



# Ram Pump

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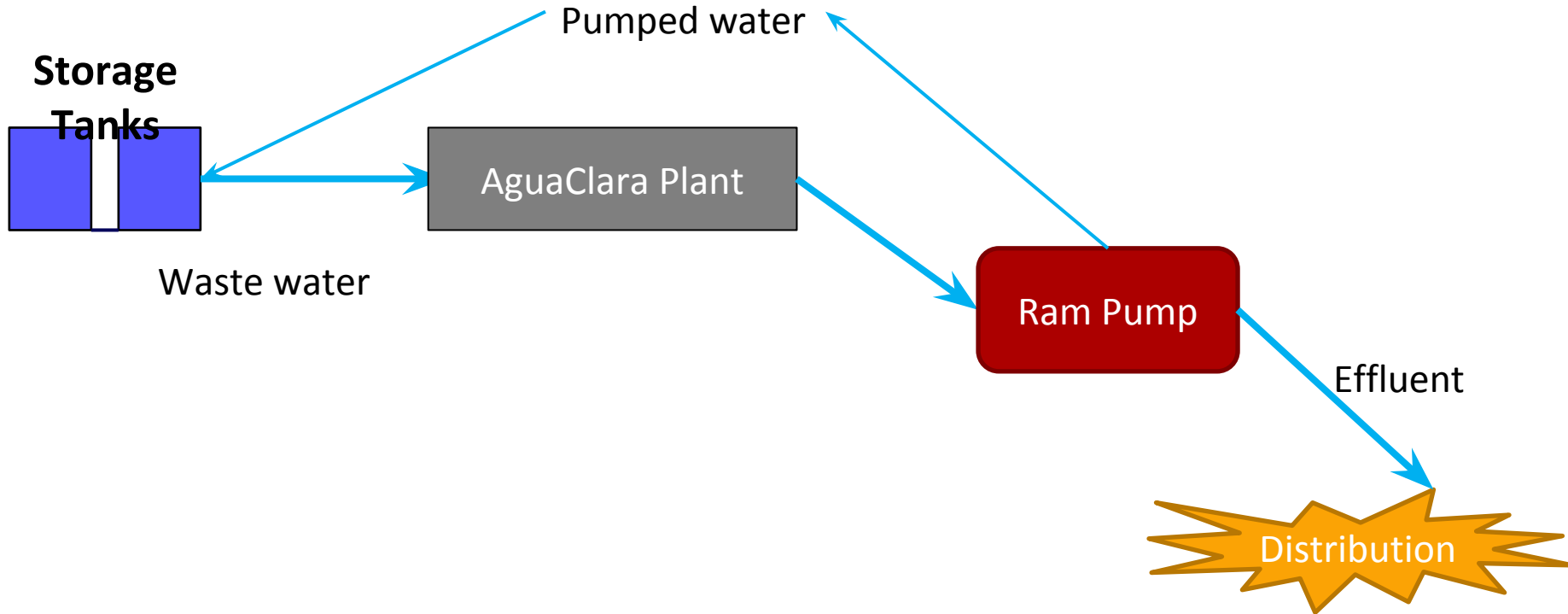


