

CE 410/510
Temperature Modeling of River and Lakes
Department of Civil and Environmental Engineering



Winter 2008

Journal Article Review

Each student will provide a 2 page summary review (typed, 12 pt font, single spaced, margins 1 in.) of a recent (last 10 years) journal article covering water temperature modeling of surface water systems; either a case study or research to improve our understanding of heat budget processes. The review should contain the following: an overview of the research conducted and linkage to in-class lecture notes, a critique of the research and methods, and references.

For example, the following topics can be chosen:

- A case study applying a temperature model to a surface water system. You should be able to discern enough about the model to compare to lecture notes.
- Lab or field studies which enhance our understanding of heat transfer processes, such as:
 - Air-water interface heat exchange
 - Sediment –water interface heat exchange
 - Evaporation
 - Short wave
 - Long wave radiation
 - Hyporheic flow heat transfer
 - Vegetative shading
 - Topographic shading
 - Light extinction
 - Ice Cover
 - Stratification
 - Measurement of heat transfer processes

Each student will provide the instructor with the title and abstract of the proposed journal article for approval of the instructor before conducting the article review.

This assignment is due on **February 26, 2008**.