

Hydrology

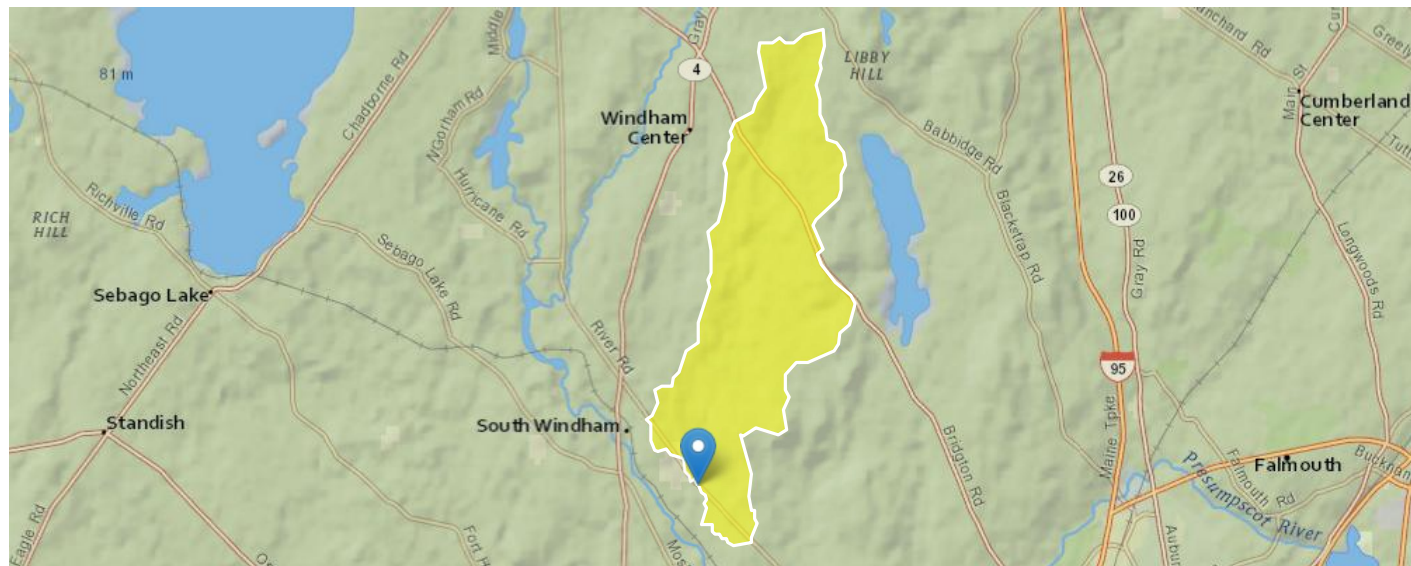
River Road over Colley Wright Brook - Rev. 2019 StreamStats Report

Region ID: ME

Workspace ID: ME20190102142826706000

Clicked Point (Latitude, Longitude): 43.72655, -70.40627

Time: 2019-01-02 09:28:42 -0500



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	7.4	square miles
STORNWI	Percentage of storage (combined water bodies and wetlands) from the National Wetlands Inventory	7.56	percent
SANDGRAVAP	Percentage of land surface underlain by sand and gravel aquifers	0	percent
COASTDIST	Shortest distance from the coastline to the basin centroid	44	miles
BSLDEM10M	Mean basin slope computed from 10 m DEM	5.77	percent
LC06WATER	Percent of open water, class 11, from NLCD 2006	0	percent
SANDGRAVAF	Fraction of land surface underlain by sand and gravel aquifers	0	dimensionless
ELEV	Mean Basin Elevation	207.7	feet
STATSGOA	Percentage of area of Hydrologic Soil Type A from STATSGO	2	percent
ELEVMAX	Maximum basin elevation	403.4	feet

Bankfull Statistics Parameters [Central and Coastal Bankfull 2004 5042]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	7.4	square miles	2.92	298

Bankfull Statistics Flow Report [Central and Coastal Bankfull 2004 5042]

Statistic	Value	Unit
Bankfull Streamflow	42.4	ft ³ /s
Bankfull Width	21.7	ft

Statistic	Value	Unit
Bankfull Depth	1.17	ft
Bankfull Area	25.4	ft^2

Bankfull Statistics Citations

Dudley, R.W., 2004, Hydraulic-Geometry Relations for Rivers in Coastal and Central Maine: U.S. Geological Survey Scientific Investigations Report 2004-5042, 30 p (<http://pubs.usgs.gov/sir/2004/5042/pdf/sir2004-5042.pdf>)

Peak-Flow Statistics Parameters [Statewide Peak Flow DA LT 12sqmi 2015 5049]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	7.4	square miles	0.31	12
STORNWI	Percentage of Storage from NWI	7.56	percent	0	22.2

Peak-Flow Statistics Flow Report [Statewide Peak Flow DA LT 12sqmi 2015 5049]

PII: Prediction Interval-Lower, PIu: Prediction Interval-Upper, SEp: Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	SEp
1.01 Year Peak Flood	70.4	ft^3/s	38
2 Year Peak Flood	246	ft^3/s	34
5 Year Peak Flood	392	ft^3/s	35
10 Year Peak Flood	496	ft^3/s	37
25 Year Peak Flood	652	ft^3/s	39
50 Year Peak Flood	764	ft^3/s	41
100 Year Peak Flood	896	ft^3/s	42
250 Year Peak Flood	1020	ft^3/s	44
500 Year Peak Flood	1210	ft^3/s	47

Peak-Flow Statistics Citations

Lombard, P.J., and Hodgkins, G.A., 2015, Peak flow regression equations for small, ungaged streams in Maine— Comparing map-based to field-based variables: U.S. Geological Survey Scientific Investigations Report 2015-5049, 12 p. (<http://dx.doi.org/10.3133/sir20155049>)

June Flow-Duration Statistics Parameters [Southern Median Monthly SJR 2010 5179]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	7.4	square miles	0.04	74.1
SANDGRAVAP	Percentage of Sand and Gravel Aquifers	0	percent	0	84.1
COASTDIST	Distance From Coast To Basin Centroid	44	miles	14.3	94

June Flow-Duration Statistics Parameters [Statewide June SJR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	7.4	square miles	14.9	1419
BSLDEM10M	Mean Basin Slope from 10m DEM	5.77	percent	1.5	26.6
LC06WATER	Percent_Water_from_NLCD2006	0	percent	0	6.2

