

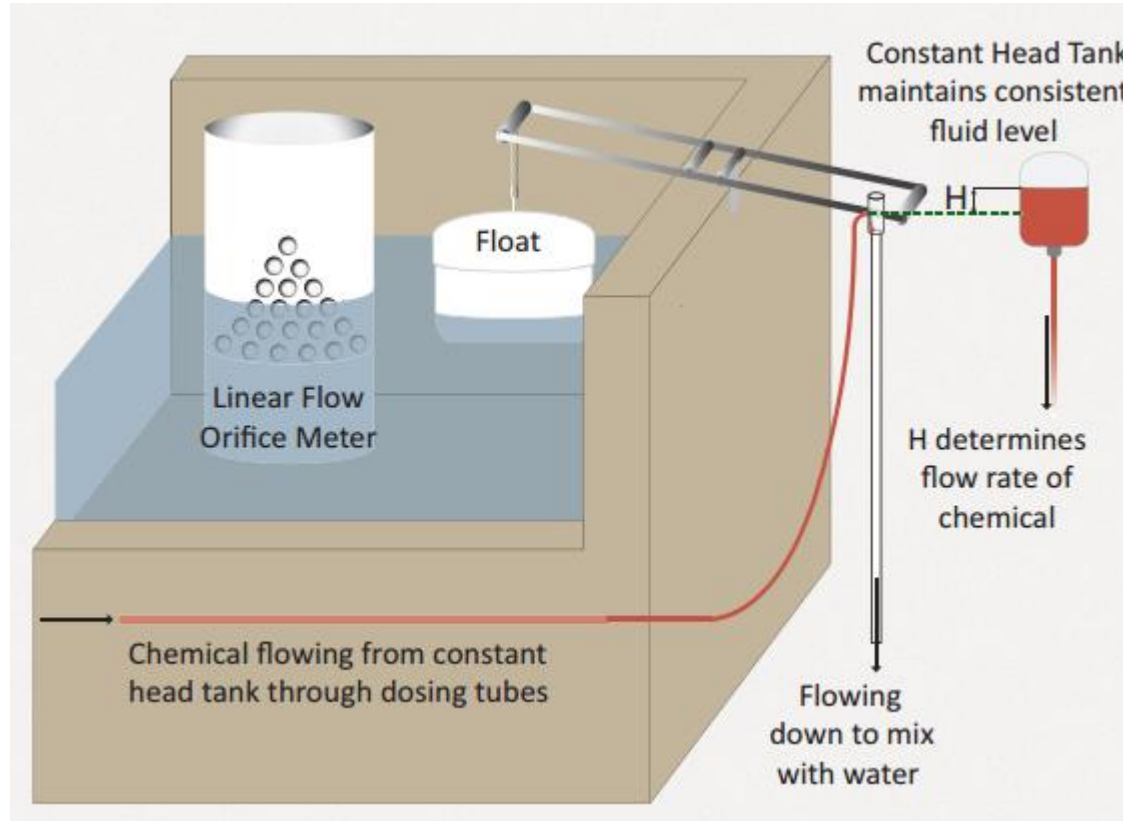


# Constant Head Tank

The Spring 2016 Constant Head Tank Sub-team developed two new CHT designs. This presentation will review and compare the new CHT designs in terms of ease of construction, functionality, and costs. A detailed report of this research is available on the Fabrication Team AguaClara wiki page.



