

## Term Project CE 412/512 Hydrology, Spring 2012

Instructor: Arturo Leon, TA: Rachelle Valverde

Deadline: Same as Final Exam.

Maximum number of students per group: 3 (**No exceptions**)

The HEC-HMS input file posted in Blackboard contains a watershed with 4 sub-basins and 2 reaches (canals). As part of mitigating flooding problems downstream of this watershed, it has been established that the maximum peak flow at the outlet of the watershed should be 200 cfs. As part of the term project, you are asked to design two reservoirs that ensure a maximum peak flow of 200 cfs at the outlet of the watershed. These two reservoirs can be installed anywhere in the watershed.

**Deliverables:** A report of at least 10 pages containing:

- (1) Assumptions you have used in the reservoirs sizing.
- (2) Sketches with dimensions of the reservoirs and hydraulic structures (e.g., orifices, weirs).
- (3) Stage-storage curve for each reservoir and stage-discharge curve for each outlet structure.
- (4) Print-outs of relevant hyetographs and hydrographs.

Try to use the methods studied in class. Further details of this term project will be discussed in class on Tuesday May 15, 2012.