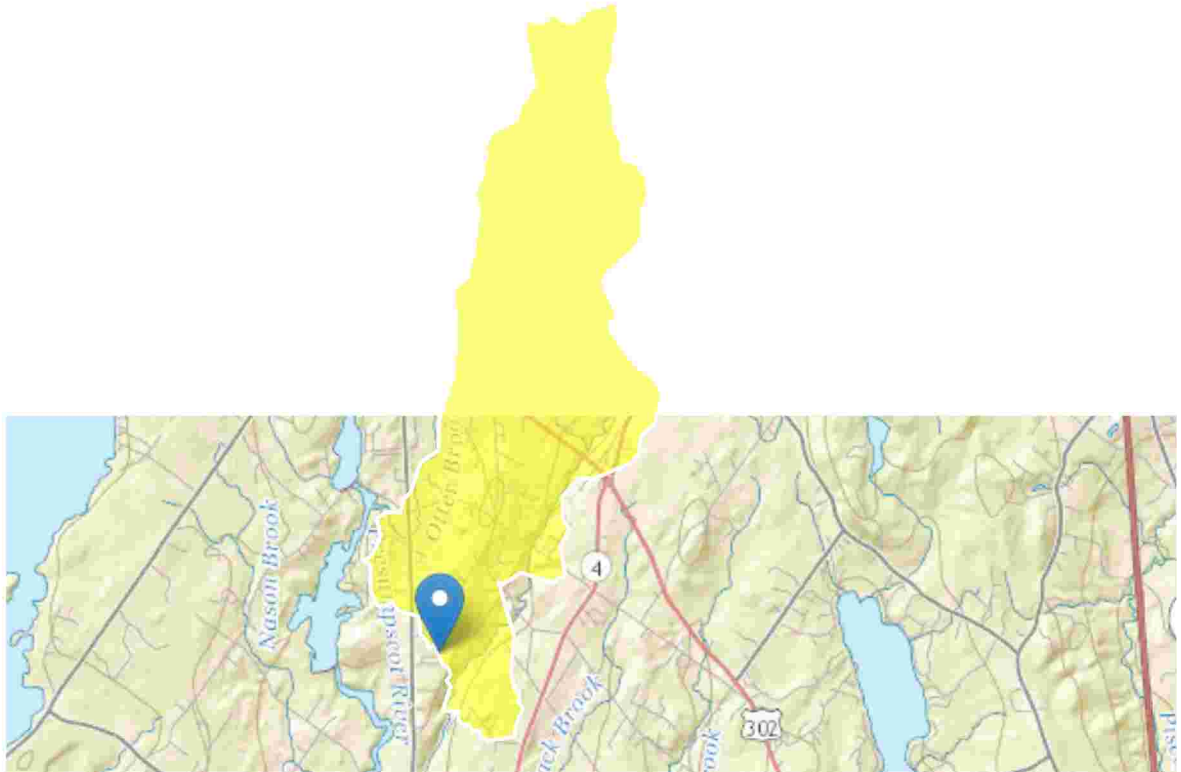
June Flow-Duration Statistics Flow Report [Southern Median Monthly SJR 2010 5179]

PII: Prediction Interval-Lower, PIu: Prediction Interval-Upper, SEp: Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	SEp
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River Road - StreamStats Report

Region ID: ME
Workspace ID: ME20160815072707377000
Clicked Point (Latitu... 43.72652,-70.40630
Time: 2016-08-15 09:27:35 -0400



USGS StreamStats Report

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	7.4	square miles
STORNWI	Percentage of storage (combined water bodies and wetlands) from the National Wetlands Inventory	7.56	percent
SANDGRAVAP	Percentage of land surface underlain by sand and gravel aquifers	0	percent

Parameter Code	Parameter Description	Value	Unit
COASTDIST	Shortest distance from the coastline to the basin centroid	44.2	miles
SANDGRAVAF	Fraction of land surface underlain by sand and gravel aquifers	0	dimensionless
PRDEC FEB90	Basin average mean precipitation for December to February from PRISM 1961-1990	11.5	inches
PRECIP	Mean Annual Precipitation	45.9	inches
ELEV	Mean Basin Elevation	207.7	feet
CENTROIDX	Basin centroid horizontal (x) location in state plane coordinates	387999.9	State plane coordinates
CENTROIDY	Basin centroid vertical (y) location in state plane units	4846306.16	State plane coordinates
LC11IMP	Average percentage of impervious area determined from NLCD 2011 impervious dataset	2.37	percent
LC11DEV	Percentage of land-use from NLCD 2011 classes 21-24	11.2	percent

Peak-Flow Statistics Parameters [100.00 Percent Statewide Peak Flow Full WRI 99 4008]

Parameter	Value	Min Limit	Max Limit
Drainage Area	7.4	0.93	1653
Percentage of Storage from NWI	7.56	0.7	26.7

Peak-Flow Statistics Flow Report [100.00 Percent Statewide Peak Flow Full WRI 99 4008]

Statistic	Value	Unit	Prediction Error
2 Year Peak Flood	292	ft ³ /s	35.1
5 Year Peak Flood	470	ft ³ /s	36.1
10 Year Peak Flood	605	ft ³ /s	36.8
25 Year Peak Flood	791	ft ³ /s	38.6
50 Year Peak Flood	939	ft ³ /s	39.9
100 Year Peak Flood	1100	ft ³ /s	41.2

Statistic	Value	Unit	Prediction Error
500 Year Peak Flood	1500	ft ³ /s	44.9

Peak-Flow Statistics Citations

Hodgkins, G. A., 1999, Estimating the Magnitude of Peak Flows for Streams in Maine for Selected Recurrence Intervals: U.S. Geological Survey Water-Resources Investigations Report 99-4008, 45 p. (<http://me.water.usgs.gov/99-4008.pdf>)

Bankfull Statistics Parameters [100.00 Percent Central and Coastal Bankfull 2004 5042]

Parameter	Value	Min Limit	Max Limit
Drainage Area	7.4	2.92	298

Bankfull Statistics Flow Report [100.00 Percent Central and Coastal Bankfull 2004 5042]

Statistic	Value	Unit	Prediction Error
Bankfull Streamflow	42.448	ft ³ /s	54.1
Bankfull Width	21.717	ft	33
Bankfull Depth	1.173	ft	26.2
Bankfull Area	25.442	ft ²	57.4

Bankfull Statistics Citations

Dudley, R.W., 2004, Hydraulic-Geometry Relations for Rivers in Coastal and Central Maine: U.S. Geological Survey Scientific Investigations Report 2004-5042, 30 p (<http://pubs.usgs.gov/sir/2004/5042/pdf/sir2004-5042.pdf>)

June Flow-Duration Statistics Parameters [100.00 Percent Southern Median Monthly SIR 2010 5179]

Parameter	Value	Min Limit	Max Limit
Drainage Area	7.4	0.04	74.1
Distance From Coast To Basin Centroid	44.2	14.3	94
Percentage of Sand and Gravel Aquifers	0	0	84.1

June Flow-Duration Statistics Disclaimers [100.00 Percent Southern Median Monthly SIR 2010 5179]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

June Flow-Duration Statistics Parameters [100.00 Percent Statewide Median Monthly SIR 2004 5026]

Parameter	Value	Min Limit	Max Limit
Drainage Area	7.4	9.79	1418

June Flow-Duration Statistics Disclaimers [100.00 Percent Statewide Median Monthly SIR 2004 5026]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

June Flow-Duration Statistics Flow Report [100.00 Percent Southern Median Monthly SIR 2010 5179]

Statistic	Value	Unit	Prediction Error
June 50 Percent Duration	4.072	ft^3/s	45.3

June Flow-Duration Statistics Flow Report [100.00 Percent Statewide Median Monthly SIR 2004 5026]

Statistic	Value	Unit	Prediction Error
June 50 Percent Duration	6.324	ft^3/s	--

June Flow-Duration Statistics Citations

Dudley, R.W., 2004, Estimating Monthly, Annual, and Low 7-Day, 10-Year Streamflows for Ungaged Rivers in Maine: U.S. Geological Survey Scientific Investigations Report 2004-5026, 22 p. (<http://water.usgs.gov/pubs/sir/2004/5026/pdf/sir2004-5026.pdf>)

