

# Detailed Task List

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## Part I

### Deadlines

- Finish Literature Review by Friday June 21, 2013.
- Research Report 1 and Progress Report 1 by Friday July 5, 2013.
- Research Report 2 and Progress Report 2 by Friday July 19, 2013.
- Final Report Draft by Friday August 2, 2013.
- Final Report by Wednesday August 6, 2013.

## Part II

### Research

- Design, build, and test multiple methods to initiate backwash after filter has been clogged
  - Prioritize qualities (reliability, self sustaining, simplicity, etc.)
  - Define which method of backwash is the best via experimentation
- Design, build, and test a sand fluidization tester for filters that aren't transparent.
- Design, build, and test a sand bed height tester for filters that aren't transparent.
  - Determine pros/cons of training a human operator versus automated operation
- Test clogging of the slotted pipes at high coagulant dosages and low turbidities.

- Design build and test a sand drain system that is able to remove all of the sand from the filter bed.
- Make slotted pipe manifold for remaining models.