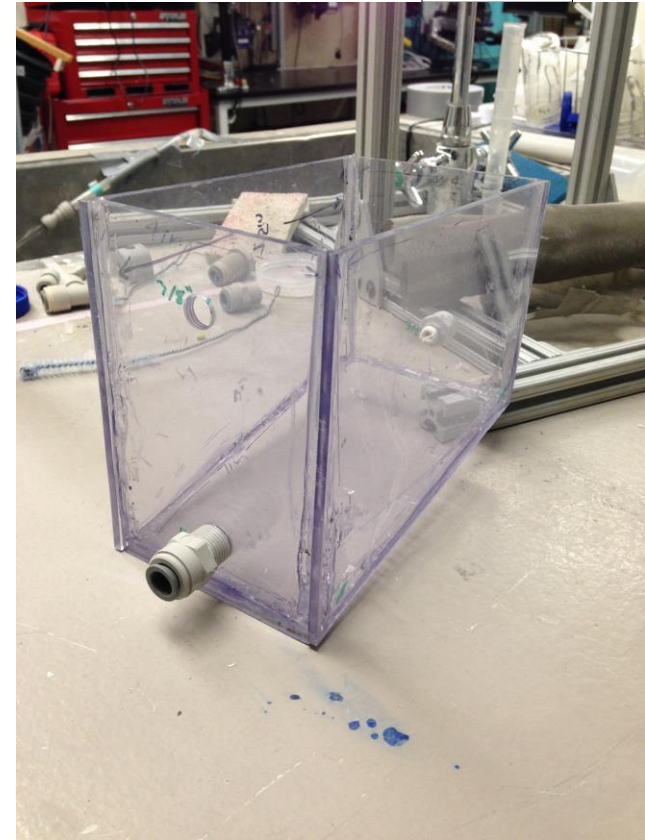
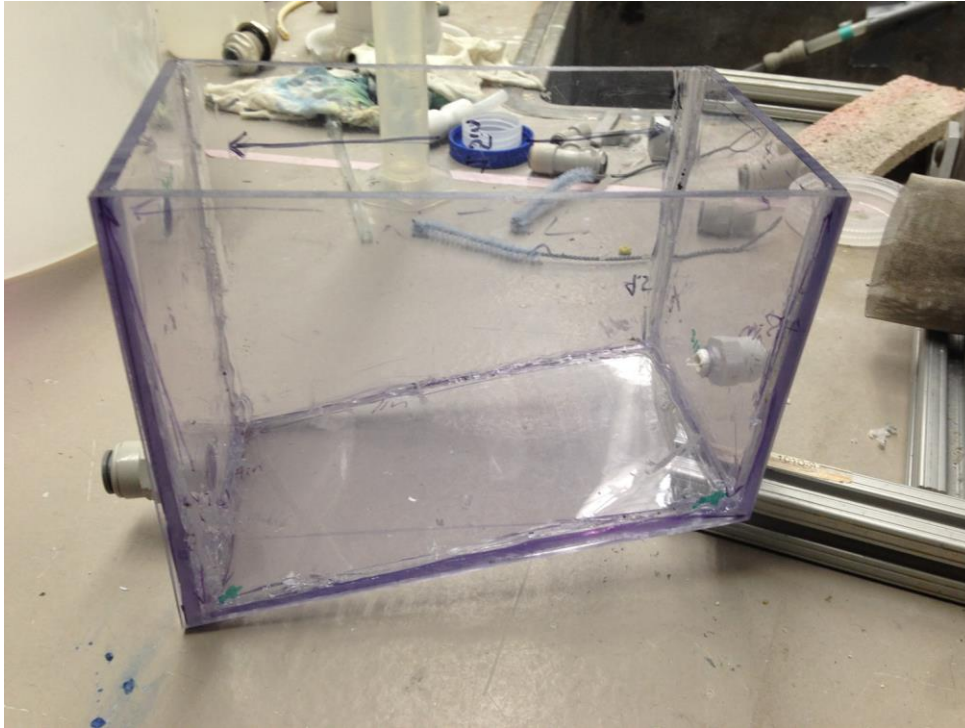
# The CDC system regulates the flow of chemicals into the treatment train



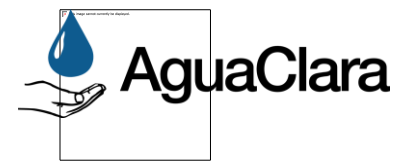
# Existing CHTs are not chlorine resistant



