

Hydrology and Hydraulics Report

Smith Brook Bridge #3189
over
Smith Brook

Bancroft TWP, Maine

2826200
WIN 28262.00



**Maine Department of Transportation
Bridge Program**

HYDROLOGY REPORT

Smith Brook begins in a wetland located 9.1 miles upstream of the bridge and ends 125' downstream of the bridge at the Mattawamkeag River. There is no stream gage on Smith Brook nor on other waterbodies near the bridge. The present project hydraulic study is the first known detailed engineering assessment of the brook's existing flood regime at this crossing. No FEMA Flood Insurance Study (FIS) nor Flood Insurance Rate Map (FIRM) have been completed which study Smith Brook in detail. Permitting for this crossing is partially governed by the Land Use Planning Commission (LUPC). As shown on the zoning map in the Supplemental Hydrology and Hydraulic Data (SHHD) document, the project site is within a Flood Prone Area Protection Subdistrict (P-FP) and is therefore subject to permitting requirements pertaining to base flood elevations outlined in Chapter 10 of *Land Use Districts and Standards For Areas Served by the Maine Land Use Planning Commission* (Reference 1, SHHD). The requirements in Sub-Chapter III Section 10.25,T within the above referenced document state that the cumulative effect of the proposed, existing, and anticipated development on the water surface elevation of the base flood will not increase more than 1'. It also states that, when possible, the lowest horizontal member is to be elevated 1' above the base flood elevation. Smith Brook is not discussed in the *Historic Flooding in Major Drainage Basins, Maine* document published in 2007 (Reference 2, SHHD). There are no anecdotal reports of the existing bridge overtopping.

Because there are no stream gages on Smith Brook, the peak flow values and drainage basin characteristics are taken from USGS StreamStats (Reference 3, SHHD). These characteristics are based on Lombard's and Hodgkin's *Estimating flood magnitude and frequency on gaged and un-gaged streams in Maine: U.S. Geological Survey Scientific Investigations Report 2020-5092*. StreamStats does not provide a discharge for the 1.1-year storm event; this flow value was estimated by dividing the 2-year flow value in half. The hydrology data is shown in Table 1 and the full StreamStats report is included in SHHD.

Table 1 Smith Brook Hydrology Summary

Drainage Area	15.11	mi ²
Q1.1	245	ft ³ /s
Q10	910	ft ³ /s
Q25	1,140	ft ³ /s
Q50	1,320	ft ³ /s
Q100	1,500	ft ³ /s
Q500	1,950	ft ³ /s

Due to the proximity of the Smith Brook Bridge to the confluence of Smith Brook with the Mattawamkeag River, joint probabilities were used to determine the coincident flows of the two water bodies. Peak flow data for the Mattawamkeag River at the confluence with Smith Brook was taken from StreamStats because the river does not have any stream gages that are nearby.

Table 2 Mattawamkeag River Hydrology Summary

Drainage Area	882.68	mi ²
Q1.1	5,536	ft ³ /s
Q10	13,900	ft ³ /s
Q25	16,200	ft ³ /s
Q50	17,900	ft ³ /s
Q100	19,600	ft ³ /s
Q500	23,400	ft ³ /s

Bog Brook, another tributary of the Mattawamkeag River, is located approximately 1,200' downstream from Smith Brook and is included in the hydraulic analysis. Peak flow data for Bog Brook was taken from StreamStats because it is an ungaged stream.

Table 3 Bog Brook Hydrology Summary

Drainage Area	8.5	mi ²
Q1.1	79	ft ³ /s
Q10	281	ft ³ /s
Q25	347	ft ³ /s
Q50	399	ft ³ /s
Q100	452	ft ³ /s
Q500	598	ft ³ /s

Coincident flows were calculated using the joint probability method as described in the NCHRP Report 15-36, Estimating Joint Probabilities of Design Coincident Flows at Stream Confluences (Reference 4, SHHD). Combinations of flows were developed using the Alternative (Copula-cased) Method found in Appendix G of NCHRP Report 15-36. The return periods were rounded to the nearest design period (e.g. 9-year storm rounded to the 10-year storm). Application of the methods found in NCHRP Report 15-36 are limited to watershed pairs satisfying three conditions:

1. Neither watershed in the pair is substantially affected by regulation
2. The sum of the watershed areas is less than 9,000 sq. mi.
3. The drainage area of the smaller watershed of the pair exceeds 1 sq. mi.

The Smith Brook and Mattawamkeag River watershed pair satisfies the three conditions stated above. The smaller watershed of the pair (Smith Brook) is less than 400 sq. mi., which determines the type of equation used to calculate Kendall's τ , a coefficient used to rank the correlation between two measured quantities. The best-fit equations were used to calculate Kendall's τ for high flows in Smith Brook and low flows in the Mattawamkeag River for results that would produce higher velocities for scour analysis. The envelope equations were used to calculate Kendall's τ for low flows in Smith Brook and high flows in the Mattawamkeag River for

results that would produce higher water surface elevations (WSE) for freeboard considerations. Additional conditions were included in the joint probabilities analysis for higher flows in both watersheds for comparison purposes.

Per NCHRP Report 15-36 Section G.4.5.1, if the design site is more likely to be influenced by the larger stream because it is closer to the larger stream than the upstream end of the smaller stream, then use of the POM ("Peaks on Main") equations might be justified. The Mattawamkeag River is the larger stream and is taken as the "Main" stream. Smith Brook Bridge is very close to the confluence with the Mattawamkeag River, so the POM values are used when Kendall's values differ.

The Bog Brook and Mattawamkeag River watershed pair satisfies the three previously stated conditions from the NCHRP Report 15-36. Bog Brook's watershed is similar in size to Smith Brook's, and as such, it is assumed that the joint probabilities for Bog Brook and the Mattawamkeag River are the same as the joint probabilities for Smith Brook and the Mattawamkeag River.

The calculations for the coincident flows and the combinations used for analysis are included in the SHHD.

Per the Environmental Coordination table on page 5, the calculated bankfull width (BFW) for Smith Brook is 34'. The site conditions made it such that BFW measurements could not be taken in the field. The minimum required clear span between wildlife shelves is 41' ($1.2 \times \text{BFW}$) and the proposed perpendicular clear span is 84.6'.

Reported by: Kayla Hampe, PE
Date: September 9, 2026

HYDRAULIC REPORT

Two-dimensional (2D), steady state hydraulic analyses were performed to analyze the existing and proposed hydraulic conditions at Smith Brook Bridge. The software package used to develop the SRH-2D (Sediment and River Hydraulics, Two-Dimensional) (Reference 5, SHHD) model for the crossing is Aquaveo's Surface-water Modeling System (SMS) Version 13.3 (Reference 6, SHHD).

The modeling process consists of importing background data (including elevations, satellite imagery, GIS data, and CAD linework); defining a mesh, boundary conditions, material coverages, and monitoring points and lines; creating simulations and defining model control parameters for each flood event; and running the model. Additionally, since no calibration data is available, sensitivity analyses were performed to verify that the model accurately represents the hydraulic conditions of the project site. The model development process is described in detail in SHHD.

Headwater elevations and stream velocities at peak flows are reported in Table 4 for both the existing and proposed structures. Supporting water surface elevation profile plots, and velocity and depth plan view images are included in SHHD.

As discussed in the Hydrology Report on page 11, joint probabilities were used to calculate the peak flows at the Smith Brook Bridge. The flows used for designing the proposed structure were the joint probability flows that resulted in the largest water surface elevation values and the largest velocity values at the existing structure.

Based on the results, the proposed bridge meets the MaineDOT Bridge Design Guide (Reference 15, SHHD) requirements of: a minimum freeboard of 2' for the Q50 flood and ability to pass the Q100 flood with a freeboard of 4.9', which is greater than the 1' desired. Additionally, the amount of freeboard at Q100 is greater than the desired freeboard of 1.0' for LUPC. The proposed structure design is sufficient for hydraulic and habitat connectivity design requirements and is therefore considered acceptable. Due to factors such as the proximity of the Smith Brook Bridge to the confluence of Smith Brook and the Mattawamkeag River, the use of a calculated BFW, and no suitable reference reach on Smith Brook, the habitat connectivity design (HCD) does not depend upon the hydraulic modeling results.

Scour analyses were completed following the latest version of FHWA's Hydraulic Engineering Circular No. 18 (HEC-18) (Reference 8, SHHD). The scour analyses indicate a scour depth of 29.0' for the Q100 scour design flood event, and a scour depth of 33.6' for the Q500 scour check flood event. These are severe scour depths, but there is a significant sustained scour hole at the outlet of the existing culvert that is about 8' to 10' deep, which supports the calculated results. Additionally, even though the proposed structure will significantly increase the opening at the

crossing, it will continue to act as a constriction to the floodplain. To help protect the abutments from scour, scour countermeasures will be installed in front of both abutments. A layer of void filled riprap will be placed from the benches at El. 334' (NAVD88) down to the streambed, and a layer of plain riprap will be provided above the benches.

Table 4 Hydraulics Summary

		Existing Structure	Proposed Structure
		11'-7" Span and 16'-7" Rise Steel Structural Plate Pipe Arch	90'-0" Span, 20° Skew, Steel Girder Bridge
Total Area of Waterway Opening	ft ²	151	920
Headwater Elevation @ Q1.1	ft	334.8	332.9
Headwater Elevation @ Q10	ft	340.9	337.6
Headwater Elevation @ Q25	ft	342.5	339.8
Headwater Elevation @ Q50	ft	343.6	340.7
Headwater Elevation @ Q100	ft	344.9	341.5
Headwater Elevation @ Q500	ft	347.4	343.2
Freeboard @ Q50	ft	0.7	5.7
Freeboard @ Q100	ft	0	4.9
Flood of Record - Unknown			
Maximum Velocity @ Q1.1	ft/s	12.8	2.8
Maximum Velocity @ Q10	ft/s	15.5	5.6
Maximum Velocity @ Q25	ft/s	21.0	10.7
Maximum Velocity @ Q50	ft/s	22.6	11.9
Maximum Velocity @ Q100	ft/s	24.2	12.9
Maximum Velocity @ Q500	ft/s	27.6	15.0

Note: Headwater elevations are based on the joint probability flow combination that produces the highest water surface elevation upstream of the bridge. The maximum velocities are based on the joint probability flow combination that produces the highest velocity at the bridge.