August Flow-Duration Statistics Parameters [100.00 Percent Southern Median Monthly SIR 2010 5179]

Parameter	Value	Min Limit	Max Limit
Drainage Area	7.4	0.04	74.1
Distance From Coast To Basin Centroid	44.2	14.3	94
Percentage of Sand and Gravel Aquifers	0	0	84.1

August Flow-Duration Statistics Disclaimers [100.00 Percent Southern Median Monthly SIR 2010 5179]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

August Flow-Duration Statistics Parameters [100.00 Percent Statewide Median Monthly SIR 2004 5026]

Parameter	Value	Min Limit	Max Limit
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Parameter	Value	Min Limit	Max Limit
Drainage Area	7.4	9.79	1418
Fraction of Sand and Gravel Aquifers	0	0	0.455

August Flow-Duration Statistics Disclaimers [100.00 Percent Statewide Median Monthly SIR 2004 5026]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

August Flow-Duration Statistics Flow Report [100.00 Percent Southern Median Monthly SIR 2010 5179]

Statistic	Value	Unit	Prediction Error
August 50 Percent Duration	0.92	ft ³ /s	66.4

August Flow-Duration Statistics Flow Report [100.00 Percent Statewide Median Monthly SIR 2004 5026]

Statistic	Value	Unit	Prediction Error
August 50 Percent Duration	1.43	ft ³ /s	--

August Flow-Duration Statistics Citations

Dudley, R.W., 2004, Estimating Monthly, Annual, and Low 7-Day, 10-Year Streamflows for Ungaged Rivers in Maine: U.S. Geological Survey Scientific Investigations Report 2004-5026, 22 p. (<http://water.usgs.gov/pubs/sir/2004/5026/pdf/sir2004-5026.pdf>)

Annual Flow Statistics Parameters [100.00 Percent Statewide Annual SIR 2004 5026]

Parameter	Value	Min Limit	Max Limit
Drainage Area	7.4	9.79	1418
Basin Ave Precip Dec Feb PRISM 1990	11.5	7.71	12.6

Annual Flow Statistics Disclaimers [100.00 Percent Statewide Annual SIR 2004 5026]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

Annual Flow Statistics Flow Report [100.00 Percent Statewide Annual SIR 2004 5026]

Statistic	Value	Unit	Prediction Error
Mean Annual Flow	15.381	ft ³ /s	--

Statistic	Value	Unit	Prediction Error
Median Annual Flow	8.097	ft ³ /s	--

Annual Flow Statistics Citations

Dudley, R.W., 2004, Estimating Monthly, Annual, and Low 7-Day, 10-Year Streamflows for Ungaged Rivers in Maine: U.S. Geological Survey Scientific Investigations Report 2004-5026, 22 p. (<http://water.usgs.gov/pubs/sir/2004/5026/pdf/sir2004-5026.pdf>)

Low-Flow Statistics Parameters [100.00 Percent Statewide Annual SIR 2004 5026]

Parameter	Value	Min Limit	Max Limit
Drainage Area	7.4	9.79	1418
Fraction of Sand and Gravel Aquifers	0	0	0.455

Low-Flow Statistics Disclaimers [100.00 Percent Statewide Annual SIR 2004 5026]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

Low-Flow Statistics Flow Report [100.00 Percent Statewide Annual SIR 2004 5026]

Statistic	Value	Unit	Prediction Error
7 Day 10 Year Low Flow	0.241	ft ³ /s	--

Low-Flow Statistics Citations

Dudley, R.W., 2004, Estimating Monthly, Annual, and Low 7-Day, 10-Year Streamflows for Ungaged Rivers in Maine: U.S. Geological Survey Scientific Investigations Report 2004-5026, 22 p. (<http://water.usgs.gov/pubs/sir/2004/5026/pdf/sir2004-5026.pdf>)

Monthly Flow Statistics Parameters [100.00 Percent Statewide Mean Monthly SIR 2004 5026]

Parameter	Value	Min Limit	Max Limit
Drainage Area	7.4	9.79	1418
Mean Annual Precipitation	45.9	37.8	47.9
Distance From Coast To Basin Centroid	44.2	42.7	193
Fraction of Sand and Gravel Aquifers	0	0	0.455

Monthly Flow Statistics Disclaimers [100.00 Percent Statewide Mean Monthly SIR 2004 5026]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

Monthly Flow Statistics Flow Report [100.00 Percent Statewide Mean Monthly SIR 2004 5026]

Statistic	Value	Unit	Prediction Error
January Mean Flow	14.7	ft^3/s	--
February Mean Flow	14.706	ft^3/s	--
March Mean Flow	32.594	ft^3/s	--
April Mean Flow	40.302	ft^3/s	--
May Mean Flow	17.515	ft^3/s	--
June Mean Flow	10.781	ft^3/s	--
July Mean Flow	4.2	ft^3/s	--
August Mean Flow	3.035	ft^3/s	--
September Mean Flow	3.543	ft^3/s	--
October Mean Flow	7.847	ft^3/s	--
November Mean Flow	16.651	ft^3/s	--
December Mean Flow	19.777	ft^3/s	--

Monthly Flow Statistics Citations

Dudley, R.W., 2004, Estimating Monthly, Annual, and Low 7-Day, 10-Year Streamflows for Ungaged Rivers in Maine: U.S. Geological Survey Scientific Investigations Report 2004-5026, 22 p. (<http://water.usgs.gov/pubs/sir/2004/5026/pdf/sir2004-5026.pdf>)

April Flow-Duration Statistics Parameters [100.00 Percent Statewide Median Monthly SIR 2004 5026]

Parameter	Value	Min Limit	Max Limit
Drainage Area	7.4	9.79	1418
Mean Annual Precipitation	45.9	37.8	47.9

April Flow-Duration Statistics Disclaimers [100.00 Percent Statewide Median Monthly SIR 2004 5026]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

April Flow-Duration Statistics Flow Report [100.00 Percent Statewide Median Monthly SIR 2004 5026]

Statistic	Value	Unit	Prediction Error
April 50 Percent Duration	33.048	ft ³ /s	--

April Flow-Duration Statistics Citations

Dudley, R.W., 2004, Estimating Monthly, Annual, and Low 7-Day, 10-Year Streamflows for Ungaged Rivers in Maine: U.S. Geological Survey Scientific Investigations Report 2004-5026, 22 p. (<http://water.usgs.gov/pubs/sir/2004/5026/pdf/sir2004-5026.pdf>)

December Flow-Duration Statistics Parameters [100.00 Percent Statewide Median Monthly SIR 2004 5026]

Parameter	Value	Min Limit	Max Limit
Drainage Area	7.4	9.79	1418
Distance From Coast To Basin Centroid	44.2	42.7	193

December Flow-Duration Statistics Disclaimers [100.00 Percent Statewide Median Monthly SIR 2004 5026]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

December Flow-Duration Statistics Flow Report [100.00 Percent Statewide Median Monthly SIR 2004 5026]