# PVC welded tanks are chlorine resistant



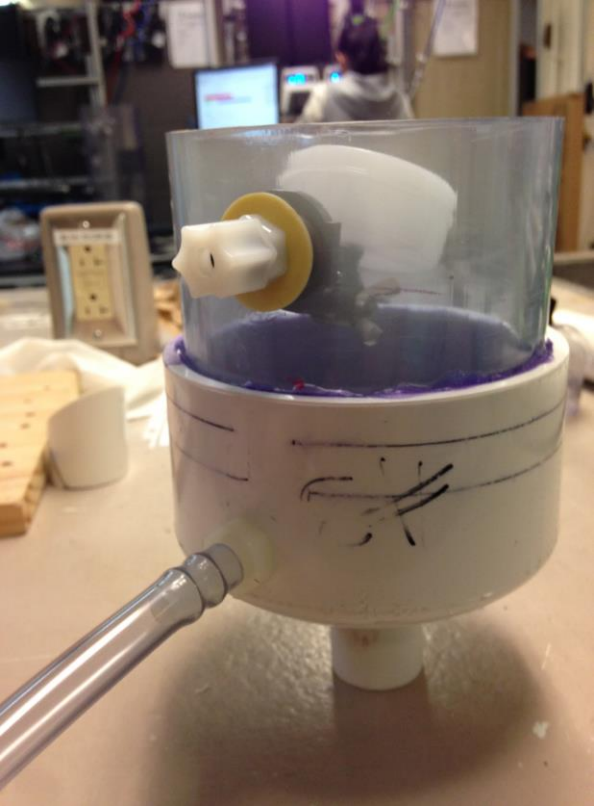
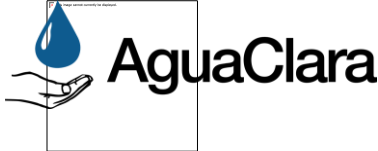
# Problems Identified



Compared to the current CHT design,

- Fabrication is more difficult, more time-consuming, and more costly
- A water-tight seal is difficult to fabricate
- PVC welding is difficult and expensive

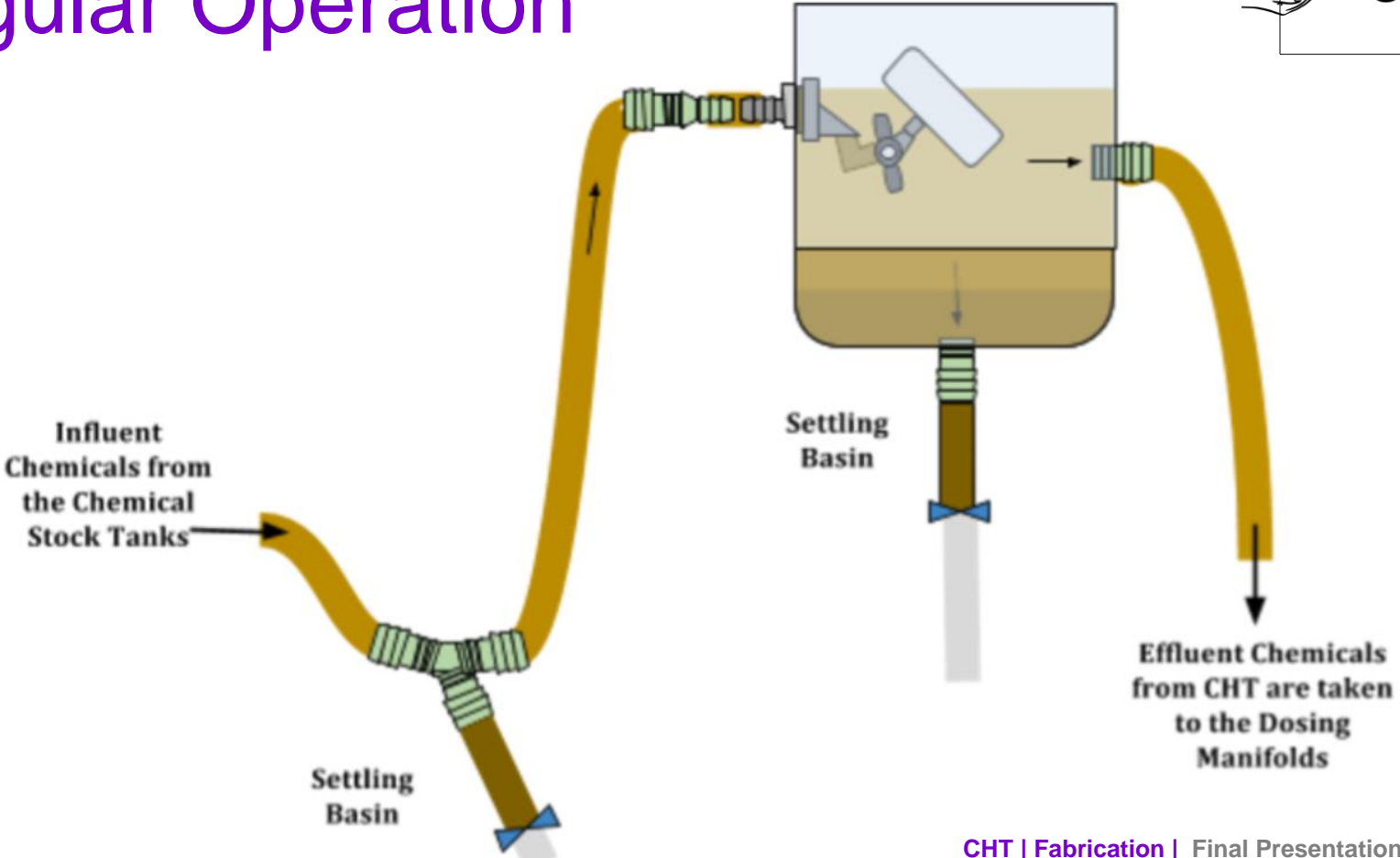
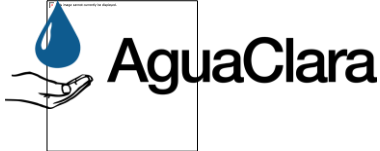
PVC pipes and caps are also chlorine resistant but easier to construct