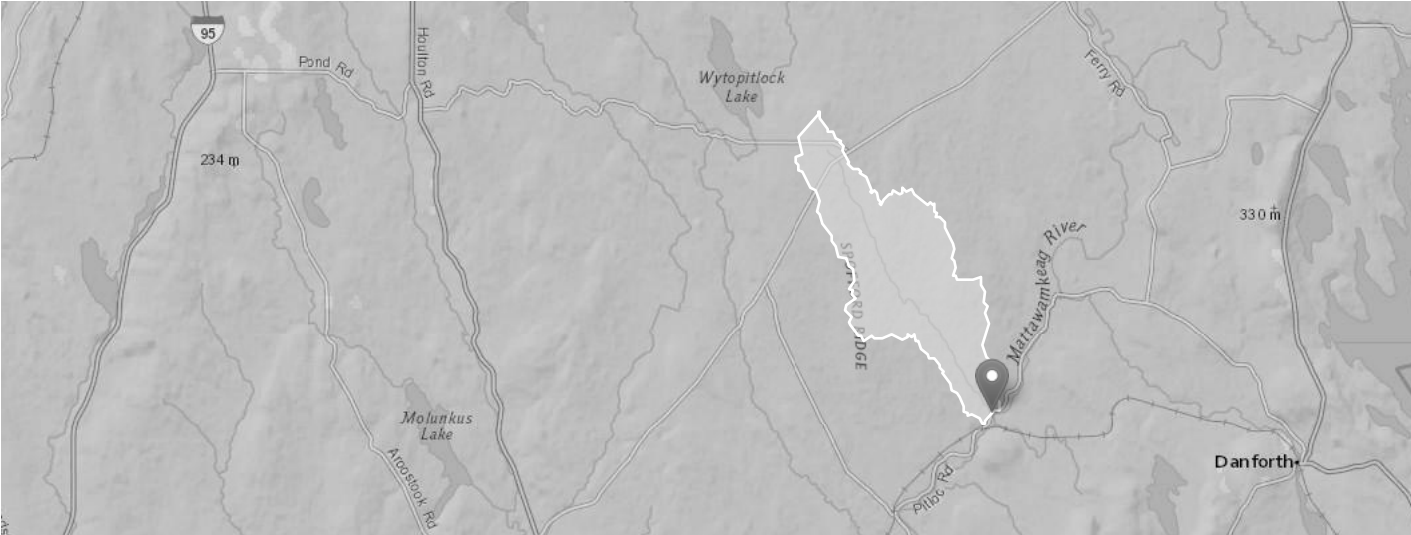
Reported by: Kayla Hampe, PE
Date: September 9, 2026

Note: All elevations based on North American Vertical Datum (NAVD) of 1988.

StreamStats Reports

StreamStats Report

Region ID: ME
Workspace ID: ME20240809182143221000
Clicked Point (Latitude, Longitude): 45.67812, -68.02627
Time: 2024-08-09 14:22:10 -0400



+ Collapse All

> Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	15.11	square miles
ELEV	Mean Basin Elevation	497	feet
I24H100Y	Maximum 24-hour precipitation that occurs on average once in 100 years	5.43	inches
I24H10Y	Maximum 24-hour precipitation that occurs on average once in 10 years	3.72	inches
I24H200Y	Maximum 24-hour precipitation that occurs on average once in 200 years	6	inches
I24H25Y	Maximum 24-hour precipitation that occurs on average once in 25 years	4.39	inches
I24H2Y	Maximum 24-hour precipitation that occurs on average once in 2 years - Equivalent to precipitation intensity index	2.64	inches
I24H500Y	Maximum 24-hour precipitation that occurs on average once in 500 years	6.81	inches
I24H50Y	Maximum 24-hour precipitation that occurs on average once in 50 years	4.9	inches
I24H5Y	Maximum 24-hour precipitation that occurs on average once in 5 years	3.23	inches
SANDGRAVAF	Fraction of land surface underlain by sand and gravel aquifers	0	dimensionless
STORAGE	Percentage of area of storage (lakes ponds reservoirs wetlands)	8.067	percent

> Peak-Flow Statistics

Peak-Flow Statistics Parameters [Statewide multiparameter peakflows SIR 2020 5092]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	15.11	square miles	0.26	5680
I24H2Y	24 Hour 2 Year Precipitation	2.64	inches	1.92	4.17
STORAGE	Percent Storage	8.067	percent	0	29.4

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
I24H5Y	24 Hour 5 Year Precipitation	3.23	inches	2.48	5.38
I24H10Y	24 Hour 10 Year Precipitation	3.72	inches	2.84	6.38
I24H25Y	24 Hour 25 Year Precipitation	4.39	inches	3.3	7.75
I24H50Y	24 Hour 50 Year Precipitation	4.9	inches	3.65	8.79
I24H100Y	24 Hour 100 Year Precipitation	5.43	inches	3.99	9.88
I24H200Y	24 Hour 200 YearPrecipitation	6	inches	5.26	11.1
I24H500Y	24 Hour 500 Year Precipitation	6.81	inches	5.95	13.1

Peak-Flow Statistics Flow Report [Statewide multiparameter peakflows SIR 2020 5092]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct (other -- see report)

Statistic	Value	Unit	PIL	PIU	ASEp
50-percent AEP flood	490	ft^3/s	264	910	39.1
20-percent AEP flood	734	ft^3/s	401	1340	38.1
10-percent AEP flood	910	ft^3/s	491	1690	38.9
4-percent AEP flood	1140	ft^3/s	607	2140	39.9
2-percent AEP flood	1320	ft^3/s	692	2520	39.7
1-percent AEP flood	1500	ft^3/s	791	2840	40.7
0.5-percent AEP flood	1680	ft^3/s	857	3290	42.8
0.2-percent AEP flood	1950	ft^3/s	982	3870	43.8

Peak-Flow Statistics Citations

Lombard, P.J., and Hodgkins, G.A.,2020, Estimating flood magnitude and frequency on gaged and ungaged streams in Maine: U.S. Geological Survey Scientific Investigations Report 2020–5092, 56 p. (<https://doi.org/10.3133/sir20205092>)

➤ Annual Flow Statistics

Annual Flow Statistics Parameters [Statewide Annual SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	15.11	square miles	14.9	1419
SANDGRAVAF	Fraction of Sand and Gravel Aquifers	0	dimensionless	0	0.212
ELEV	Mean Basin Elevation	497	feet	239	2120

Annual Flow Statistics Flow Report [Statewide Annual SIR 2015 5151]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct (other -- see report)

Statistic	Value	Unit	ASEp
Mean Annual Flow	32.2	ft^3/s	16

Annual Flow Statistics Citations

Dudley, R.W.,2015, Regression equations for monthly and annual mean and selected percentile streamflows for ungaged rivers in Maine: U.S. Geological Survey Scientific Investigations Report 2015–5151, 35 p. (<http://dx.doi.org/10.3133/sir20155151>)

➤ Bankfull Statistics

Bankfull Statistics Parameters [Appalachian Highlands D Bieger 2015]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	15.11	square miles	0.07722	940.1535

Bankfull Statistics Parameters [New England P Bieger 2015]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	15.11	square miles	3.799224	138.999861

Bankfull Statistics Parameters [USA Bieger 2015]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	15.11	square miles	0.07722	59927.7393

Bankfull Statistics Flow Report [Appalachian Highlands D Bieger 2015]

Statistic	Value	Unit
Bieger_D_channel_width	46.9	ft
Bieger_D_channel_depth	2.44	ft
Bieger_D_channel_cross_sectional_area	117	ft^2

Bankfull Statistics Flow Report [New England P Bieger 2015]

Statistic	Value	Unit
Bieger_P_channel_width	54	ft
Bieger_P_channel_depth	2.5	ft
Bieger_P_channel_cross_sectional_area	138	ft^2

Bankfull Statistics Flow Report [USA Bieger 2015]

Statistic	Value	Unit
Bieger_USA_channel_width	32.2	ft
Bieger_USA_channel_depth	2.15	ft
Bieger_USA_channel_cross_sectional_area	74	ft^2

Bankfull Statistics Flow Report [Area-Averaged]

Statistic	Value	Unit
Bieger_D_channel_width	46.9	ft
Bieger_D_channel_depth	2.44	ft
Bieger_D_channel_cross_sectional_area	117	ft^2
Bieger_P_channel_width	54	ft
Bieger_P_channel_depth	2.5	ft
Bieger_P_channel_cross_sectional_area	138	ft^2
Bieger_USA_channel_width	32.2	ft
Bieger_USA_channel_depth	2.15	ft
Bieger_USA_channel_cross_sectional_area	74	ft^2

Bankfull Statistics Citations

Bieger, Katrin; Rathjens, Hendrik; Allen, Peter M.; and Arnold, Jeffrey G.,2015, Development and Evaluation of Bankfull Hydraulic Geometry Relationships for the Physiographic Regions of the United States, Publications from USDA-ARS / UNL Faculty, 17p.
(https://digitalcommons.unl.edu/usdaarsfacpub/1515?utm_source=digitalcommons.unl.edu%2Fusdaarsfacpub%2F1515&utm_medium=PDF&utm_campaign=PDFCoverPages)