Statistic	Value	Unit	Prediction Error
December 50 Percent Duration	12.715	ft ³ /s	--

December Flow-Duration Statistics Citations

Dudley, R.W., 2004, Estimating Monthly, Annual, and Low 7-Day, 10-Year Streamflows for Ungaged Rivers in Maine: U.S. Geological Survey Scientific Investigations Report 2004-5026, 22 p. (<http://water.usgs.gov/pubs/sir/2004/5026/pdf/sir2004-5026.pdf>)

February Flow-Duration Statistics Parameters [100.00 Percent Statewide Median Monthly SIR 2004 5026]

Parameter	Value	Min Limit	Max Limit
Drainage Area	7.4	9.79	1418
Distance From Coast To Basin Centroid	44.2	42.7	193

February Flow-Duration Statistics Disclaimers [100.00 Percent Statewide Median Monthly SIR 2004 5026]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

February Flow-Duration Statistics Flow Report [100.00 Percent Statewide Median Monthly SIR 2004 5026]

Statistic	Value	Unit	Prediction Error
February 50 Percent Duration	9.602	ft ³ /s	--

February Flow-Duration Statistics Citations

Dudley, R.W., 2004, Estimating Monthly, Annual, and Low 7-Day, 10-Year Streamflows for Ungaged Rivers in Maine: U.S. Geological Survey Scientific Investigations Report 2004-5026, 22 p. (<http://water.usgs.gov/pubs/sir/2004/5026/pdf/sir2004-5026.pdf>)

January Flow-Duration Statistics Parameters [100.00 Percent Statewide Median Monthly SIR 2004 5026]

Parameter	Value	Min Limit	Max Limit
Drainage Area	7.4	9.79	1418
Distance From Coast To Basin Centroid	44.2	42.7	193

January Flow-Duration Statistics Disclaimers [100.00 Percent Statewide Median Monthly SIR 2004 5026]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

January Flow-Duration Statistics Flow Report [100.00 Percent Statewide Median Monthly SIR 2004 5026]

Statistic	Value	Unit	Prediction Error
January 50 Percent Duration	9.181	ft ³ /s	--

January Flow-Duration Statistics Citations

Dudley, R.W., 2004, Estimating Monthly, Annual, and Low 7-Day, 10-Year Streamflows for Ungaged Rivers in Maine: U.S. Geological Survey Scientific Investigations Report 2004-5026,

22 p. (<http://water.usgs.gov/pubs/sir/2004/5026/pdf/sir2004-5026.pdf>)

July Flow-Duration Statistics Parameters [100.00 Percent Statewide Median Monthly SIR 2004 5026]

Parameter	Value	Min Limit	Max Limit
Drainage Area	7.4	9.79	1418
Fraction of Sand and Gravel Aquifers	0	0	0.455

July Flow-Duration Statistics Disclaimers [100.00 Percent Statewide Median Monthly SIR 2004 5026]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

July Flow-Duration Statistics Flow Report [100.00 Percent Statewide Median Monthly SIR 2004 5026]

Statistic	Value	Unit	Prediction Error
July 50 Percent Duration	2.094	ft ³ /s	--

July Flow-Duration Statistics Citations

Dudley, R.W., 2004, Estimating Monthly, Annual, and Low 7-Day, 10-Year Streamflows for Ungaged Rivers in Maine: U.S. Geological Survey Scientific Investigations Report 2004-5026, 22 p. (<http://water.usgs.gov/pubs/sir/2004/5026/pdf/sir2004-5026.pdf>)

March Flow-Duration Statistics Parameters [100.00 Percent Statewide Median Monthly SIR 2004 5026]

Parameter	Value	Min Limit	Max Limit
Drainage Area	7.4	9.79	1418
Distance From Coast To Basin Centroid	44.2	42.7	193

March Flow-Duration Statistics Disclaimers [100.00 Percent Statewide Median Monthly SIR 2004 5026]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

March Flow-Duration Statistics Flow Report [100.00 Percent Statewide Median Monthly SIR 2004 5026]

Statistic	Value	Unit	Prediction Error
March 50 Percent Duration	17.923	ft ³ /s	--

March Flow-Duration Statistics Citations

Dudley, R.W., 2004, Estimating Monthly, Annual, and Low 7-Day, 10-Year Streamflows for Ungaged Rivers in Maine: U.S. Geological Survey Scientific Investigations Report 2004-5026, 22 p. (<http://water.usgs.gov/pubs/sir/2004/5026/pdf/sir2004-5026.pdf>)

May Flow-Duration Statistics Parameters [100.00 Percent Statewide Median Monthly SIR 2004 5026]

Parameter	Value	Min Limit	Max Limit
Drainage Area	7.4	9.79	1418
Distance From Coast To Basin Centroid	44.2	42.7	193

May Flow-Duration Statistics Disclaimers [100.00 Percent Statewide Median Monthly SIR 2004 5026]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

May Flow-Duration Statistics Flow Report [100.00 Percent Statewide Median Monthly SIR 2004 5026]

Statistic	Value	Unit	Prediction Error
May 50 Percent Duration	12.791	ft ³ /s	--

May Flow-Duration Statistics Citations

Dudley, R.W., 2004, Estimating Monthly, Annual, and Low 7-Day, 10-Year Streamflows for Ungaged Rivers in Maine: U.S. Geological Survey Scientific Investigations Report 2004-5026, 22 p. (<http://water.usgs.gov/pubs/sir/2004/5026/pdf/sir2004-5026.pdf>)

November Flow-Duration Statistics Parameters [100.00 Percent Statewide Median Monthly SIR 2004 5026]

Parameter	Value	Min Limit	Max Limit
Drainage Area	7.4	9.79	1418

November Flow-Duration Statistics Disclaimers [100.00 Percent Statewide Median Monthly SIR 2004 5026]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

November Flow-Duration Statistics Flow Report [100.00 Percent Statewide Median Monthly SIR 2004 5026]

Statistic	Value	Unit	Prediction Error
November 50 Percent Duration	9.115	ft ³ /s	--

November Flow-Duration Statistics Citations

Dudley, R.W., 2004, Estimating Monthly, Annual, and Low 7-Day, 10-Year Streamflows for Ungaged Rivers in Maine: U.S. Geological Survey Scientific Investigations Report 2004-5026, 22 p. (<http://water.usgs.gov/pubs/sir/2004/5026/pdf/sir2004-5026.pdf>)

October Flow-Duration Statistics Parameters [100.00 Percent Statewide Median Monthly SIR 2004 5026]

Parameter	Value	Min Limit	Max Limit
Drainage Area	7.4	9.79	1418
Fraction of Sand and Gravel Aquifers	0	0	0.455

October Flow-Duration Statistics Disclaimers [100.00 Percent Statewide Median Monthly SIR 2004 5026]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

October Flow-Duration Statistics Flow Report [100.00 Percent Statewide Median Monthly SIR 2004 5026]

Statistic	Value	Unit	Prediction Error
October 50 Percent Duration	2.634	ft ³ /s	--

October Flow-Duration Statistics Citations

Dudley, R.W., 2004, Estimating Monthly, Annual, and Low 7-Day, 10-Year Streamflows for Ungaged Rivers in Maine: U.S. Geological Survey Scientific Investigations Report 2004-5026, 22 p. (<http://water.usgs.gov/pubs/sir/2004/5026/pdf/sir2004-5026.pdf>)

