

CWR 3540 – WATER RESOURCES ENGINEERING – Fall 2024

(Guidelines: engineering paper or equivalent; 8-1/2 in x 11 in sheets; content organized in official template; all sheets stapled)

Assigned Study Material: Modules 2 and 3

Homework Set No.4:

Required Problem 4.13 (see statement in textbook p. 125) (25 points maximum)

Required Problem A (see statement below*) (75 points maximum)

****Problem A:*** The parameters for Horton's equation are $f_o = 3.0$ in/h, $f_c = 0.5$ in/h, and $k = 4.0$ h⁻¹. Determine and graph the infiltration rate f_p (f_p versus t ; f_p is also referred to as f in literature) and the cumulative infiltration (F versus t) at 0.25-h increments up to 4 h from the beginning of infiltration. You may assume that the storm results in continuous water ponding on the ground surface. You are also encouraged to refer to the Horton's Equation handout and additional examples that are posted in our course website.

Due on Tuesday, October 15, 2024 (at the start of the lecture)

Recommended Practice Problems: 3.1, 3.2, 3.3, 3.5, 3.6, 4.10, 4.11, 4.13, 4.15 and 4.16

Exam No. 2: Thursday, November 5, 2024