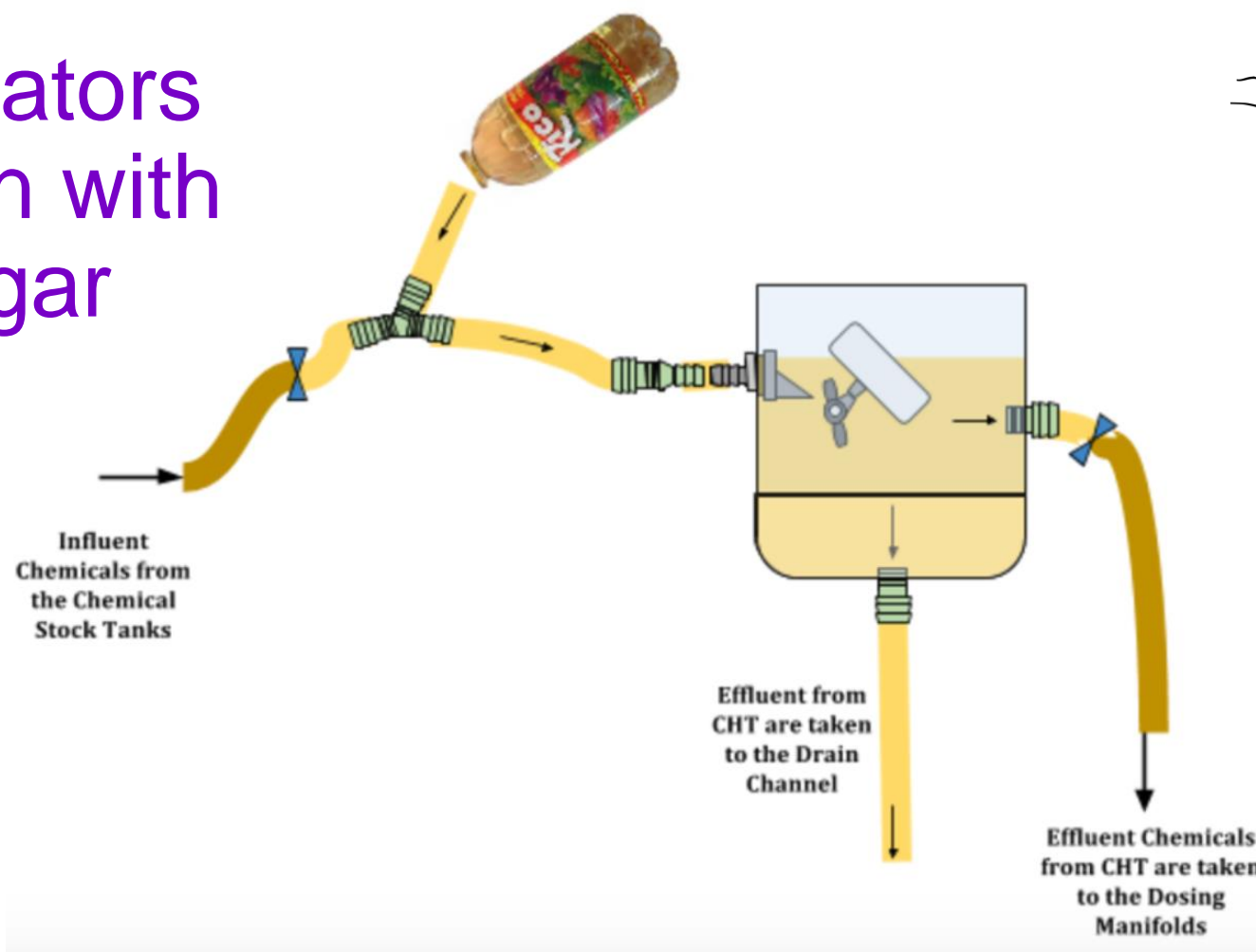


# Regular Operation

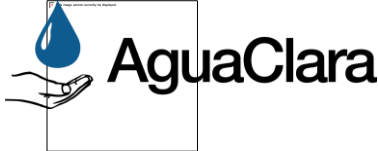




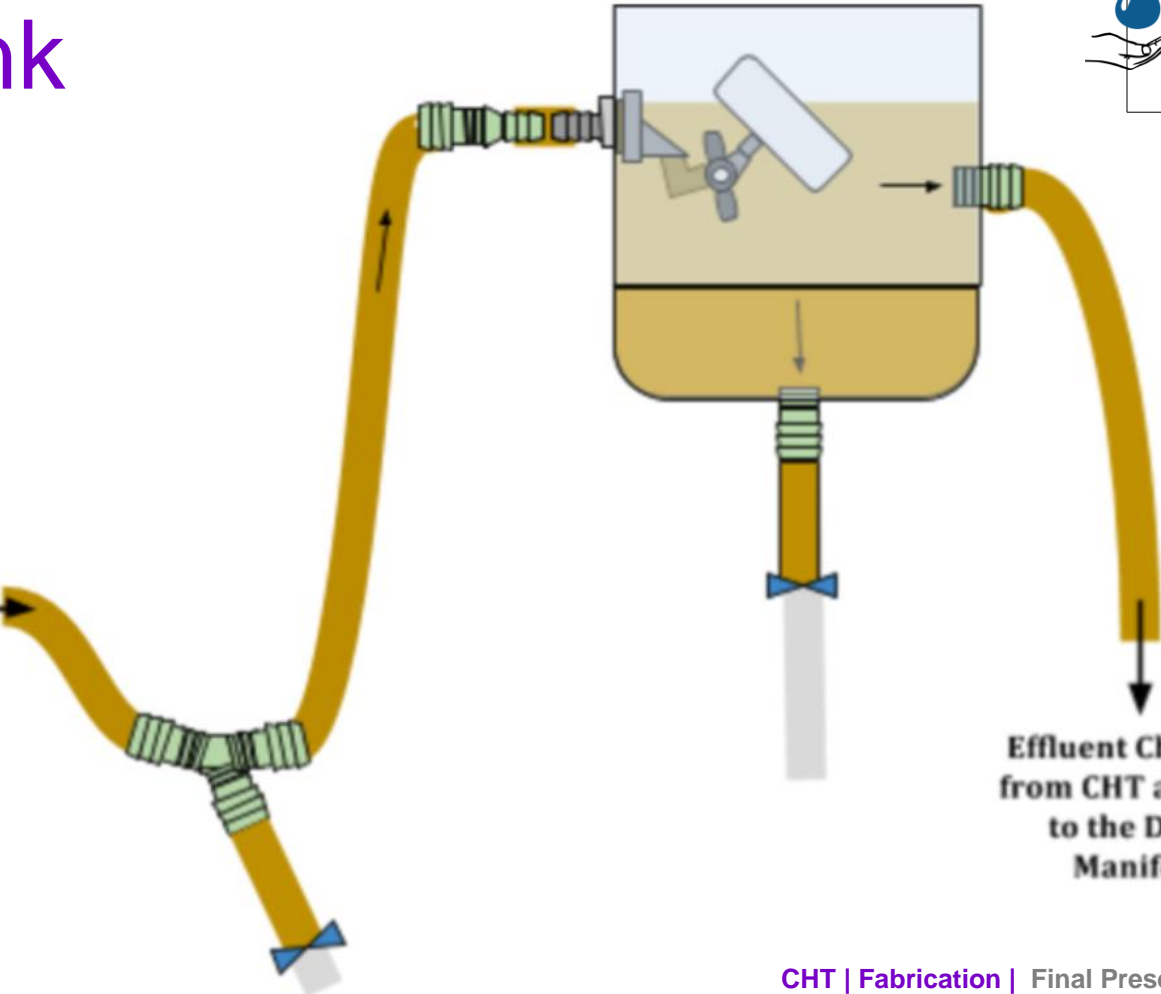