September Flow-Duration Statistics Parameters [100.00 Percent Statewide Median Monthly SIR 2004 5026]

Parameter	Value	Min Limit	Max Limit
Drainage Area	7.4	9.79	1418
Fraction of Sand and Gravel Aquifers	0	0	0.455

September Flow-Duration Statistics Disclaimers [100.00 Percent Statewide Median Monthly SIR 2004 5026]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

September Flow-Duration Statistics Flow Report [100.00 Percent Statewide Median Monthly SIR 2004 5026]

Statistic	Value	Unit	Prediction Error
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Statistic	Value	Unit	Prediction Error
September 50 Percent Duration	1.506	ft ³ /s	--
September Flow-Duration Statistics Citations			
Dudley, R.W., 2004, Estimating Monthly, Annual, and Low 7-Day, 10-Year Streamflows for Ungaged Rivers in Maine: U.S. Geological Survey Scientific Investigations Report 2004-5026, 22 p. (http://water.usgs.gov/pubs/sir/2004/5026/pdf/sir2004-5026.pdf)			

Project Name: Windham Colley Wright Brook
 Stream Name: Colley Wright Brook
 Bridge Name: Doles Bridge
 Route No. River Road
 Analysis by: AWM / CSH

PIN: 18948
 Town: Windham
 Bridge No. 5061
 USGS Quad:
 Date: 3/1/2016

Peak Flow Calculations by USGS Regression Equations (Hodgkins, 1999 & Lombard/Hodgkins, 2015)

Enter data in blue cells only!

	km ²	mi ²	ac
A	19.22	7.42	4748.8
W	1.45	0.6	359.0
P _c	387998	4846339	
County	Cumberland SE		
pptA	44.4		
SG	0.00		
A (km ²)	19.22		
W (%)	7.56		

Enter data in [mi²]

Watershed Area *DRNAREA*
 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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 207-557-1052
Charles.Hebson@maine.gov
ver. 2016 Feb 05

Conf Lvl 0.67

NWI Wetlands % *STORNWI*

References:

Hodgkins, G.A., 1999.
 Estimating the magnitude of peak flows for streams
 in Maine for selected recurrence intervals
WRIR 99-4008, USGS Augusta, ME

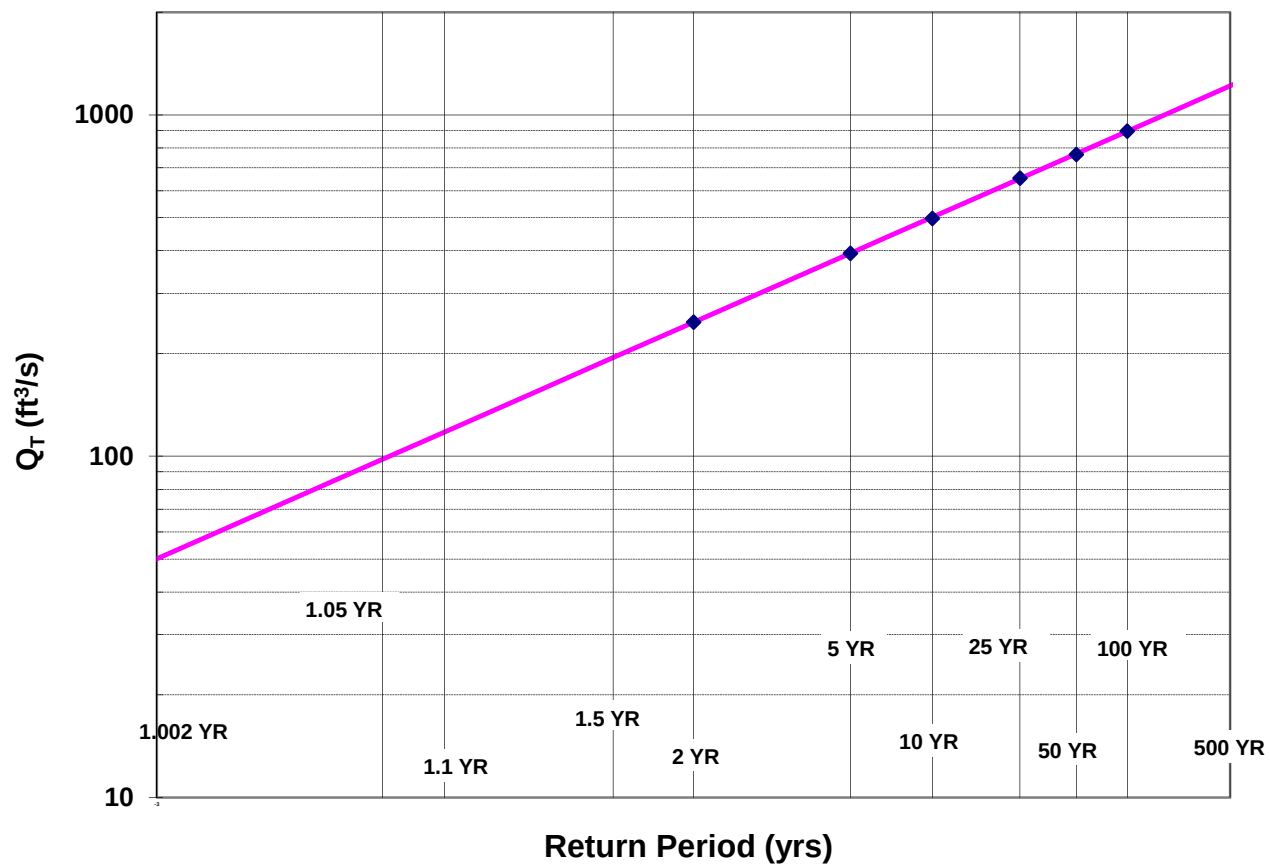
Lombard, P.J. & G.A. Hodgkins, 2015.
 Peak flow regression equations for small, ungaged streams
 Maine - Comparing map-based to field-based variables
SIR 2015-4059, USGS, Augusta, ME

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

Ret Pd	Peak Flow Estimate		
T (yr)	Lower	Q _T (m ³ /s)	Upper
1.1		3.34	
2		7.00	
5		11.13	
10		14.08	
25		18.51	
50		21.70	
100		25.43	
500		34.47	

Q _T (ft ³ /s)
117.9
247.1
393.1
497.3
653.5
766.4
898.1
1217.2

Log-Normal Probability Plot



Project Name: Windham Colley Wright Brook
 Stream Name: Colley Wright Brook
 Bridge Name: Doles Bridge
 Route No. River Road
 Analysis by: AWM / CSH

PIN: 18948
 Town: Windham
 Bridge No. 5061
 USGS Quad:
 Date: 3/1/2016

DO NOT ENTER ANY DATA ON THIS PAGE; EVERYTHING IS CALCULATED

MAINE MONTHLY MEDIAN FLOWS and HYDRAULIC GEOMETRY BY USGS REGRESSION EQUATIONS (2004)