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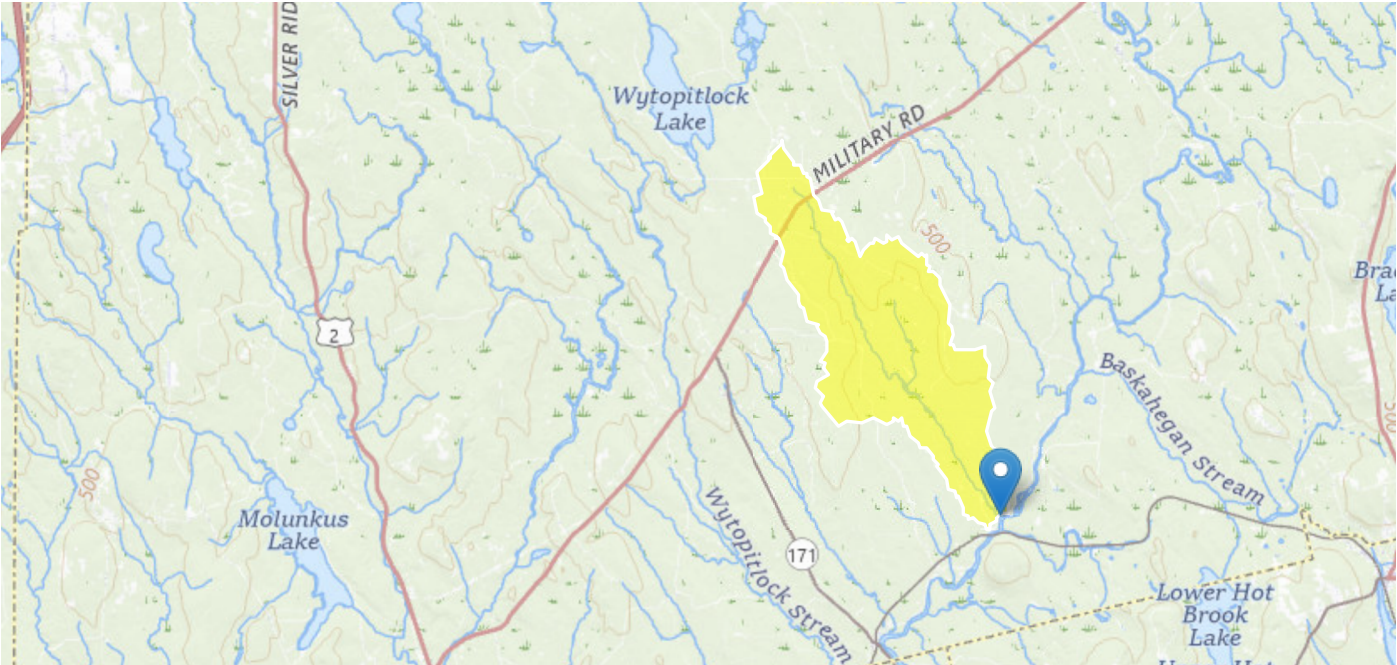
Application Version: 4.23.0

StreamStats Services Version: 1.2.22

NSS Services Version: 2.2.1

3189 Supplemental StreamStats Report

Region ID: ME
Delineation Point (Latitude, Longitude): 45.67795, -68.02625
NHD Stream GNIS Name of Click Point: Ⓜ Smith Brook
Time: 2026-09-09 16:46:51 -0400



StreamStats Update

Starting with version 4.30.0, the StreamStats application uses services that were redeveloped with open-source software components. Users may observe minor variations in computed results when compared to those from previous versions. These differences are expected and do not reflect errors in the underlying data or analytical methods. Users are advised to consider these potential variations when interpreting or comparing results generated across different versions of StreamStats. Please email streamstats@usgs.gov with any questions or concerns. A full list of changes can be found at <https://www.usgs.gov/streamstats/news/streamstats-data-updates-open-source-code-release> (<https://www.usgs.gov/streamstats/news/streamstats-data-updates-open-source-code-release>).

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➤ Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BSLDEM10M	Mean basin slope computed from 10 m DEM	2.45	percent
COASTDIST	Shortest distance from the coastline to the basin centroid	104.47	miles
DRNAREA	Area that drains to a point on a stream	15.1	square miles
ELEV	Mean Basin Elevation	497	feet
ELEVMAX	Maximum basin elevation	689	feet

Parameter Code	Parameter Description	Value	Unit
JULAVPRE	Mean July Precipitation	3.878	inches
LC06WATER	Percent of open water, class 11, from NLCD 2006	0	percent
PCTSDNDRV	Percentage of land surface underlain by sand and gravel deposits	0	percent
SANDGRAVAF	Fraction of land surface underlain by sand and gravel aquifers	0	dimensionless
STATSGOA	Percentage of area of Hydrologic Soil Type A from STATSGO	4.117	percent

➤ Low-Flow Statistics

Low-Flow Statistics Parameters [Statewide LowFlow SIR 2004 5026]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	15.1	square miles	9.79	1418
SANDGRAVAF	Fraction of Sand and Gravel Aquifers	0	dimensionless	0	0.455

Low-Flow Statistics Flow Report [Statewide LowFlow SIR 2004 5026]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR²: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	SE	ASEp	Equiv. Yrs.
7 Day 10 Year Low Flow	0.555	ft ³ /s	44.3	44.3	2.9

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>)

➤ Annual Flow Statistics

Annual Flow Statistics Parameters [Statewide Annual SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	15.1	square miles	14.9	1419
ELEV	Mean Basin Elevation	497	feet	239	2120
SANDGRAVAF	Fraction of Sand and Gravel Aquifers	0	dimensionless	0	0.212

Annual Flow Statistics Flow Report [Statewide Annual SIR 2015 5151]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR²: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	ASEp
Mean Annual Flow	32.1	ft^3/s	16

Annual Flow Statistics Citations

Dudley, R.W.,2015, Regression equations for monthly and annual mean and selected percentile streamflows for ungaged rivers in Maine: U.S. Geological Survey Scientific Investigations Report 2015–5151, 35 p. (<http://dx.doi.org/10.3133/sir20155151>)

➤ Monthly Flow Statistics

Monthly Flow Statistics Parameters [Statewide January SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	15.1	square miles	14.9	1419
STATSGOA	STATSGO Percent Hydrologic Soil Type A	4.117	percent	0	31.5

Monthly Flow Statistics Parameters [Statewide February SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
BSLDEM10M	Mean Basin Slope from 10m DEM	2.45	percent	1.5	26.6
COASTDIST	Distance From Coast To Basin Centroid	104.47	miles	46.6	193
DRNAREA	Drainage Area	15.1	square miles	14.9	1419

Monthly Flow Statistics Parameters [Statewide March SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
COASTDIST	Distance From Coast To Basin Centroid	104.47	miles	46.6	193
DRNAREA	Drainage Area	15.1	square miles	14.9	1419
LC06WATER	Percent_Water_from_NLCD2006	0	percent	0	6.2

Monthly Flow Statistics Parameters [Statewide April SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
COASTDIST	Distance From Coast To Basin Centroid	104.47	miles	46.6	193
DRNAREA	Drainage Area	15.1	square miles	14.9	1419
LC06WATER	Percent_Water_from_NLCD2006	0	percent	0	6.2

Monthly Flow Statistics Parameters [Statewide May SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
BSLDEM10M	Mean Basin Slope from 10m DEM	2.45	percent	1.5	26.6
DRNAREA	Drainage Area	15.1	square miles	14.9	1419
LC06WATER	Percent_Water_from_NLCD2006	0	percent	0	6.2

Monthly Flow Statistics Parameters [Statewide June SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
BSLDEM10M	Mean Basin Slope from 10m DEM	2.45	percent	1.5	26.6
DRNAREA	Drainage Area	15.1	square miles	14.9	1419
LC06WATER	Percent_Water_from_NLCD2006	0	percent	0	6.2

Monthly Flow Statistics Parameters [Statewide July SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	15.1	square miles	14.9	1419
ELEV	Mean Basin Elevation	497	feet	239	2120
SANDGRAVAF	Fraction of Sand and Gravel Aquifers	0	dimensionless	0	0.212

Monthly Flow Statistics Parameters [Statewide August SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	15.1	square miles	14.9	1419
ELEV	Mean Basin Elevation	497	feet	239	2120
SANDGRAVAF	Fraction of Sand and Gravel Aquifers	0	dimensionless	0	0.212

Monthly Flow Statistics Parameters [Statewide September SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	15.1	square miles	14.9	1419
ELEV	Mean Basin Elevation	497	feet	239	2120
SANDGRAVAF	Fraction of Sand and Gravel Aquifers	0	dimensionless	0	0.212

Monthly Flow Statistics Parameters [Statewide October SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	15.1	square miles	14.9	1419
ELEV	Mean Basin Elevation	497	feet	239	2120
SANDGRAVAF	Fraction of Sand and Gravel Aquifers	0	dimensionless	0	0.212

Monthly Flow Statistics Parameters [Statewide November SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	15.1	square miles	14.9	1419
ELEVMAX	Maximum Basin Elevation	689	feet	633	6290

Monthly Flow Statistics Parameters [Statewide December SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	15.1	square miles	14.9	1419
STATSGOA	STATSGO Percent Hydrologic Soil Type A	4.117	percent	0	31.5

Monthly Flow Statistics Flow Report [Statewide January SIR 2015 5151]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR^2: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	ASEp
January 1st percentile flow	4.03	ft^3/s	49
January_5th_percentile_flow	5.87	ft^3/s	37
January_10th_percentile_flow	7.34	ft^3/s	35
January 25th percentile flow	10.5	ft^3/s	28
January_50th_percentile_flow	14.5	ft^3/s	35
January 75th percentile flow	24.2	ft^3/s	39
January_90th_percentile_flow	46.9	ft^3/s	40
January 95th percentile flow	90.3	ft^3/s	45
January 99th percentile flow	246	ft^3/s	79
January Mean Flow	27.5	ft^3/s	32

Monthly Flow Statistics Flow Report [Statewide February SIR 2015 5151]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR^2: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	ASEp
February 1st percentile flow	2.86	ft^3/s	50
February_5th_percentile_flow	3.25	ft^3/s	37
February_10th_percentile_flow	3.76	ft^3/s	33
February 25th percentile flow	5.07	ft^3/s	27
February_50th_percentile_flow	7.38	ft^3/s	23
February 75th percentile flow	14	ft^3/s	16
February_90th_percentile_flow	24.6	ft^3/s	22
February 95th percentile flow	46.2	ft^3/s	31
February 99th percentile flow	110	ft^3/s	46
February Mean Flow	13.3	ft^3/s	17

Monthly Flow Statistics Flow Report [Statewide March SIR 2015 5151]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR^2: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	ASEp
March 1st percentile flow	4.01	ft^3/s	48
March_5th_percentile_flow	5.38	ft^3/s	41
March_10th_percentile_flow	7.12	ft^3/s	31
March 25th percentile flow	11.3	ft^3/s	23
March_50th_percentile_flow	21.5	ft^3/s	20
March 75th percentile flow	47.1	ft^3/s	25
March_90th_percentile_flow	113	ft^3/s	29
March 95th percentile flow	178	ft^3/s	37
March 99th percentile flow	543	ft^3/s	33
March Mean Flow	49.6	ft^3/s	21

