

Project Name: Underwitted Br
 Stream Name: Piscataqua River
 Bridge Name: Underwitted
 Route No. Leighton Rd
 Analysis by: CSH

PIN: 17092
 Town: Falmouth
 Bridge No. 0214
 USGS Quad:
 Date: 12/5/2010

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

Enter data in blue cells only!

	km ²	mi ²	ac
A	54.39	21.00	13440.0
W	4.53	1.75	1120.0
P _c	394750	4848500	
County	Cumberland SE		
pptA	44.4		
SG	0.00		
A (km ²)	54.39		
W (%)	8.33		

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:

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Conf Lvl 0.67

Note: WS are from FEMA FIS 4/16/84; NWI set to match Q100 from FIS - CSH

Ret Pd T (yr)	Peak Flow Estimate		
	Lower	Q _T (m ³ /s)	Upper
1.1		9.43	
2	13.70	19.12	26.69
5	21.23	29.76	41.70
10	26.62	37.67	53.31
25	33.66	48.30	69.31
50	39.03	56.66	82.26
100	44.64	65.59	96.38
500	57.88	87.79	133.15

Q _T (ft ³ /s)
332.9
675.1
1050.8
1330.1
1705.4
2000.7
2316.0
3099.8

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

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