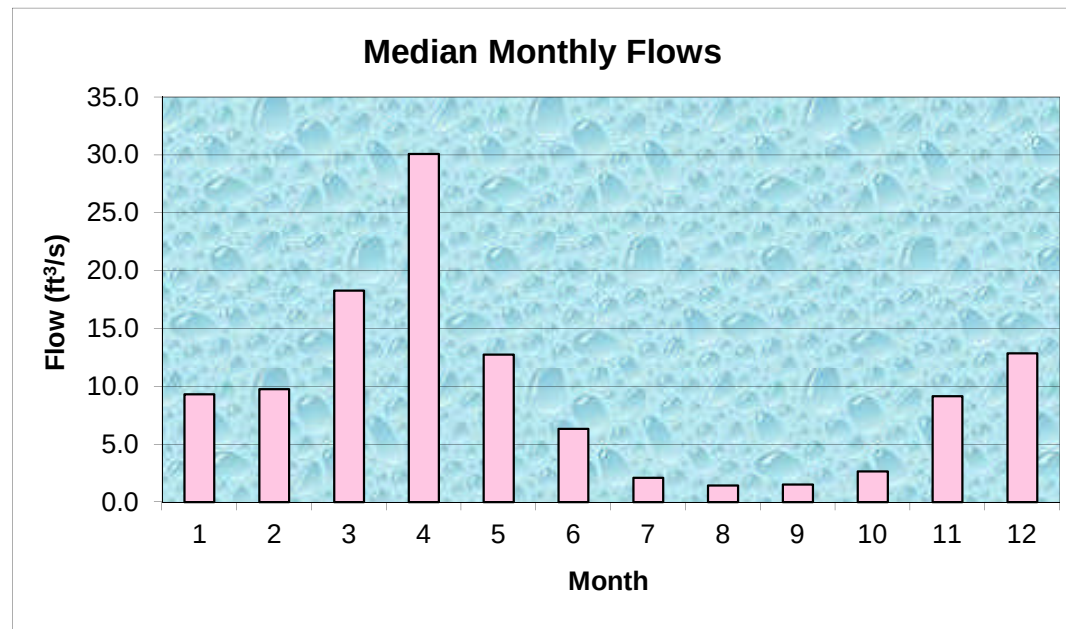
	Value	Variable	Explanation
	7.42	A	Area (mi ²)
387998	4846339	P _c	Watershed centroid (E,N; UTM; Zone 19; meters)
	43.56	DIST	Distance from Coastal reference line (mi)
	44.4	pptA	Mean Annual Precipitation (inches)
	0.00	SG	Sand & Gravel Aquifer (decimal fraction of watershed area)

Month	Q _{median} (ft ³ /s)	(m ³ /s)
Jan	9.31	0.2638
Feb	9.75	0.2764
Mar	18.27	0.5179
Apr	30.08	0.8525
May	12.74	0.3611
Jun	6.34	0.1797
Jul	2.10	0.0595
Aug	1.43	0.0407
Sep	1.51	0.0428
Oct	2.64	0.0749
Nov	9.14	0.2590
Dec	12.85	0.3640

Q _{bf}	42.6
ann avg	15.1
ann med	7.7
Q _{1.002}	50.1
Q _{1.01}	67.9
Q _{1.05}	98.0
Q _{bf}	102.1

assume v = 4ft/s

W _{bf}	21.7	estimated bankfull width (ft)
d _{bf}	1.2	estimated bankfull depth (ft)
A _{bf}	25.5	estimated bankfull flow area (ft ²)



References

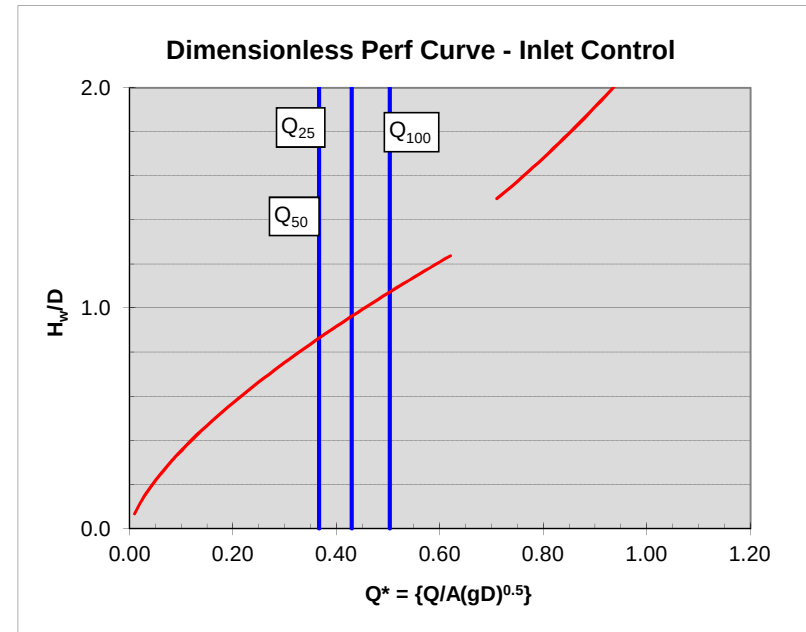
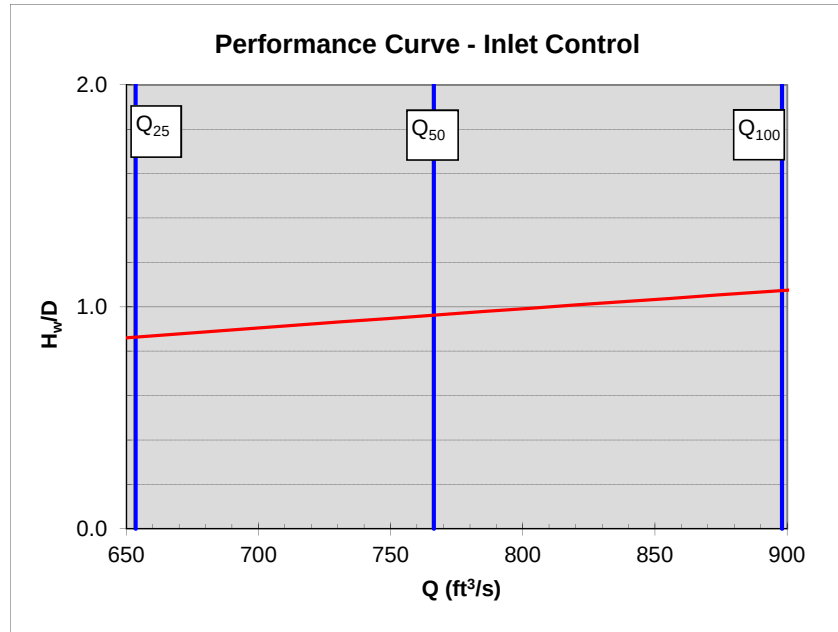
Dudley, R.W., 2004. Hydraulic Geometry Relations ..., SIR 2004-5042
 Dudley, R.W., 2004. Estimating Monthly Streamflows ... , SIR 2004-5026

