

# CDC Goals SU09

## Goals for Summer 2009

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### Summer 2009 team members

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### Summer 2009 Goals

- Rapid Mix Testing: We are attempting to recreate a surface film similar to that found in AguaClara Plants in Honduras in a lab setting.
  - The group will work together and hopes to accomplish this within a three week period
  - Week 1: Varying Alum Dosage (35 mg/L, 45 mg/L, 55 mg/L, 65 mg/L)
  - Week 2: Varying Turbidity
  - Week 3: Varying Location of Alum Addition (above water surface vs below water surface) and Aeration of water
  - Week 4: Addition of surfactant and design a way to reduce water aeration in current plants
  - Week 5: Continue design and calculations of plant with less water aeration
- Non-Linear Dose Controller: We need to revise the MathCAD code before constructing a fully functional model.
  - The group will work together and hopes to accomplish this after completing our first goal.
  - Week 6: MathCad Revision
  - Week 7: Construction of Level Arm
  - Week 8: Assembly of Non-Linear Dose Controller

### Bibliography

- D. Bouyer, R. E. (2005). Experimental Analysis of Hydrodynamics in a Jar-Test. Institution of Chemical Engineers , 22-30.
- D. Chapple, S. M. (2002). The Effect of Impeller and Tank Geometry on Power Number for a Pitched Blade Turbine. Institute of Chemical Engineers , 364-372.
- Johnson, D. E. (1996). Effect of organic matter on bubble surface tension. Journal of Geophysical Research , 3769-3774.

### [Summer 2009 Research Plan](#)