Fall 2013 Ram Pump Team Detailed Task List

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Task List

0.1 Overhead Drive Tank

- Connect to system and troubleshoot if necessary. (09/16/13)
- Replace 3/4" drive pipe with 1" pipe to better simulate Honduras parameters. (09/18/13).

0.2 Water Delivery System

- Construct 7.0 m head loss simulation apparatus. (09/18/13)
- Attach air line into apparatus to replentish air in downward pipes. (09/18/13*)
- Add graduated cylinder & pressure sensor to record delivery flow rate. (09/18/13)
- Achieve flow rate of 70.0 mL/s. (ongoing)

0.3 Waste/Recycle System

- Connect waste bucket to recycling system. (09/21/13)
- Try replacing weights with various springs and determine which is more efficient/convenient for operators. (09/23/13)

0.4 Air Chamber

- Experiment with components inside the air chamber i.e. make tires accessible from the outside or determine if they are necessary. (09/25/13)
- Find a way to measure pressure/volume of the tire- bicycle pump maybe. (09/25/13)
- Experiment with various sizes of air chambers. (If time allows)

0.5 Commercial Ram Pump

- Study commercial ram pump and make adjustments; beware patents! (TBD)

0.6 Mathematical Model

- Create a model that describes ram pump performance from data collected. (TBD)