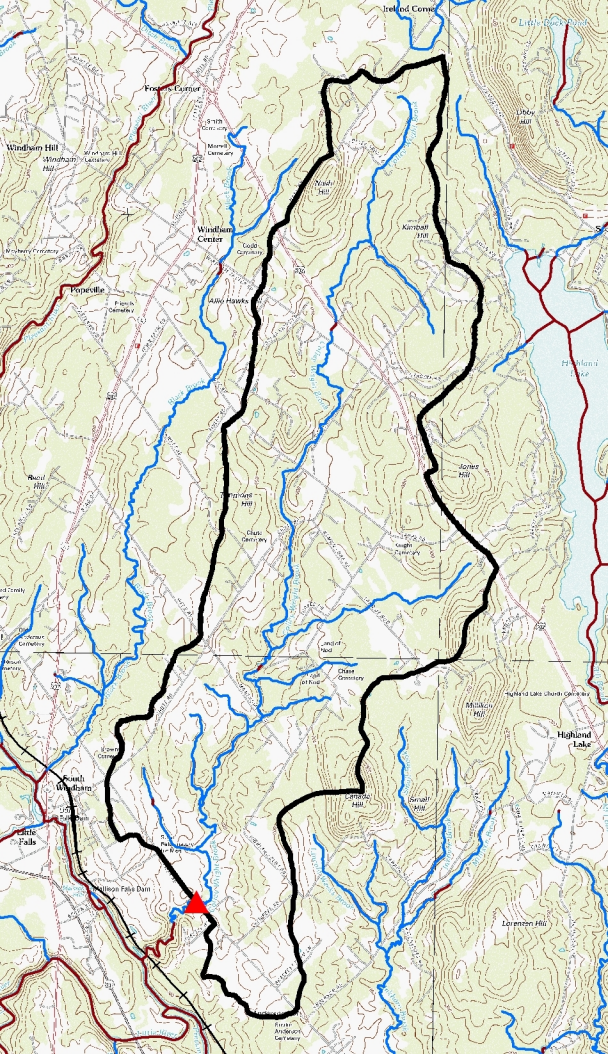
NOTE: This page is for preliminary sizing only.
Final design should be done with HY8 or HDS-5

Preliminary Culvert Sizing - Round & Box Culverts

Shape:	Box				
Type:	Box 0 ww				
D or R (ft)	14	Q_{25}	653.5	trial D / R =	11.8
w (ft)	6 box width	Q_{50}	766.4	trial w: BFW =	21.7
Slope (ft/ft)	0.02	Q_{100}	898.1		
A (ft ²)	84.00				
g (ft/s ²)	32.2				

Note: culvert dimensions are for open flow area; adjust for lost capacity due to embedding / backfilling (min {2' / 25% rise} embedment)





StreamStats Version 3.0

Flow Statistics Ungaged Site Report

Date: Tues Mar 8, 2016 9:59:42 AM GMT-5

Study Area: Maine

NAD 1983 Latitude: 43.7266 (43 43 36)

NAD 1983 Longitude: -70.4061 (-70 24 22)

Drainage Area: 7.4 mi²

Regional Hydraulic Geometry Basin Characteristics

100% Central and Coastal Bankfull 2004 5042 (7.4 mi²)

Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	7.4	2.92	298

Regional Median Flows Basin Characteristics

100% Southern Median Monthly SIR 2010 5179 (7.4 mi²)

Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	7.4	0.04	74.1
Percentage of Sand and Gravel Aquifers (percent)	0.00	0	84.1
Distance From Coast To Basin Centroid (miles)	44.2	14.3	94

Monthly Mean Flows Basin Characteristics

100% Statewide Mean Monthly SIR 2004 5026 (7.4 mi²)

Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	7.4 (below min value 9.79)	9.79	1418
Fraction of Sand and Gravel Aquifers (dimensionless)	0.00	0	0.455
Mean Annual Precipitation (inches)	45.9	37.8	47.9
Distance From Coast To Basin Centroid (miles)	44.2	42.7	193

Warning: Some parameters are outside the suggested range. Estimates will be extrapolations with unknown errors.

Monthly Median Flows Basin Characteristics

100% Statewide Median Monthly SIR 2004 5026 (7.4 mi2)

Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	7.4 (below min value 9.79)	9.79	1418
Fraction of Sand and Gravel Aquifers (dimensionless)	0.00	0	0.455
Mean Annual Precipitation (inches)	45.9	37.8	47.9
Distance From Coast To Basin Centroid (miles)	44.2	42.7	193

Warning: Some parameters are outside the suggested range. Estimates will be extrapolations with unknown errors.

Peak Flow Basin Characteristics**100% Statewide Peak Flow Full WRI 99 4008 (7.4 mi2)**

Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	7.4	0.93	1653
Percentage of Storage from NWI (percent)	7.56	0.7	26.7

Annual Flows Basin Characteristics**100% Statewide Annual SIR 2004 5026 (7.4 mi2)**

Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	7.4 (below min value 9.79)	9.79	1418
Fraction of Sand and Gravel Aquifers (dimensionless)	0.00	0	0.455
Basin Ave Precip Dec Feb PRISM 1990 (inches)	11.5	7.71	12.6

Warning: Some parameters are outside the suggested range. Estimates will be extrapolations with unknown errors.

Regional Hydraulic Geometry Statistics

Statistic	Value	Unit	Prediction Error (percent)	Equivalent years of record	90-Percent Prediction Interval	
					Min	Max
BFFLOW	42.4	ft3/s	54			
BFWDTH	21.7	ft	33			
BFDPTH	1.17	ft	26			
BFAREA	25.4	ft2	57			

Regional Median Flows Statistics						
Statistic	Value	Unit	Prediction Error (percent)	Equivalent years of record	90-Percent Prediction Interval	
					Min	Max
JUND50	4.07	ft3/s	45			
AUGD50	0.92	ft3/s	66			

<http://pubs.usgs.gov/sir/2010/5179/pdf/sir2010-5179.pdf> (<http://pubs.usgs.gov/sir/2010/5179/pdf/sir2010-5179.pdf>)

Lombard_ P.J._ 2010_ June and August median streamflows estimated for ungaged streams in southern Maine: U.S. Geological Survey Scientific Investigations Report 2010-5179_ 16 p.

Monthly Mean Flows Statistics						
Statistic	Value	Unit	Prediction Error (percent)	Equivalent years of record	90-Percent Prediction Interval	
					Min	Max
Q1	14.7	ft3/s				
Q2	14.7	ft3/s				
Q3	32.6	ft3/s				
Q4	40.3	ft3/s				
Q5	17.5	ft3/s				
Q6	10.8	ft3/s				
Q7	4.2	ft3/s				
Q8	3.04	ft3/s				
Q9	3.54	ft3/s				
Q10	7.85	ft3/s				
Q11	16.7	ft3/s				
Q12	19.8	ft3/s				

<http://water.usgs.gov/pubs/sir/2004/5026/pdf/sir2004-5026.pdf> (<http://water.usgs.gov/pubs/sir/2004/5026/pdf/sir2004-5026.pdf>)

Dudley_ R.W._ 2004_ Estimating Monthly_ Annual_ and Low 7-Day_ 10-Year Streamflows for Ungaged Rivers in Maine: U.S. Geological Survey Scientific Investigations Report 2004-5026_ 22 p.

