

Project Name: Arundel Hutchins Bridge
 Stream Name: Goffs Mill Brook
 Bridge Name: Hutchins Bridge
 Route No. Log CabinRd
 Analysis by: CSH

PIN: 17867
 Town: Arundel
 Bridge No.
 USGS Quad:
 Date: 12/29/2010

Peak Flow Calculations by USGS Regression Equations (Hodgkins, 1999)

Enter data in blue cells only!

	km ²	mi ²	ac
A	12.31	4.75	3040.6
W	2.76	1.07	683.0
P _c	378950	4810000	
County	York		
pptA	46.7		
SG	0.00		
A (km ²)	12.31		
W (%)	22.46		

Enter data in [mi²]

Watershed Area
 Wetlands area (by NWI)

watershed centroid (E, N; UTM 19N; meters)
 choose county from drop-down menu
 mean annual precipitation (inches; by look-up)
 sand & gravel aquifer as decimal fraction of watershed A

Worksheet prepared by:

Charles S. Hebson, PE
 Environmental Office
 Maine Dept. Transportation
 Augusta, ME 04333-0016
 207-557-1052
Charles.Hebson@maine.gov

Conf Lvl 0.67

Ret Pd T (yr)	Peak Flow Estimate		
	Lower	Q _T (m ³ /s)	Upper
1.1		1.18	
2	1.61	2.28	3.23
5	2.43	3.45	4.89
10	2.98	4.28	6.16
25	3.70	5.41	7.90
50	4.24	6.28	9.29
100	4.81	7.22	10.83
500	6.10	9.47	14.71

Q _T (ft ³ /s)
41.6
80.6
121.7
151.3
191.0
221.6
255.0
334.4

Reference:

Hodgkins, G., 1999.
 Estimating the magnitude of peak flows for streams
 in Maine for selected recurrence intervals
Water-Resources Investigations Report 99-4008
 US Geological Survey, Augusta, Maine

$$Q_T = b \times A^a \times 10^{-ww}$$