

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			_____ %	
$\frac{\text{Elevation difference}}{\text{Watershed length}} \times 100 =$	$\frac{\text{m}}{\text{m}} \times 100$	$\frac{\text{ft}}{\text{ft}} \times 100$		
5. Hydrologic soil group from Table 2.2 or OMAFRA Publication 29, <i>Drainage Guide for Ontario</i>			_____	
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	Flow Rate (m ³ /s)	Flow Rate (ft ³ /s)
2 years		
5 years		
10 years		
25 years		

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