss potential Mathcad code with Casey.

2. Clean our lab space/9/17/14-9/19/14 - Guillermo

Make space in Hollister B60 for the filter apparatus. Find out what parts we need to rebuild the filter apparatus. Make all necessary hardware and software connections to be able to run experiments.

3. Design experiments/9/24/14 -10/01/14 Alex

Design a set of experiments to test our hypotheses. Meet with Monroe to go over plan.

4. Rebuild apparatus and test different versions/Wednesday 10/1/14 -10/22/14 Guillermo

Make the Enclosed Stacked Rapid Sand Filter fully operational. Make all necessary connections. Make a filter without sand to test the head loss across the mesh. Decide if mesh is necessary.

5. Run experiments/Wednesday 10/23/14 -11/19/14 Guillermo

Set up Process Controller to run experiments and collect data. Set up a Mathcad file to collect data.

6. Analyze data/Wednesday 10/29/14 - 11/26/14 Theresa

Graph data and assess filter performance. Create graphs of pC* performance curves and head loss.

7. Compare data with previous data (Spring 2014) /Wednesday 11/26/14 -11/28/14 Alex

Compile new data with previous semester's data.