

CEE6400 Physical Hydrology

Homework 7. Routing Surface Runoff to a Basin Outlet

Date: 11/9/16

Due: 11/21/16

Learning Objectives.

- Be able to use stationary linear response methods (unit hydrograph) to calculate catchment response
- Be able to estimate the unit hydrograph from data
- Be able to describe the assumptions, limitations and uses of linear response methods

1. Chow problem 7.2.2
2. Chow problem 7.4.5
3. Chow problem 7.5.3
4. Chow problem 7.6.2
5. Using the data presented in Chow problem 7.4.5 derive the two-hour unit hydrograph using (a) least squares and (b) linear programming. Compare the results to the unit hydrograph derived by deconvolution in problem 7.4.5.
6. Chow problem 7.7.2
7. Chow problem 7.7.3
8. Chow problem 7.8.2