Project Name:	Ludden Brook	**PIN:**	15639
Stream Name:	Ludden Brook	**Town:**	Canton
Bridge Name:		**Bridge No.**	
Route No.	Dixfield Rd	**USGS Quad:**	
Analysis by:	CSH	**Date:**	2/28/2008

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

Enter data in blue cells only!

	km^2	mi^2	ac	*Enter data in [mi^2]*
A	13.19	5.092	3259.1	Watershed Area
W	0.13	0.051	32.6	Wetlands area (by NWI)

P_c		watershed centroid (E, N; UTM 19N; meters)
DIST		distance from Gulf of Maine line
pptA		mean annual precipitation (inches)
SG		sand & gravel aquifer as percentage of watershed area

A (km^2)	13.189	**Conf Lvl**	0.67
W (%)	1.00		

Worksheet prepared by:

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Ret Pd T (yr)	Peak Flow Estimate Lower	Q_T (m^3/s)	Upper	Q_T (ft^3/s)
1.1		3.94		139.2
2	6.37	9.01	12.75	318.1
5	10.64	15.14	21.56	534.7
10	13.87	19.95	28.70	704.6
25	18.28	26.71	39.03	943.0
50	21.75	32.21	47.69	1137.3
100	25.42	38.15	57.25	1347.1
500	34.46	53.55	83.22	1891.0

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

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

Equation Coefficients

b	a	w
1.075	0.848	-0.0266
1.952	0.820	-0.0288
2.674	0.806	-0.0300
3.740	0.790	-0.0312
4.637	0.780	-0.0320
5.629	0.771	-0.0326
8.283	0.754	-0.0340