

# LFSRSF Team Detailed Task List

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## Literature Review (Sept. 27)

- Fluid Mechanics (Alex and Jeanette)
- Monroe's slides (4540)
- Previous reports

## Finalize Materials List (Sept. 27)

- Purchase necessary materials online

## Building New Filter (Oct. 1)

- Finalize materials list and order
- Get plans from Julia/India/Maysoon
- Become familiar with plant
- Play in lab/process controller
- Ask about trunk height

## Testing: Backwash Tests (Oct. 16)

- Add sand to test
- Try different configurations of backwash initiators
  - Experiment with different shapes and rod thicknesses

- Test placement within filter
  - Test when to know when to unplug
- Test fluidization of sand

## Building Filter (Nov. 1)

- Cutting pipes
- Logistics
- Put together piping
- First test run by Nov.1

## Work on Sand Drain (Nov. 1)

- Testing for head loss
- Develop new method to close sand drain
  - Alternatives to seal (needs to be perfect—is this realistic?)

## Connect New Model to Process Controller (Nov. 18)

- If time allows, improve fabrication on new design
- Simplified hydraulic controls for LFSRSF
  - Explore options for reducing size of the inlet and outlet piping to make it more compact
  - Develop a method to fabricate inlet and outlet tanks including the weir system that is used to divide the flow between multiple LFSRSF.

## Done by Thanksgiving Break (Nov. 27)