

CE/ESR 479/579

2011

Things to Know for Midterm Exam #2

(Key Concepts for Your Understanding)

This exam will focus on material covered in class from ~~Week 4 (estuaries) through Week 7 (air/water exchange, basic Streeter-Phelps)~~.

last Midterm

- Be able to perform simple calculations of mineral solubility using the solubility product, given information about the composition of the water.
- Be able to do simple carbonate equilibrium problems, such as finding the pH of a water near given some other facts about the composition (similar to homework or practice problems.)
- Know how and when to use the appropriate partitioning coefficient such as vapor pressure, solubility, H , or K_{ow} .
- Be able to set up a simple air-water interface problem if you are given information about Henry's Law coefficients (H) and piston velocities. Know whether transport is air-side or water-side controlled on the basis of the magnitude of H .
- Know how to modify the value of an air-water exchange parameter on the basis of a change in molecular weight (e.g., take a propane parameter and convert it to a suitable approximation for something else like trichlorobenzene).
- Have a good command of vocabulary terms. A guide to what is important: terms that showed up on quizzes, and terms that are *italicized* in the text.

Finally, brush up on stuff from early in the term that kept cropping up during this part of the term but that you may have had some difficulty with earlier.