

Reading Guide

CEEG 340–Introduction to Environmental Engineering

Instructor: Deborah Sills

Reading assigned for Monday 10/7: Textbook pp.392–399

After completing the reading, you should be able to:

1. Describe coagulation and flocculation in one or two sentences.
2. Describe the mechanisms of coagulation and flocculation: compression of the electrical double layer, charge neutralization, adsorption, and precipitation and enmeshment.
3. Name two common coagulants.
4. Describe factors that influence the choice of coagulant.
5. Describe why alkalinity is required when alum is used as a coagulant.
6. Define the term \bar{G} (root mean square velocity gradient).
7. Given, \bar{G} , Q , θ , and temperature, calculate the volume and power requirement for a mechanical rapid-mix tank.