Cornell University

# What is the Ram Pump?

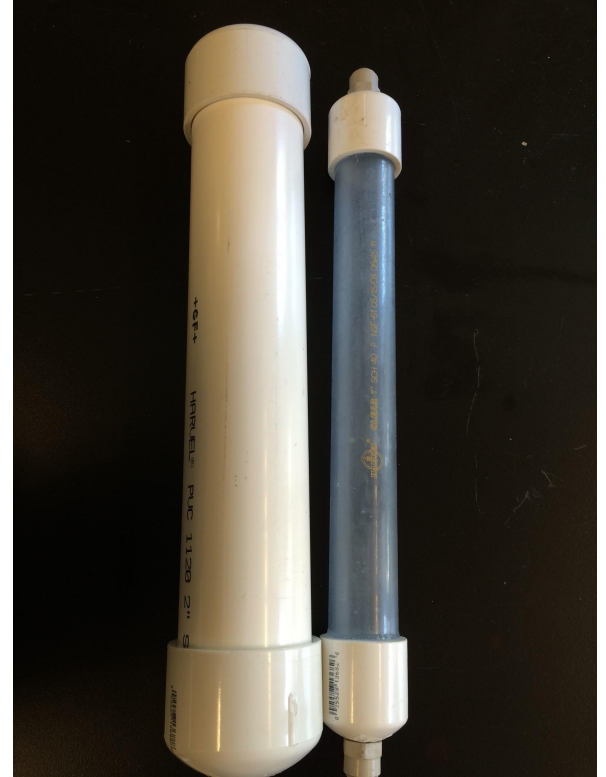
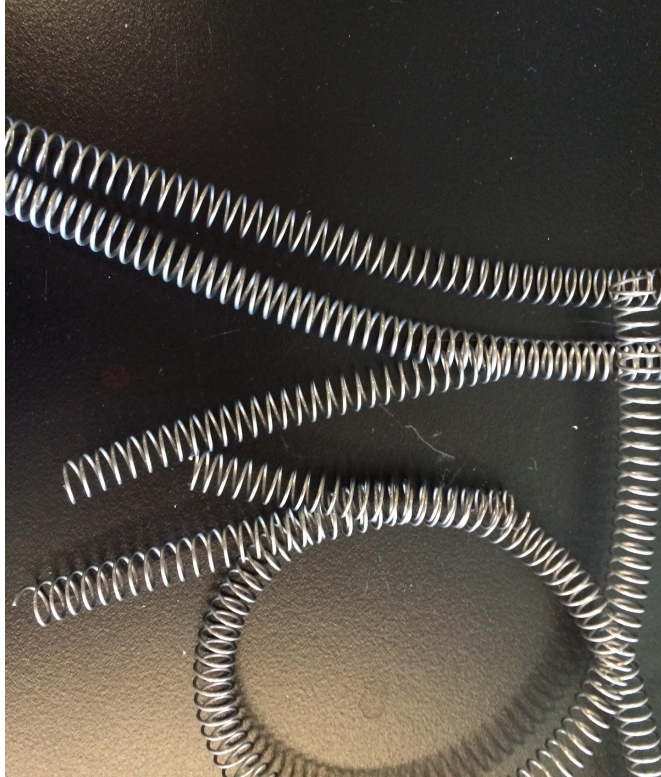
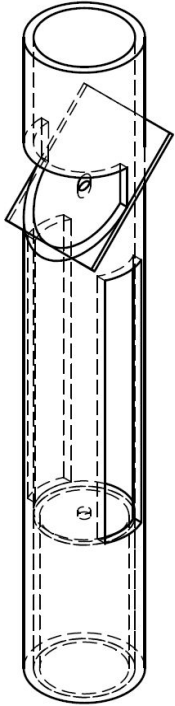