Monthly Median Flows Statistics						
Statistic	Value	Unit	Prediction Error (percent)	Equivalent years of record	90-Percent Prediction Interval	
					Min	Max
JAND50	9.18	ft3/s				
FEBD50	9.6	ft3/s				
MARD50	17.9	ft3/s				
APRD50	33	ft3/s				

MAYD50	12.8	ft3/s				
JUND50	6.32	ft3/s				
JULD50	2.09	ft3/s				
AUGD50	1.43	ft3/s				
SEPD50	1.51	ft3/s				
OCTD50	2.63	ft3/s				
NOVD50	9.12	ft3/s				
DECD50	12.7	ft3/s				

<http://water.usgs.gov/pubs/sir/2004/5026/pdf/sir2004-5026.pdf> (<http://water.usgs.gov/pubs/sir/2004/5026/pdf/sir2004-5026.pdf>)

Dudley_ R.W._ 2004_ Estimating Monthly_ Annual_ and Low 7-Day_ 10-Year Streamflows for Ungaged Rivers in Maine: U.S. Geological Survey Scientific Investigations Report 2004-5026_ 22 p.

Peak Flow Statistics						
Statistic	Value	Unit	Prediction Error (percent)	Equivalent years of record	90-Percent Prediction Interval	
					Min	Max
PK2	292	ft3/s	35	1.8	162	528
PK5	470	ft3/s	36	2.5	258	858
PK10	605	ft3/s	37	3.2	326	1120
PK25	791	ft3/s	39	4.1	415	1510
PK50	939	ft3/s	40	4.8	482	1830
PK100	1100	ft3/s	41	5.4	551	2190
PK500	1500	ft3/s	45	6.4	709	3170

<http://me.water.usgs.gov/99-4008.pdf> (<http://me.water.usgs.gov/99-4008.pdf>)

Hodgkins_ G. A._ 1999_ Estimating the Magnitude of Peak Flows for Streams in Maine for Selected Recurrence Intervals: U.S. Geological Survey Water-Resources Investigations Report 99-4008_ 45 p.

Annual Flows Statistics						
Statistic	Value	Unit	Prediction Error (percent)	Equivalent years of record	90-Percent Prediction Interval	
					Min	Max
QA	15.4	ft3/s				
MEDAN	8.1	ft3/s				
M7D10Y	0.24	ft3/s				

<http://water.usgs.gov/pubs/sir/2004/5026/pdf/sir2004-5026.pdf> (<http://water.usgs.gov/pubs/sir/2004/5026/pdf/sir2004-5026.pdf>)

Dudley_ R.W._ 2004_ Estimating Monthly_ Annual_ and Low 7-Day_ 10-Year Streamflows for Ungaged Rivers in Maine: U.S. Geological Survey Scientific Investigations Report 2004-5026_ 22 p.



StreamStats Version 3.0

Basin Characteristics Ungaged Site Report

Date: Tues Mar 8, 2016 9:58:11 AM GMT-5

Study Area: Maine

NAD 1983 Latitude: 43.7266 (43 43 36)

NAD 1983 Longitude: -70.4061 (-70 24 22)

Label	Value	Units	Definition
DRNAREA	7.4	square miles	Area that drains to a point on a stream
STORNWI	7.56	percent	Percentage of storage (combined water bodies and wetlands) from the National Wetlands Inventory
ELEV	207.7	feet	Mean Basin Elevation
PRECIP	45.9	inches	Mean Annual Precipitation
PRDEC FEB90	11.5	inches	Basin average mean precipitation for December to February from PRISM 1961-1990
SANDGRAVAP	0	percent	Percentage of land surface underlain by sand and gravel aquifers
COASTDIST	44.2	miles	Shortest distance from the coastline to the basin centroid
CENTROIDX	388000.01	State plane coordinates	Basin centroid horizontal (x) location in state plane coordinates
CENTROIDY	4846306.52	State plane coordinates	Basin centroid vertical (y) location in state plane units
SANDGRAVAF	0	dimensionless	Fraction of land surface underlain by sand and gravel aquifers
LC11IMP	2.36	percent	Average percentage of impervious area determined from NLCD 2011 impervious dataset
LC11DEV	11.2	percent	Percentage of land-use from NLCD 2011 classes 21-24

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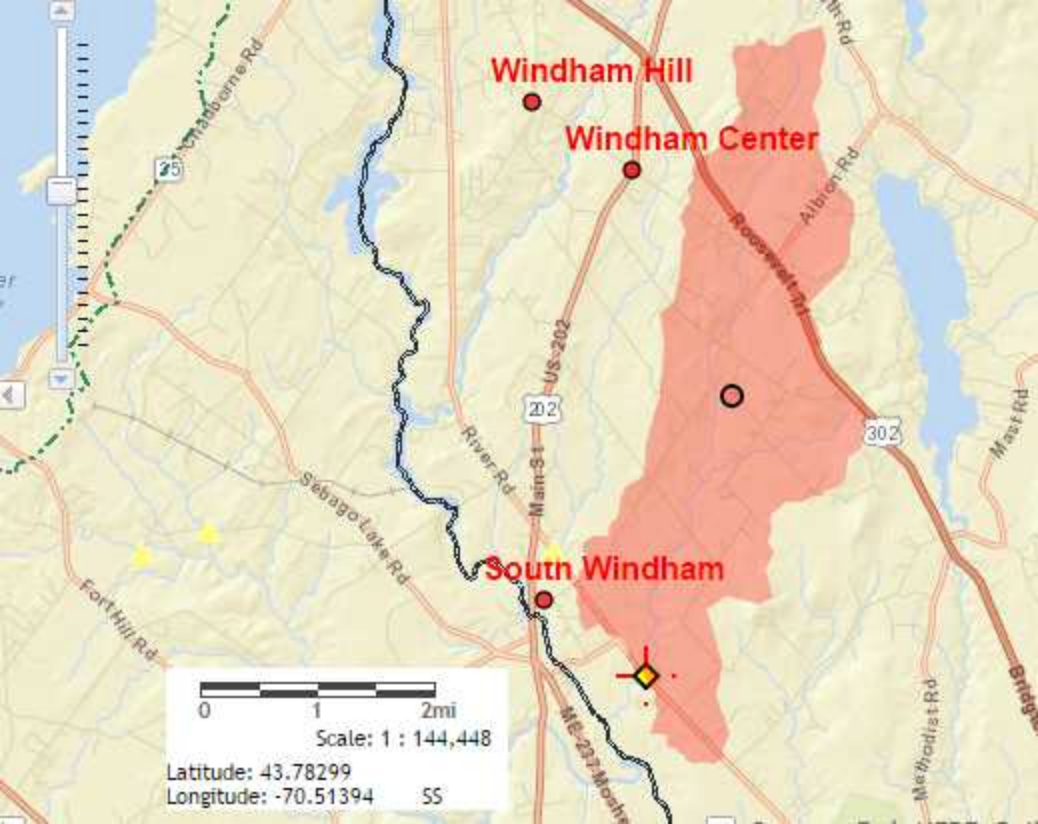
URL: http://ssdev.cr.usgs.gov/v3_beta/BCreport.htm

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Windham Hill

Windham Center

South Windham



Scale: 1 : 144,448

Latitude: 43.78299

Longitude: -70.51394

SS

Crossing - 18Sx10R emb 30", Design Discharge - 898.0 cfs

Culvert - Culvert 1, Culvert Discharge - 898.0 cfs

