

Project Name: Topsham
 Stream Name: Muddy River
 Bridge Name: Muddy River Bridge
 Route No. Forside Road
 Analysis by: AWMann

PIN: 16756.00
 Town: Topsham
 Bridge No. 3825
 USGS Quad:
 Date: 7/27/2009

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

Enter data in blue cells only!

	km ²	mi ²	ac
A	8.54	3.296	2109.3
W	2.86	1.102	705.5
P _c	426711	4866545	
County	Sagadahoc		
pptA	45.3		
SG	0.00		
A (km ²)	8.54		
W (%)	33.45		

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

Ret Pd	Peak Flow Estimate		
T (yr)	Lower	Q _T (m ³ /s)	Upper
1.1		0.47	
2	0.59	0.85	1.24
5	0.85	1.23	1.80
10	1.01	1.49	2.21
25	1.22	1.84	2.77
50	1.37	2.10	3.21
100	1.54	2.39	3.71
500	1.88	3.04	4.91

Q _T (ft ³ /s)
16.7
30.2
43.5
52.8
65.0
74.2
84.3
107.4

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

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