Work Sheet to Determine Peak Flow Rate from an Agricultural Watershed

Watershed characteristics

1. Watershed size _____ha _____ac

2. Watershed length _____m _____ft

3. Elevation difference over length of watershed _____m _____ft

4. Average grade of watershed
   Elevation difference_____m ÷ Watershed length_____m x 100 = _____m
   Elevation difference_____ft ÷ Watershed length_____ ft x 100 = _____ft
   _____%

5. Hydrologic soil group from Table 2.2 or OMAFRA Publication 29, Drainage Guide for Ontario _____

6. Hydrologic condition from Table 2.3 _____

7. Runoff curve number from Table 2.4 _____

8. Choose the appropriate peak flow chart based on runoff curve number, i.e. Table 2.5-M to 2.11-M (2.5-I to 2.11-I). Read acreage across the top of the figure and average grade along the left side. Enter the peak flow rates for the appropriate return periods into the chart below.

Storm Return Period

2 years	_____ Flow Rate (m^3/s)	_____ Flow Rate (ft^3/s)
5 years	_____ Flow Rate (m^3/s)	_____ Flow Rate (ft^3/s)
10 years	_____ Flow Rate (m^3/s)	_____ Flow Rate (ft^3/s)
25 years	_____ Flow Rate (m^3/s)	_____ Flow Rate (ft^3/s)

Use the appropriate peak flows to design various structures as outlined in Section 4 in Publication 832.