# Set-up: In the Plant

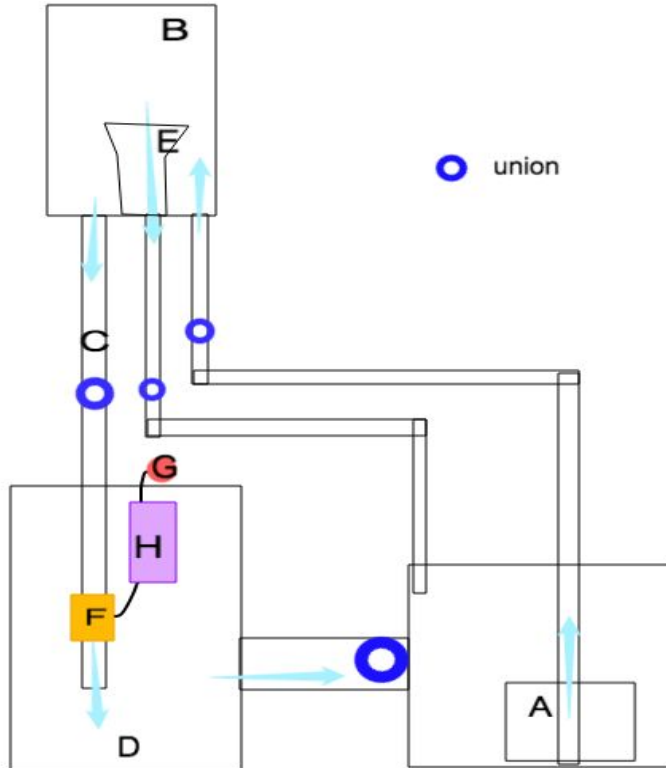




## Previous Work

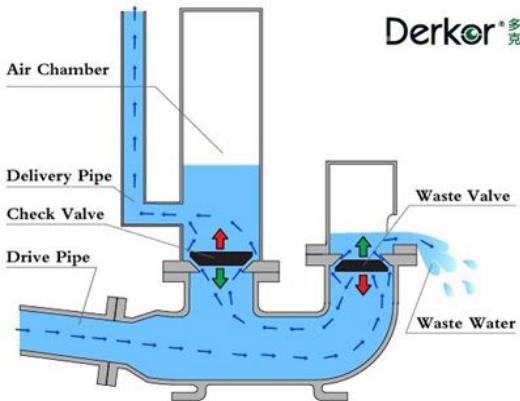


# How water flows through the system



- A: Auxiliary Pump
- B: Collection bucket
- C: Drive pipe
- D: Collection bucket
- E: Overflow Control
- F: Ram pump
- G: Pressure valve
- H: Air Chamber