Monthly Flow Statistics Flow Report [Statewide April SIR 2015 5151]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR^2: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	ASEp
April 1st percentile flow	11	ft^3/s	38
April_5th_percentile_flow	17.1	ft^3/s	37
April_10th_percentile_flow	22.8	ft^3/s	28
April 25th percentile flow	39.8	ft^3/s	24
April_50th_percentile_flow	70.6	ft^3/s	22
April 75th percentile flow	145	ft^3/s	22
April_90th_percentile_flow	283	ft^3/s	20
April 95th percentile flow	412	ft^3/s	19
April 99th percentile flow	811	ft^3/s	32
April Mean Flow	121	ft^3/s	18

Monthly Flow Statistics Flow Report [Statewide May SIR 2015 5151]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR^2: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	ASEp
May 1st percentile flow	2.71	ft^3/s	43
May_5th_percentile_flow	4.29	ft^3/s	34
May_10th_percentile_flow	5.55	ft^3/s	31
May 25th percentile flow	8.75	ft^3/s	26
May_50th_percentile_flow	14.7	ft^3/s	22
May 75th percentile flow	25.4	ft^3/s	24
May_90th_percentile_flow	46.4	ft^3/s	30

Statistic	Value	Unit	ASEp
May 95th percentile flow	71.4	ft ³ /s	31
May 99th percentile flow	162	ft ³ /s	27
May Mean Flow	23.4	ft ³ /s	23

Monthly Flow Statistics Flow Report [Statewide June SIR 2015 5151]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR²: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	ASEp
June 1st percentile flow	1.72	ft ³ /s	69
June 5th percentile flow	2.21	ft ³ /s	52
June_10th_percentile_flow	2.69	ft ³ /s	46
June 25th percentile flow	4.47	ft ³ /s	34
June_50th_percentile_flow	8.26	ft ³ /s	27
June 75th percentile flow	20	ft ³ /s	28
June_90th_percentile_flow	52.8	ft ³ /s	34
June 95th percentile flow	111	ft ³ /s	34
June 99th percentile flow	389	ft ³ /s	47
June Mean Flow	22.6	ft ³ /s	21

Monthly Flow Statistics Flow Report [Statewide July SIR 2015 5151]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR²: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	ASEp
July 1st percentile flow	0.353	ft ³ /s	96
July_5th_percentile_flow	0.682	ft ³ /s	78
July_10th_percentile_flow	0.915	ft ³ /s	64
July 25th percentile flow	1.51	ft ³ /s	49
July_50th_percentile_flow	3.35	ft ³ /s	37
July 75th percentile flow	8.79	ft ³ /s	31
July_90th_percentile_flow	22	ft ³ /s	28
July 95th percentile flow	38.5	ft ³ /s	33
July 99th percentile flow	96.5	ft ³ /s	60
July Mean Flow	9.68	ft ³ /s	22

Monthly Flow Statistics Flow Report [Statewide August SIR 2015 5151]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR²: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	ASEp
August 1st percentile flow	0.0296	ft^3/s	319
August_5th_percentile_flow	0.0957	ft^3/s	155
August_10th_percentile_flow	0.147	ft^3/s	130
August 25th percentile flow	0.599	ft^3/s	60
August_50th_percentile_flow	1.42	ft^3/s	40
August 75th percentile flow	4.83	ft^3/s	35
August_90th_percentile_flow	13.3	ft^3/s	36
August 95th percentile flow	22.8	ft^3/s	34
August 99th percentile flow	71.6	ft^3/s	59
August Mean Flow	5.56	ft^3/s	34

Monthly Flow Statistics Flow Report [Statewide September SIR 2015 5151]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR^2: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	ASEp
September 1st percentile flow	0.0246	ft^3/s	304
September_5th_percentile_flow	0.0396	ft^3/s	315
September_10th_percentile_flow	0.174	ft^3/s	106
September 25th percentile flow	0.483	ft^3/s	65
September_50th_percentile_flow	1.43	ft^3/s	36
September 75th percentile flow	4.96	ft^3/s	26
September_90th_percentile_flow	12.4	ft^3/s	38
September 95th percentile flow	24.6	ft^3/s	44
September 99th percentile flow	92.4	ft^3/s	67
September Mean Flow	6.06	ft^3/s	33

Monthly Flow Statistics Flow Report [Statewide October SIR 2015 5151]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR^2: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	ASEp
October 1st percentile flow	0.19	ft^3/s	129
October_5th_percentile_flow	0.309	ft^3/s	110
October_10th_percentile_flow	0.674	ft^3/s	64
October 25th percentile flow	2.21	ft^3/s	28
October_50th_percentile_flow	7.34	ft^3/s	33
October 75th percentile flow	23.7	ft^3/s	39
October_90th_percentile_flow	61.2	ft^3/s	47

Statistic	Value	Unit	ASEp
October 95th percentile flow	110	ft ³ /s	45
October 99th percentile flow	317	ft ³ /s	61
October Mean Flow	26.1	ft ³ /s	35

Monthly Flow Statistics Flow Report [Statewide November SIR 2015 5151]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR²: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	ASEp
November 1st percentile flow	1.32	ft ³ /s	141
November_5th_percentile_flow	2.34	ft ³ /s	91
November_10th_percentile_flow	5.21	ft ³ /s	45
November 25th percentile flow	13.3	ft ³ /s	32
November_50th_percentile_flow	26	ft ³ /s	24
November 75th percentile flow	49.2	ft ³ /s	21
November_90th_percentile_flow	92.1	ft ³ /s	26
November 95th percentile flow	135	ft ³ /s	37
November 99th percentile flow	283	ft ³ /s	58
November Mean Flow	42.4	ft ³ /s	23

Monthly Flow Statistics Flow Report [Statewide December SIR 2015 5151]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR²: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	ASEp
December 1st percentile flow	1.89	ft ³ /s	109
December_5th_percentile_flow	4.89	ft ³ /s	33
December_10th_percentile_flow	8.71	ft ³ /s	26
December 25th percentile flow	14.7	ft ³ /s	27
December_50th_percentile_flow	24.9	ft ³ /s	35
December 75th percentile flow	39.9	ft ³ /s	39
December_90th_percentile_flow	73.2	ft ³ /s	39
December 95th percentile flow	125	ft ³ /s	38
December 99th percentile flow	297	ft ³ /s	61
December Mean Flow	39.8	ft ³ /s	29

Monthly Flow Statistics Flow Report [Area-Averaged]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR²: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	ASEp
January 1st percentile flow	4.03	ft ³ /s	49
January_5th_percentile_flow	5.87	ft ³ /s	37
January_10th_percentile_flow	7.34	ft ³ /s	35
January 25th percentile flow	10.5	ft ³ /s	28
January_50th_percentile_flow	14.5	ft ³ /s	35
January 75th percentile flow	24.2	ft ³ /s	39
January_90th_percentile_flow	46.9	ft ³ /s	40
January 95th percentile flow	90.3	ft ³ /s	45
January 99th percentile flow	246	ft ³ /s	79
January Mean Flow	27.5	ft ³ /s	32
February 1st percentile flow	2.86	ft ³ /s	50
February_5th_percentile_flow	3.25	ft ³ /s	37
February_10th_percentile_flow	3.76	ft ³ /s	33
February 25th percentile flow	5.07	ft ³ /s	27
February_50th_percentile_flow	7.38	ft ³ /s	23
February 75th percentile flow	14	ft ³ /s	16
February_90th_percentile_flow	24.6	ft ³ /s	22
February 95th percentile flow	46.2	ft ³ /s	31
February 99th percentile flow	110	ft ³ /s	46
February Mean Flow	13.3	ft ³ /s	17
March 1st percentile flow	4.01	ft ³ /s	48
March_5th_percentile_flow	5.38	ft ³ /s	41
March_10th_percentile_flow	7.12	ft ³ /s	31
March 25th percentile flow	11.3	ft ³ /s	23
March_50th_percentile_flow	21.5	ft ³ /s	20
March 75th percentile flow	47.1	ft ³ /s	25
March_90th_percentile_flow	113	ft ³ /s	29
March 95th percentile flow	178	ft ³ /s	37
March 99th percentile flow	543	ft ³ /s	33
March Mean Flow	49.6	ft ³ /s	21
April 1st percentile flow	11	ft ³ /s	38
April_5th_percentile_flow	17.1	ft ³ /s	37
April_10th_percentile_flow	22.8	ft ³ /s	28
April 25th percentile flow	39.8	ft ³ /s	24
April_50th_percentile_flow	70.6	ft ³ /s	22
April 75th percentile flow	145	ft ³ /s	22
April_90th_percentile_flow	283	ft ³ /s	20

Statistic	Value	Unit	ASEp
April 95th percentile flow	412	ft ³ /s	19
April 99th percentile flow	811	ft ³ /s	32
April Mean Flow	121	ft ³ /s	18
May 1st percentile flow	2.71	ft ³ /s	43
May_5th_percentile_flow	4.29	ft ³ /s	34
May_10th_percentile_flow	5.55	ft ³ /s	31
May 25th percentile flow	8.75	ft ³ /s	26
May_50th_percentile_flow	14.7	ft ³ /s	22
May 75th percentile flow	25.4	ft ³ /s	24
May_90th_percentile_flow	46.4	ft ³ /s	30
May 95th percentile flow	71.4	ft ³ /s	31
May 99th percentile flow	162	ft ³ /s	27
May Mean Flow	23.4	ft ³ /s	23
June 1st percentile flow	1.72	ft ³ /s	69
June 5th percentile flow	2.21	ft ³ /s	52
June_10th_percentile_flow	2.69	ft ³ /s	46
June 25th percentile flow	4.47	ft ³ /s	34
June_50th_percentile_flow	8.26	ft ³ /s	27
June 75th percentile flow	20	ft ³ /s	28
June_90th_percentile_flow	52.8	ft ³ /s	34
June 95th percentile flow	111	ft ³ /s	34
June 99th percentile flow	389	ft ³ /s	47
June Mean Flow	22.6	ft ³ /s	21
July 1st percentile flow	0.353	ft ³ /s	96
July_5th_percentile_flow	0.682	ft ³ /s	78
July_10th_percentile_flow	0.915	ft ³ /s	64
July 25th percentile flow	1.51	ft ³ /s	49
July_50th_percentile_flow	3.35	ft ³ /s	37
July 75th percentile flow	8.79	ft ³ /s	31
July_90th_percentile_flow	22	ft ³ /s	28
July 95th percentile flow	38.5	ft ³ /s	33
July 99th percentile flow	96.5	ft ³ /s	60
July Mean Flow	9.68	ft ³ /s	22
August 1st percentile flow	0.0296	ft ³ /s	319
August_5th_percentile_flow	0.0957	ft ³ /s	155
August_10th_percentile_flow	0.147	ft ³ /s	130
August 25th percentile flow	0.599	ft ³ /s	60