# Operators Clean with Vinegar



# Clean Tank

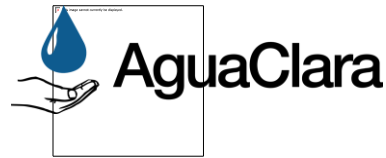


Influent  
Chemicals from  
the Chemical  
Stock Tanks

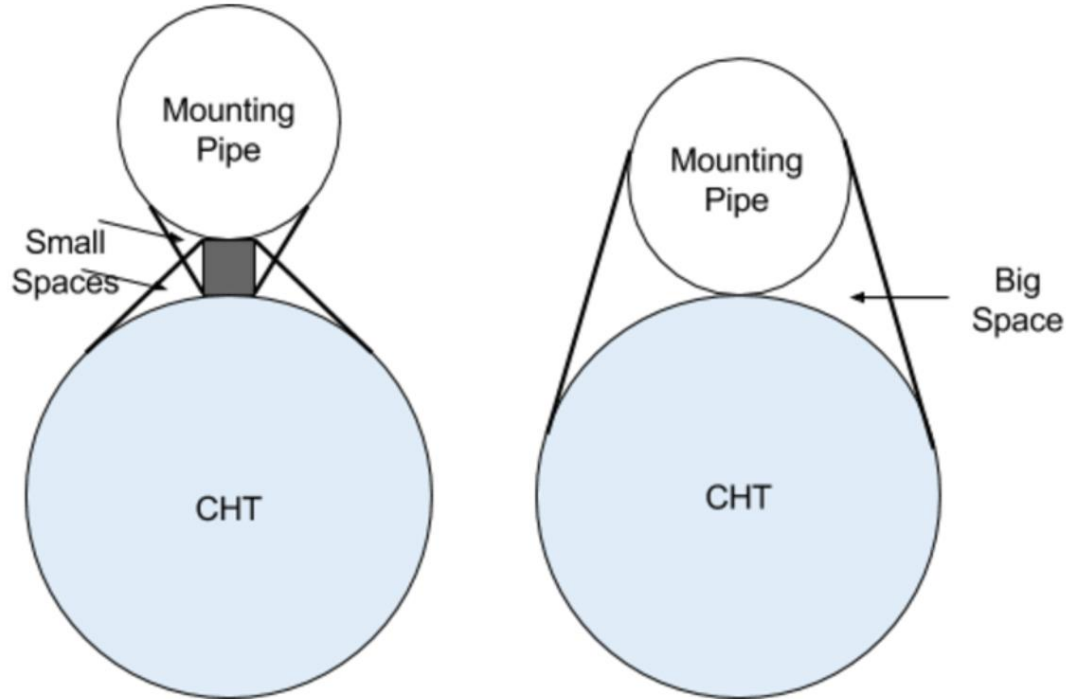


Effluent Chemicals  
from CHT are taken  
to the Dosing  
Manifolds

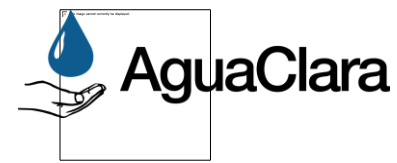
# Modular mounting system can be retrofitted to existing plants