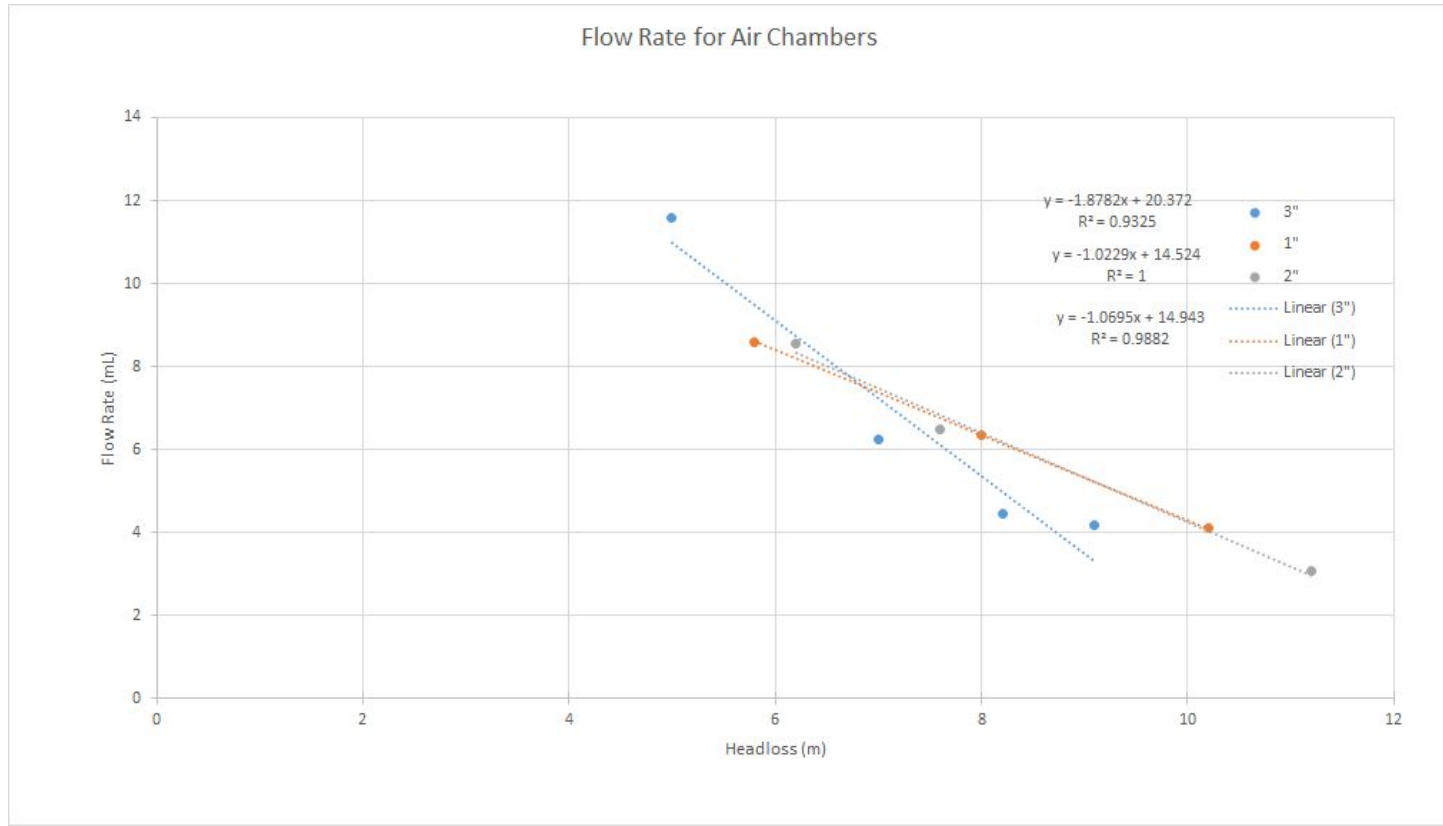
# Pump Theory



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# Air Chamber Results

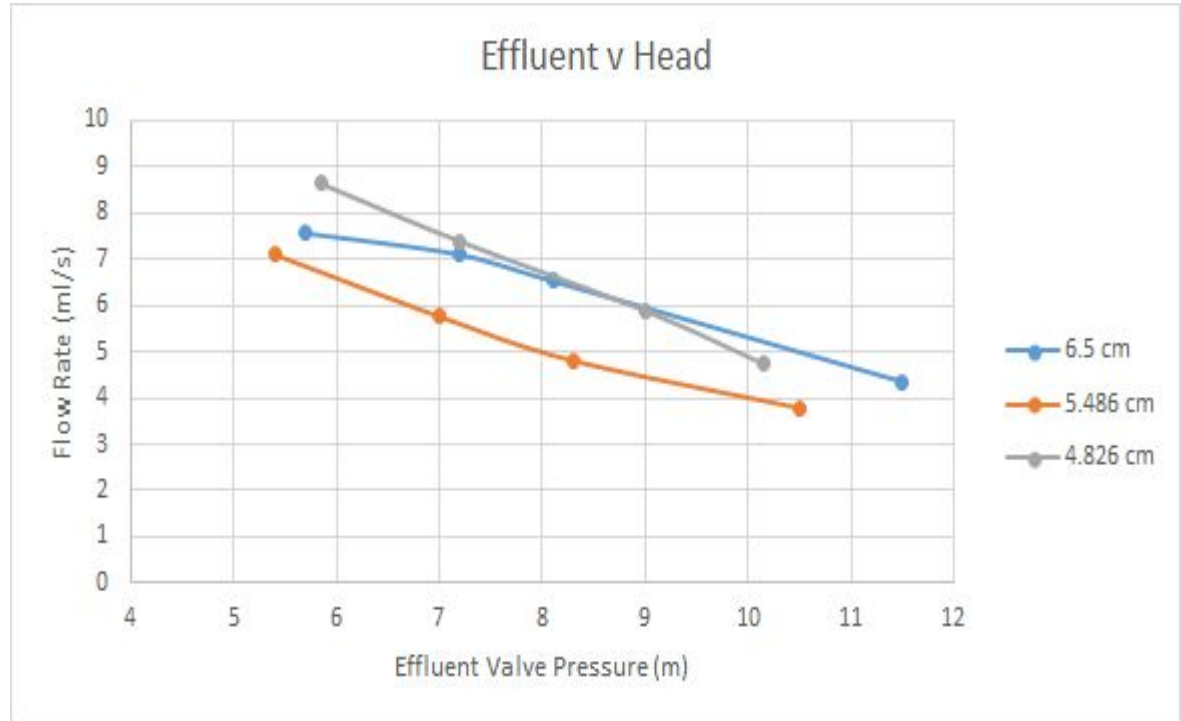




# Spring Testing Results

Tested keeping compression length ( $\Delta x$ ) the same while varying total spring length

Determined no significant correlation





## Future Work

The Ram Pump team hopes to further their understanding of pump physics to have a better idea on what to optimize

Determine a method to apply a varied force at the top and bottom of the spring oscillation

Determine a method to relate the effluent pressure to the position of the spring throughout its cycle





# Questions/Comments/ Suggestions?

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