Statistic	Value	Unit	ASEp
August_50th_percentile_flow	1.42	ft^3/s	40
August 75th percentile flow	4.83	ft^3/s	35
August_90th_percentile_flow	13.3	ft^3/s	36
August 95th percentile flow	22.8	ft^3/s	34
August 99th percentile flow	71.6	ft^3/s	59
August Mean Flow	5.56	ft^3/s	34
September 1st percentile flow	0.0246	ft^3/s	304
September_5th_percentile_flow	0.0396	ft^3/s	315
September_10th_percentile_flow	0.174	ft^3/s	106
September 25th percentile flow	0.483	ft^3/s	65
September_50th_percentile_flow	1.43	ft^3/s	36
September 75th percentile flow	4.96	ft^3/s	26
September_90th_percentile_flow	12.4	ft^3/s	38
September 95th percentile flow	24.6	ft^3/s	44
September 99th percentile flow	92.4	ft^3/s	67
September Mean Flow	6.06	ft^3/s	33
October 1st percentile flow	0.19	ft^3/s	129
October_5th_percentile_flow	0.309	ft^3/s	110
October_10th_percentile_flow	0.674	ft^3/s	64
October 25th percentile flow	2.21	ft^3/s	28
October_50th_percentile_flow	7.34	ft^3/s	33
October 75th percentile flow	23.7	ft^3/s	39
October_90th_percentile_flow	61.2	ft^3/s	47
October 95th percentile flow	110	ft^3/s	45
October 99th percentile flow	317	ft^3/s	61
October Mean Flow	26.1	ft^3/s	35
November 1st percentile flow	1.32	ft^3/s	141
November_5th_percentile_flow	2.34	ft^3/s	91
November_10th_percentile_flow	5.21	ft^3/s	45
November 25th percentile flow	13.3	ft^3/s	32
November_50th_percentile_flow	26	ft^3/s	24
November 75th percentile flow	49.2	ft^3/s	21
November_90th_percentile_flow	92.1	ft^3/s	26
November 95th percentile flow	135	ft^3/s	37
November 99th percentile flow	283	ft^3/s	58
November Mean Flow	42.4	ft^3/s	23
December 1st percentile flow	1.89	ft^3/s	109

Statistic	Value	Unit	ASEp
December_5th_percentile_flow	4.89	ft ³ /s	33
December_10th_percentile_flow	8.71	ft ³ /s	26
December 25th percentile flow	14.7	ft ³ /s	27
December_50th_percentile_flow	24.9	ft ³ /s	35
December 75th percentile flow	39.9	ft ³ /s	39
December_90th_percentile_flow	73.2	ft ³ /s	39
December 95th percentile flow	125	ft ³ /s	38
December 99th percentile flow	297	ft ³ /s	61
December Mean Flow	39.8	ft ³ /s	29

Monthly Flow Statistics Citations

Dudley, R.W.,2015, Regression equations for monthly and annual mean and selected percentile streamflows for ungaged rivers in Maine: U.S. Geological Survey Scientific Investigations Report 2015–5151, 35 p. (<http://dx.doi.org/10.3133/sir20155151>)

➤ Base Flow Statistics

Base Flow Statistics Parameters [Maine August Unit Baseflow RivResAppl 2021]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
JULAVPRE	Mean July Precipitation	3.878	inches	3.3	4.9
PCTSDGRV	Percent Underlain By Sand And Gravel	0	percent	0	73

Base Flow Statistics Flow Report [Maine August Unit Baseflow RivResAppl 2021]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR²: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	SE
Mean August unit baseflow	0.312	ft ³ /s/mi ²	20.8

Base Flow Statistics Citations

2021, Pamela J. Lombard, Robert W. Dudley, Mathias J. Collins, Rory Saunders, Earnie AtkinsonModel estimated baseflow for streams with endangered Atlantic Salmon in Maine, USA; John Wiley & Sons Ltd., River Research and Applications, Volume 37, Issue 9, pp 1254-1264. (<https://doi.org/10.1002/rra.3835>)

➤ Flow Percentile Statistics

Flow Percentile Statistics Parameters [Statewide Annual SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	15.1	square miles	14.9	1419
ELEV	Mean Basin Elevation	497	feet	239	2120
SANDGRAVAF	Fraction of Sand and Gravel Aquifers	0	dimensionless	0	0.212

Flow Percentile Statistics Flow Report [Statewide Annual SIR 2015 5151]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR²: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	ASEp
1st Percentile Flow	0.098	ft ³ /s	144
5th Percentile Flow	0.47	ft ³ /s	62
10th Percentile Flow	1.12	ft ³ /s	41
25th Percentile Flow	4.5	ft ³ /s	22
50th Percentile Flow Median	13.8	ft ³ /s	20
75th Percentile Flow	35.1	ft ³ /s	17
90th Percentile Flow	78.6	ft ³ /s	17
95th Percentile Flow	123	ft ³ /s	18
99th Percentile Flow	287	ft ³ /s	29

Flow Percentile Statistics Citations

Dudley, R.W.,2015, Regression equations for monthly and annual mean and selected percentile streamflows for ungaged rivers in Maine: U.S. Geological Survey Scientific Investigations Report 2015–5151, 35 p.
(<http://dx.doi.org/10.3133/sir20155151>)

➤ Maximum Probable Flood Statistics

Maximum Probable Flood Statistics Parameters [Crippen Bue Region 1]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	15.1	square miles	0.1	10000

Maximum Probable Flood Statistics Flow Report [Crippen Bue Region 1]

Statistic	Value	Unit
Maximum Flood Crippen Bue Regional	24800	ft ³ /s

Maximum Probable Flood Statistics Citations

➤ NHD Features of Delineated Basin

NHD Streams Intersecting Basin Delineation Boundary

This functionality attempts to find the stream name at the delineation point. The name of the nearest intersecting National Hydrography Dataset (NHD) stream is selected by default to appear in the report above. NHD streams do not correspond to the StreamStats stream grid and may not be accurate. If you would like a different stream to appear in the above section, please make a selection below.

GNIS ID	GNIS Name	Distance from Clicked Point (ft)	Feature Type	Selected Stream Name
00575600	Smith Brook	11.03	Perennial	☒ Smith Brook

Watershed Boundary Dataset (WBD) HUC 8 Intersecting Basin Delineation Boundary

This functionality attempts to find the intersecting HUC 8 of the delineated watershed. HUC boundaries do not correspond to the StreamStats data and may not be accurate.

HUC 8	Name
01020003	Mattawamkeag River

NHD Hydrologic Features Citations

U.S. Geological Survey, 2022, USGS TNM - National Hydrography Dataset, accessed July 21, 2022 at URL <https://hydro.nationalmap.gov/arcgis/rest/services/nhd/MapServer/6>.
(<https://hydro.nationalmap.gov/arcgis/rest/services/nhd/MapServer/6>) U.S. Geological Survey, 2022, USGS TNM - National Hydrography Dataset, accessed July 21, 2022 at URL <https://hydro.nationalmap.gov/arcgis/rest/services/wbd/MapServer/4>.
(<https://hydro.nationalmap.gov/arcgis/rest/services/wbd/MapServer/4>)

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Application Version: 4.37.1

SSHydro Services Version: 1.4.0

SSDelineate Services Version: 1.2.0

NSS Services Version: 2.5.0

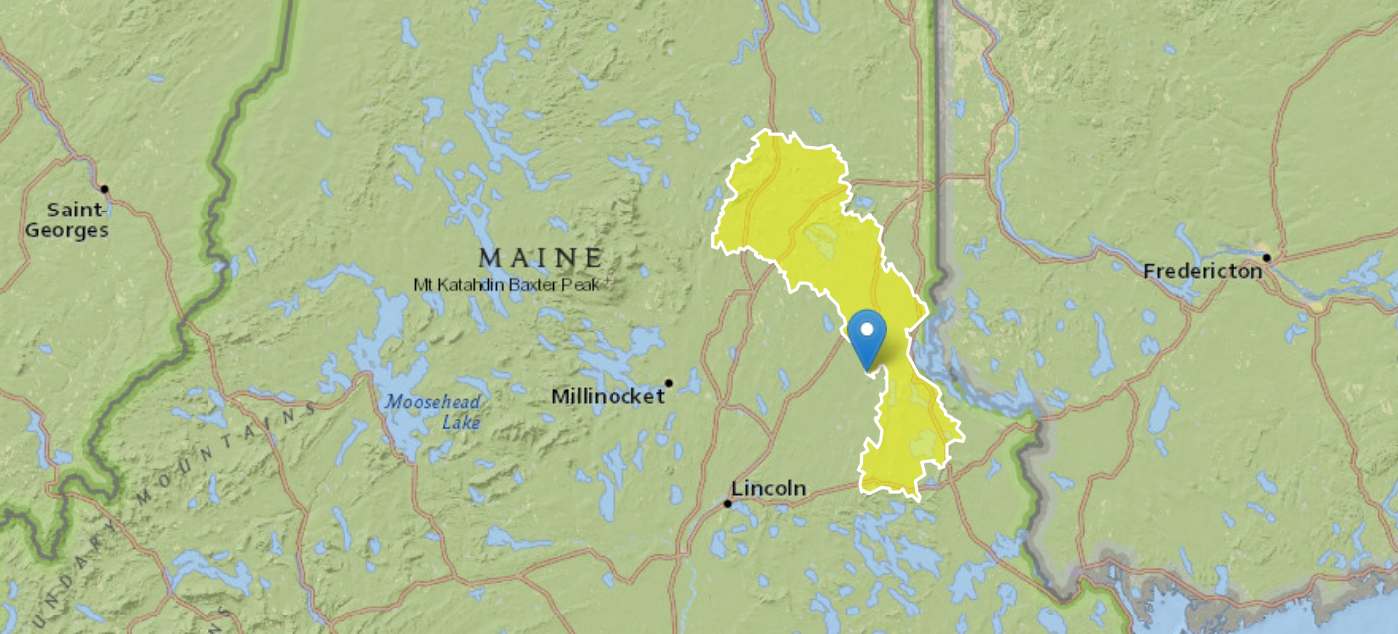
GageStats Services Version: 1.2.1

Pourpoint Services Version: 1.2.2

Batch Processor Version: 1.6.2

StreamStats Report

Region ID: ME
Workspace ID: ME20250212190227708000
Clicked Point (Latitude, Longitude): 45.67770, -68.02516
Time: 2025-02-12 14:03:05 -0500



+ Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	882.68	square miles
I24H100Y	Maximum 24-hour precipitation that occurs on average once in 100 years	5.52	inches
I24H10Y	Maximum 24-hour precipitation that occurs on average once in 10 years	3.77	inches
I24H200Y	Maximum 24-hour precipitation that occurs on average once in 200 years	6.1	inches
I24H25Y	Maximum 24-hour precipitation that occurs on average once in 25 years	4.46	inches
I24H2Y	Maximum 24-hour precipitation that occurs on average once in 2 years - Equivalent to precipitation intensity index	2.67	inches
I24H500Y	Maximum 24-hour precipitation that occurs on average once in 500 years	6.93	inches
I24H50Y	Maximum 24-hour precipitation that occurs on average once in 50 years	4.98	inches
I24H5Y	Maximum 24-hour precipitation that occurs on average once in 5 years	3.27	inches
STORAGE	Percentage of area of storage (lakes ponds reservoirs wetlands)	19.485	percent

➤ Peak-Flow Statistics

Peak-Flow Statistics Parameters [Statewide multiparameter peakflows SIR 2020 5092]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	882.68	square miles	0.26	5680
I24H100Y	24 Hour 100 Year Precipitation	5.52	inches	3.99	9.88
I24H10Y	24 Hour 10 Year Precipitation	3.77	inches	2.84	6.38
I24H200Y	24 Hour 200 YearPrecipitation	6.1	inches	5.26	11.1
I24H25Y	24 Hour 25 Year Precipitation	4.46	inches	3.3	7.75
I24H2Y	24 Hour 2 Year Precipitation	2.67	inches	1.92	4.17
I24H500Y	24 Hour 500 Year Precipitation	6.93	inches	5.95	13.1
I24H50Y	24 Hour 50 Year Precipitation	4.98	inches	3.65	8.79
I24H5Y	24 Hour 5 Year Precipitation	3.27	inches	2.48	5.38
STORAGE	Percent Storage	19.485	percent	0	29.4

Peak-Flow Statistics Flow Report [Statewide multiparameter peakflows SIR 2020 5092]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR^2: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	PIL	PIU	ASEp
50-percent AEP flood	9130	ft^3/s	4900	17000	39.1
20-percent AEP flood	11900	ft^3/s	6490	21800	38.1
10-percent AEP flood	13900	ft^3/s	7480	25800	38.9
4-percent AEP flood	16200	ft^3/s	8610	30500	39.9
2-percent AEP flood	17900	ft^3/s	9370	34200	39.7
1-percent AEP flood	19600	ft^3/s	10300	37200	40.7
0.5-percent AEP flood	21200	ft^3/s	10800	41600	42.8
0.2-percent AEP flood	23400	ft^3/s	11800	46500	43.8

Peak-Flow Statistics Citations

Lombard, P.J., and Hodgkins, G.A.,2020, Estimating flood magnitude and frequency on gaged and ungaged streams in Maine: U.S. Geological Survey Scientific Investigations Report 2020–5092, 56 p.
(<https://doi.org/10.3133/sir20205092>)

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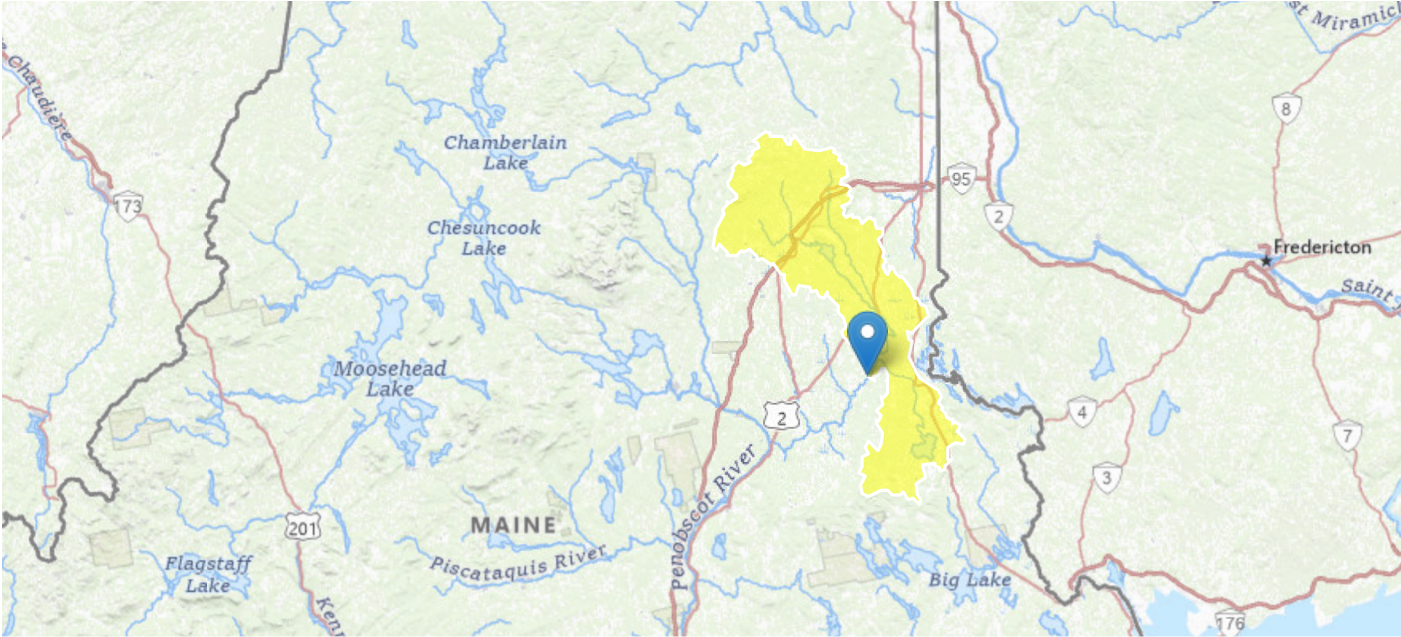
Application Version: 4.26.0

StreamStats Services Version: 1.2.22

NSS Services Version: 2.2.1

3189 Mattawamkeag Supplemental StreamStats Report

Region ID: ME
Delineation Point (Latitude, Longitude): 45.67757, -68.02535
Time: 2026-09-09 16:51:55 -0400



StreamStats Update

Starting with version 4.30.0, the StreamStats application uses services that were redeveloped with open-source software components. Users may observe minor variations in computed results when compared to those from previous versions. These differences are expected and do not reflect errors in the underlying data or analytical methods. Users are advised to consider these potential variations when interpreting or comparing results generated across different versions of StreamStats. Please email streamstats@usgs.gov with any questions or concerns. A full list of changes can be found at <https://www.usgs.gov/streamstats/news/streamstats-data-updates-open-source-code-release> (<https://www.usgs.gov/streamstats/news/streamstats-data-updates-open-source-code-release>).

 Collapse All

➤ Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BSLDEM10M	Mean basin slope computed from 10 m DEM	4.816	percent
COASTDIST	Shortest distance from the coastline to the basin centroid	114.15	miles
DRNAREA	Area that drains to a point on a stream	883	square miles
ELEV	Mean Basin Elevation	612	feet
ELEVMAX	Maximum basin elevation	2436	feet
JULAVPRE	Mean July Precipitation	3.865	inches
LC06WATER	Percent of open water, class 11, from NLCD 2006	3.383	percent
PCTSNDGRV	Percentage of land surface underlain by sand and gravel deposits	2.357	percent

Parameter Code	Parameter Description	Value	Unit
SANDGRAVAF	Fraction of land surface underlain by sand and gravel aquifers	0.024	dimensionless
STATSGOA	Percentage of area of Hydrologic Soil Type A from STATSGO	2.101	percent

➤ Low-Flow Statistics

Low-Flow Statistics Parameters [Statewide LowFlow SIR 2004 5026]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	883	square miles	9.79	1418
SANDGRAVAF	Fraction of Sand and Gravel Aquifers	0.024	dimensionless	0	0.455

Low-Flow Statistics Flow Report [Statewide LowFlow SIR 2004 5026]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR²: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	SE	ASEp	Equiv. Yrs.
7 Day 10 Year Low Flow	75.6	ft ³ /s	44.3	44.3	2.9

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>)

➤ Annual Flow Statistics

Annual Flow Statistics Parameters [Statewide Annual SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	883	square miles	14.9	1419
ELEV	Mean Basin Elevation	612	feet	239	2120
SANDGRAVAF	Fraction of Sand and Gravel Aquifers	0.024	dimensionless	0	0.212

Annual Flow Statistics Flow Report [Statewide Annual SIR 2015 5151]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR²: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	ASEp
Mean Annual Flow	1650	ft ³ /s	16

Annual Flow Statistics Citations

Dudley, R.W., 2015, Regression equations for monthly and annual mean and selected percentile streamflows for ungaged rivers in Maine: U.S. Geological Survey Scientific Investigations Report 2015-5151, 35 p.
(<http://dx.doi.org/10.3133/sir20155151>)