# Achieve Stability by reducing spaces in hose clamps

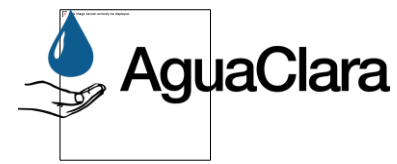


# Advantages/Comparison



- Easy to fabricate
- Easily attainable parts and tools
- Less expensive
  
- NO PVC WELDING

# Future Work



- NEW design challenge: PVC Pipe Tank design
- Implementation in future AguaClara treatment plants

# Questions and Recommendations



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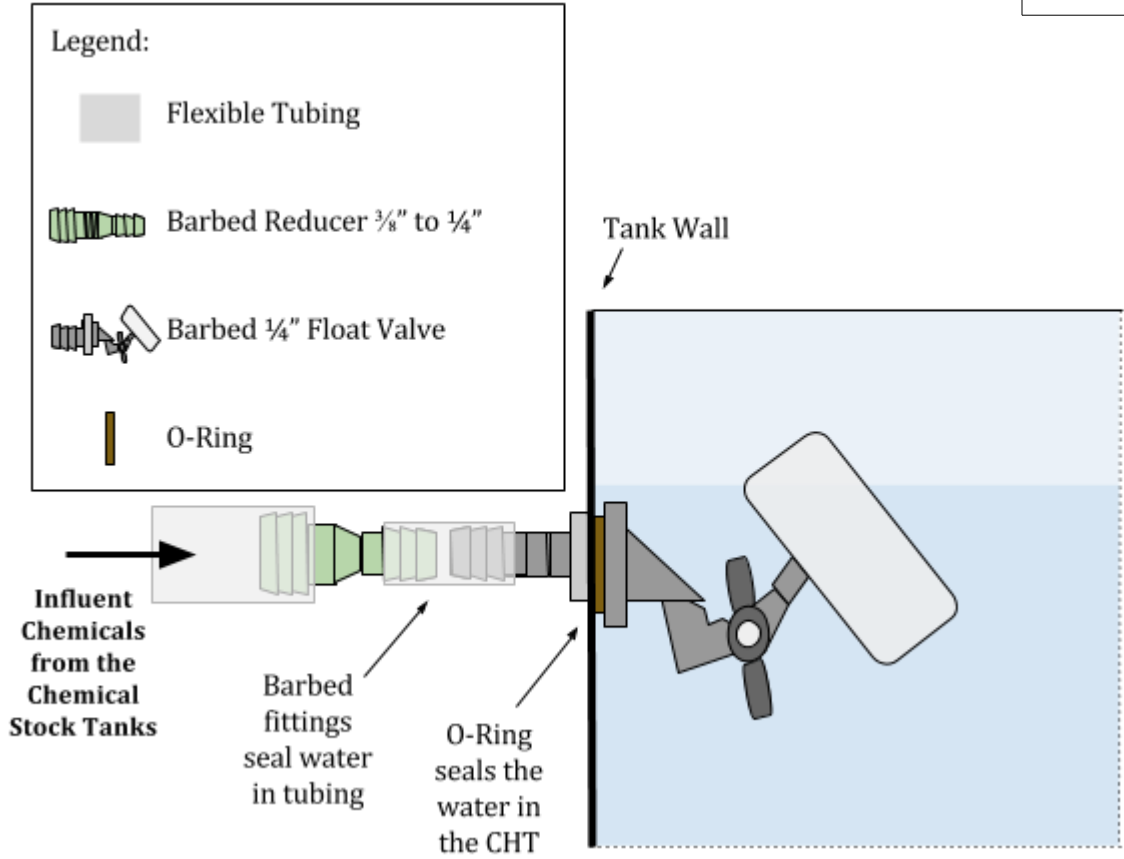
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# Appendix Slides



# Schematic of the Float Valve Connection



# Schematic of Modular Mounting System

