

Unit 20

1. Calculate the runoff volume in gallons for a 200 ft² paved patio with a runoff coefficient of 0.98 and a grass covered patio with a runoff coefficient of 0.39 created by a rainfall of 10 inch. Discuss your results.
2. For a 10 km² watershed the streamflow at the outlet on 8 consecutive days was 5, 5, 10, 15, 20, 10, 5, and 5 m³/s. The accumulated rainfall on these days was 0, 15, 25, 0, 5, 0, 0, and 0 mm.
 - a. Calculate the total evapotranspiration, and the ET/P and Q/P ratios.
 - b. How much would you estimate is the baseflow provided by groundwater?
 - c. Discuss sources and potential magnitudes of error in the estimation of evapotranspiration by the water balance method.
 - d. Name the climatological and geological factors that determine the ET/P and Q/P ratios.
 - e. Explain how they contribute to variability of computed water balance components.
 - f. Discuss whether you can apply the water balance method for the time scale given in this problem.