➤ Monthly Flow Statistics

Monthly Flow Statistics Parameters [Statewide January SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	883	square miles	14.9	1419
STATSGOA	STATSGO Percent Hydrologic Soil Type A	2.101	percent	0	31.5

Monthly Flow Statistics Parameters [Statewide February SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
BSLDEM10M	Mean Basin Slope from 10m DEM	4.816	percent	1.5	26.6
COASTDIST	Distance From Coast To Basin Centroid	114.15	miles	46.6	193
DRNAREA	Drainage Area	883	square miles	14.9	1419

Monthly Flow Statistics Parameters [Statewide March SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
COASTDIST	Distance From Coast To Basin Centroid	114.15	miles	46.6	193
DRNAREA	Drainage Area	883	square miles	14.9	1419
LC06WATER	Percent_Water_from_NLCD2006	3.383	percent	0	6.2

Monthly Flow Statistics Parameters [Statewide April SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
COASTDIST	Distance From Coast To Basin Centroid	114.15	miles	46.6	193
DRNAREA	Drainage Area	883	square miles	14.9	1419
LC06WATER	Percent_Water_from_NLCD2006	3.383	percent	0	6.2

Monthly Flow Statistics Parameters [Statewide May SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
BSLDEM10M	Mean Basin Slope from 10m DEM	4.816	percent	1.5	26.6
DRNAREA	Drainage Area	883	square miles	14.9	1419
LC06WATER	Percent_Water_from_NLCD2006	3.383	percent	0	6.2

Monthly Flow Statistics Parameters [Statewide June SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
BSLDEM10M	Mean Basin Slope from 10m DEM	4.816	percent	1.5	26.6
DRNAREA	Drainage Area	883	square miles	14.9	1419
LC06WATER	Percent_Water_from_NLCD2006	3.383	percent	0	6.2

Monthly Flow Statistics Parameters [Statewide July SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	883	square miles	14.9	1419
ELEV	Mean Basin Elevation	612	feet	239	2120
SANDGRAVAF	Fraction of Sand and Gravel Aquifers	0.024	dimensionless	0	0.212

Monthly Flow Statistics Parameters [Statewide August SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	883	square miles	14.9	1419
ELEV	Mean Basin Elevation	612	feet	239	2120
SANDGRAVAF	Fraction of Sand and Gravel Aquifers	0.024	dimensionless	0	0.212

Monthly Flow Statistics Parameters [Statewide September SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	883	square miles	14.9	1419
ELEV	Mean Basin Elevation	612	feet	239	2120
SANDGRAVAF	Fraction of Sand and Gravel Aquifers	0.024	dimensionless	0	0.212

Monthly Flow Statistics Parameters [Statewide October SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	883	square miles	14.9	1419
ELEV	Mean Basin Elevation	612	feet	239	2120
SANDGRAVAF	Fraction of Sand and Gravel Aquifers	0.024	dimensionless	0	0.212

Monthly Flow Statistics Parameters [Statewide November SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	883	square miles	14.9	1419
ELEVMAX	Maximum Basin Elevation	2436	feet	633	6290

Monthly Flow Statistics Parameters [Statewide December SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	883	square miles	14.9	1419
STATSGOA	STATSGO Percent Hydrologic Soil Type A	2.101	percent	0	31.5

Monthly Flow Statistics Flow Report [Statewide January SIR 2015 5151]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR^2: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	ASEp
January 1st percentile flow	203	ft^3/s	49
January_5th_percentile_flow	269	ft^3/s	37

Statistic	Value	Unit	ASEp
January_10th_percentile_flow	317	ft^3/s	35
January 25th percentile flow	451	ft^3/s	28
January_50th_percentile_flow	665	ft^3/s	35
January 75th percentile flow	1020	ft^3/s	39
January_90th_percentile_flow	1670	ft^3/s	40
January 95th percentile flow	2520	ft^3/s	45
January 99th percentile flow	6290	ft^3/s	79
January Mean Flow	974	ft^3/s	32

Monthly Flow Statistics Flow Report [Statewide February SIR 2015 5151]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR^2: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	ASEp
February 1st percentile flow	149	ft^3/s	50
February_5th_percentile_flow	219	ft^3/s	37
February_10th_percentile_flow	281	ft^3/s	33
February 25th percentile flow	421	ft^3/s	27
February_50th_percentile_flow	600	ft^3/s	23
February 75th percentile flow	947	ft^3/s	16
February_90th_percentile_flow	1570	ft^3/s	22
February 95th percentile flow	2180	ft^3/s	31
February 99th percentile flow	3760	ft^3/s	46
February Mean Flow	803	ft^3/s	17

Monthly Flow Statistics Flow Report [Statewide March SIR 2015 5151]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR^2: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	ASEp
March 1st percentile flow	233	ft^3/s	48
March_5th_percentile_flow	304	ft^3/s	41
March_10th_percentile_flow	353	ft^3/s	31
March 25th percentile flow	537	ft^3/s	23
March_50th_percentile_flow	1090	ft^3/s	20
March 75th percentile flow	1960	ft^3/s	25
March_90th_percentile_flow	3350	ft^3/s	29
March 95th percentile flow	4570	ft^3/s	37
March 99th percentile flow	8010	ft^3/s	33
March Mean Flow	1570	ft^3/s	21

Monthly Flow Statistics Flow Report [Statewide April SIR 2015 5151]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR²: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	ASEp
April 1st percentile flow	701	ft ³ /s	38
April_5th_percentile_flow	1190	ft ³ /s	37
April_10th_percentile_flow	1540	ft ³ /s	28
April 25th percentile flow	2370	ft ³ /s	24
April_50th_percentile_flow	4210	ft ³ /s	22
April 75th percentile flow	6650	ft ³ /s	22
April_90th_percentile_flow	9410	ft ³ /s	20
April 95th percentile flow	11400	ft ³ /s	19
April 99th percentile flow	15600	ft ³ /s	32
April Mean Flow	5010	ft ³ /s	18

Monthly Flow Statistics Flow Report [Statewide May SIR 2015 5151]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR²: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	ASEp
May 1st percentile flow	542	ft ³ /s	43
May_5th_percentile_flow	792	ft ³ /s	34
May_10th_percentile_flow	964	ft ³ /s	31
May 25th percentile flow	1440	ft ³ /s	26
May_50th_percentile_flow	2310	ft ³ /s	22
May 75th percentile flow	3630	ft ³ /s	24
May_90th_percentile_flow	5420	ft ³ /s	30
May 95th percentile flow	6690	ft ³ /s	31
May 99th percentile flow	10700	ft ³ /s	27
May Mean Flow	2900	ft ³ /s	23

Monthly Flow Statistics Flow Report [Statewide June SIR 2015 5151]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR²: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	ASEp
June 1st percentile flow	263	ft ³ /s	69
June 5th percentile flow	335	ft ³ /s	52
June_10th_percentile_flow	420	ft ³ /s	46
June 25th percentile flow	623	ft ³ /s	34
June_50th_percentile_flow	962	ft ³ /s	27
June 75th percentile flow	1660	ft ³ /s	28
June_90th_percentile_flow	2790	ft ³ /s	34

Statistic	Value	Unit	ASEp
June 95th percentile flow	3890	ft^3/s	34
June 99th percentile flow	7590	ft^3/s	47
June Mean Flow	1400	ft^3/s	21

Monthly Flow Statistics Flow Report [Statewide July SIR 2015 5151]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR^2: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	ASEp
July 1st percentile flow	123	ft^3/s	96
July_5th_percentile_flow	172	ft^3/s	78
July_10th_percentile_flow	216	ft^3/s	64
July 25th percentile flow	303	ft^3/s	49
July_50th_percentile_flow	484	ft^3/s	37
July 75th percentile flow	838	ft^3/s	31
July_90th_percentile_flow	1630	ft^3/s	28
July 95th percentile flow	2430	ft^3/s	33
July 99th percentile flow	4390	ft^3/s	60
July Mean Flow	824	ft^3/s	22

Monthly Flow Statistics Flow Report [Statewide August SIR 2015 5151]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR^2: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	ASEp
August 1st percentile flow	65.3	ft^3/s	319
August_5th_percentile_flow	93.9	ft^3/s	155
August_10th_percentile_flow	119	ft^3/s	130
August 25th percentile flow	190	ft^3/s	60
August_50th_percentile_flow	296	ft^3/s	40
August 75th percentile flow	620	ft^3/s	35
August_90th_percentile_flow	1350	ft^3/s	36
August 95th percentile flow	2080	ft^3/s	34
August 99th percentile flow	3760	ft^3/s	59
August Mean Flow	571	ft^3/s	34

Monthly Flow Statistics Flow Report [Statewide September SIR 2015 5151]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR^2: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	ASEp
September 1st percentile flow	45.3	ft^3/s	304
September_5th_percentile_flow	73.3	ft^3/s	315
September_10th_percentile_flow	90.7	ft^3/s	106

Statistic	Value	Unit	ASEp
September 25th percentile flow	142	ft^3/s	65
September_50th_percentile_flow	239	ft^3/s	36
September 75th percentile flow	449	ft^3/s	26
September_90th_percentile_flow	920	ft^3/s	38
September 95th percentile flow	1570	ft^3/s	44
September 99th percentile flow	3670	ft^3/s	67
September Mean Flow	462	ft^3/s	33

Monthly Flow Statistics Flow Report [Statewide October SIR 2015 5151]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR^2: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	ASEp
October 1st percentile flow	63.3	ft^3/s	129
October_5th_percentile_flow	109	ft^3/s	110
October_10th_percentile_flow	152	ft^3/s	64
October 25th percentile flow	259	ft^3/s	28
October_50th_percentile_flow	507	ft^3/s	33
October 75th percentile flow	1180	ft^3/s	39
October_90th_percentile_flow	2410	ft^3/s	47
October 95th percentile flow	3490	ft^3/s	45
October 99th percentile flow	7960	ft^3/s	61
October Mean Flow	1040	ft^3/s	35

Monthly Flow Statistics Flow Report [Statewide November SIR 2015 5151]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR^2: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	ASEp
November 1st percentile flow	208	ft^3/s	141
November_5th_percentile_flow	312	ft^3/s	91
November_10th_percentile_flow	447	ft^3/s	45
November 25th percentile flow	722	ft^3/s	32
November_50th_percentile_flow	1400	ft^3/s	24
November 75th percentile flow	2480	ft^3/s	21
November_90th_percentile_flow	3900	ft^3/s	26
November 95th percentile flow	5170	ft^3/s	37
November 99th percentile flow	7730	ft^3/s	58
November Mean Flow	1880	ft^3/s	23

Monthly Flow Statistics Flow Report [Statewide December SIR 2015 5151]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR^2: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	ASEp
December 1st percentile flow	324	ft^3/s	109
December_5th_percentile_flow	430	ft^3/s	33
December_10th_percentile_flow	471	ft^3/s	26
December 25th percentile flow	648	ft^3/s	27
December_50th_percentile_flow	1110	ft^3/s	35
December 75th percentile flow	1920	ft^3/s	39
December_90th_percentile_flow	3340	ft^3/s	39
December 95th percentile flow	4540	ft^3/s	38
December 99th percentile flow	9380	ft^3/s	61
December Mean Flow	1660	ft^3/s	29

Monthly Flow Statistics Flow Report [Area-Averaged]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR^2: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	ASEp
January 1st percentile flow	203	ft^3/s	49
January_5th_percentile_flow	269	ft^3/s	37
January_10th_percentile_flow	317	ft^3/s	35
January 25th percentile flow	451	ft^3/s	28
January_50th_percentile_flow	665	ft^3/s	35
January 75th percentile flow	1020	ft^3/s	39
January_90th_percentile_flow	1670	ft^3/s	40
January 95th percentile flow	2520	ft^3/s	45
January 99th percentile flow	6290	ft^3/s	79
January Mean Flow	974	ft^3/s	32
February 1st percentile flow	149	ft^3/s	50
February_5th_percentile_flow	219	ft^3/s	37
February_10th_percentile_flow	281	ft^3/s	33
February 25th percentile flow	421	ft^3/s	27
February_50th_percentile_flow	600	ft^3/s	23
February 75th percentile flow	947	ft^3/s	16
February_90th_percentile_flow	1570	ft^3/s	22
February 95th percentile flow	2180	ft^3/s	31
February 99th percentile flow	3760	ft^3/s	46
February Mean Flow	803	ft^3/s	17
March 1st percentile flow	233	ft^3/s	48
March_5th_percentile_flow	304	ft^3/s	41
March_10th_percentile_flow	353	ft^3/s	31
March 25th percentile flow	537	ft^3/s	23

Statistic	Value	Unit	ASEp
March_50th_percentile_flow	1090	ft^3/s	20
March 75th percentile flow	1960	ft^3/s	25
March_90th_percentile_flow	3350	ft^3/s	29
March 95th percentile flow	4570	ft^3/s	37
March 99th percentile flow	8010	ft^3/s	33
March Mean Flow	1570	ft^3/s	21
April 1st percentile flow	701	ft^3/s	38
April_5th_percentile_flow	1190	ft^3/s	37
April_10th_percentile_flow	1540	ft^3/s	28
April 25th percentile flow	2370	ft^3/s	24
April_50th_percentile_flow	4210	ft^3/s	22
April 75th percentile flow	6650	ft^3/s	22
April_90th_percentile_flow	9410	ft^3/s	20
April 95th percentile flow	11400	ft^3/s	19
April 99th percentile flow	15600	ft^3/s	32
April Mean Flow	5010	ft^3/s	18
May 1st percentile flow	542	ft^3/s	43
May_5th_percentile_flow	792	ft^3/s	34
May_10th_percentile_flow	964	ft^3/s	31
May 25th percentile flow	1440	ft^3/s	26
May_50th_percentile_flow	2310	ft^3/s	22
May 75th percentile flow	3630	ft^3/s	24
May_90th_percentile_flow	5420	ft^3/s	30
May 95th percentile flow	6690	ft^3/s	31
May 99th percentile flow	10700	ft^3/s	27
May Mean Flow	2900	ft^3/s	23
June 1st percentile flow	263	ft^3/s	69
June 5th percentile flow	335	ft^3/s	52
June_10th_percentile_flow	420	ft^3/s	46
June 25th percentile flow	623	ft^3/s	34
June_50th_percentile_flow	962	ft^3/s	27
June 75th percentile flow	1660	ft^3/s	28
June_90th_percentile_flow	2790	ft^3/s	34
June 95th percentile flow	3890	ft^3/s	34
June 99th percentile flow	7590	ft^3/s	47
June Mean Flow	1400	ft^3/s	21
July 1st percentile flow	123	ft^3/s	96
July_5th_percentile_flow	172	ft^3/s	78

Statistic	Value	Unit	ASEp
July_10th_percentile_flow	216	ft^3/s	64
July 25th percentile flow	303	ft^3/s	49
July_50th_percentile_flow	484	ft^3/s	37
July 75th percentile flow	838	ft^3/s	31
July_90th_percentile_flow	1630	ft^3/s	28
July 95th percentile flow	2430	ft^3/s	33
July 99th percentile flow	4390	ft^3/s	60
July Mean Flow	824	ft^3/s	22
August 1st percentile flow	65.3	ft^3/s	319
August_5th_percentile_flow	93.9	ft^3/s	155
August_10th_percentile_flow	119	ft^3/s	130
August 25th percentile flow	190	ft^3/s	60
August_50th_percentile_flow	296	ft^3/s	40
August 75th percentile flow	620	ft^3/s	35
August_90th_percentile_flow	1350	ft^3/s	36
August 95th percentile flow	2080	ft^3/s	34
August 99th percentile flow	3760	ft^3/s	59
August Mean Flow	571	ft^3/s	34
September 1st percentile flow	45.3	ft^3/s	304
September_5th_percentile_flow	73.3	ft^3/s	315
September_10th_percentile_flow	90.7	ft^3/s	106
September 25th percentile flow	142	ft^3/s	65
September_50th_percentile_flow	239	ft^3/s	36
September 75th percentile flow	449	ft^3/s	26
September_90th_percentile_flow	920	ft^3/s	38
September 95th percentile flow	1570	ft^3/s	44
September 99th percentile flow	3670	ft^3/s	67
September Mean Flow	462	ft^3/s	33
October 1st percentile flow	63.3	ft^3/s	129
October_5th_percentile_flow	109	ft^3/s	110
October_10th_percentile_flow	152	ft^3/s	64
October 25th percentile flow	259	ft^3/s	28
October_50th_percentile_flow	507	ft^3/s	33
October 75th percentile flow	1180	ft^3/s	39
October_90th_percentile_flow	2410	ft^3/s	47
October 95th percentile flow	3490	ft^3/s	45
October 99th percentile flow	7960	ft^3/s	61
October Mean Flow	1040	ft^3/s	35

Statistic	Value	Unit	ASEp
November 1st percentile flow	208	ft ³ /s	141
November_5th_percentile_flow	312	ft ³ /s	91
November_10th_percentile_flow	447	ft ³ /s	45
November 25th percentile flow	722	ft ³ /s	32
November_50th_percentile_flow	1400	ft ³ /s	24
November 75th percentile flow	2480	ft ³ /s	21
November_90th_percentile_flow	3900	ft ³ /s	26
November 95th percentile flow	5170	ft ³ /s	37
November 99th percentile flow	7730	ft ³ /s	58
November Mean Flow	1880	ft ³ /s	23
December 1st percentile flow	324	ft ³ /s	109
December_5th_percentile_flow	430	ft ³ /s	33
December_10th_percentile_flow	471	ft ³ /s	26
December 25th percentile flow	648	ft ³ /s	27
December_50th_percentile_flow	1110	ft ³ /s	35
December 75th percentile flow	1920	ft ³ /s	39
December_90th_percentile_flow	3340	ft ³ /s	39
December 95th percentile flow	4540	ft ³ /s	38
December 99th percentile flow	9380	ft ³ /s	61
December Mean Flow	1660	ft ³ /s	29

Monthly Flow Statistics Citations

Dudley, R.W.,2015, Regression equations for monthly and annual mean and selected percentile streamflows for ungaged rivers in Maine: U.S. Geological Survey Scientific Investigations Report 2015–5151, 35 p. (<http://dx.doi.org/10.3133/sir20155151>)

➤ August Flow-Duration Statistics

August Flow-Duration Statistics Parameters [66.0 Percent (581 square miles) East Aroostook 2 Variable WRI 03 4225]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	883	square miles	0.38	43.06
ELEV	Mean Basin Elevation	612	feet	437	1024

August Flow-Duration Statistics Disclaimers [66.0 Percent (581 square miles) East Aroostook 2 Variable WRI 03 4225]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors. Weighted flows were not calculated. Users should be careful to evaluate the applicability of the provided estimates. Percentage of area falls outside where region is undefined. Whole estimates have been provided using available regional equations.

August Flow-Duration Statistics Flow Report [66.0 Percent (581 square miles) East Aroostook 2 Variable WRI 03 4225]

Statistic	Value	Unit
August 50 Percent Duration	826	ft ³ /s

August Flow-Duration Statistics Citations

Lombard, P. J., Tasker, G. D., and Nielsen, M. G., 2003, August Median Streamflow on Ungaged Streams in Eastern Aroostook County, Maine: U.S. Geological Survey Water-Resources Investigations Report 03-4225, 20 p. (<http://water.usgs.gov/pubs/wri/wri034225/pdf/wrir03-4225.pdf>)

➤ Base Flow Statistics

Base Flow Statistics Parameters [Maine August Unit Baseflow RivResAppl 2021]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
JULAVPRE	Mean July Precipitation	3.865	inches	3.3	4.9
PCTSDGRV	Percent Underlain By Sand And Gravel	2.357	percent	0	73

Base Flow Statistics Flow Report [Maine August Unit Baseflow RivResAppl 2021]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR²: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	SE
Mean August unit baseflow	0.332	ft ³ /s/mi ²	20.8

Base Flow Statistics Citations

2021, Pamela J. Lombard, Robert W. Dudley, Mathias J. Collins, Rory Saunders, Earnie Atkinson Model estimated baseflow for streams with endangered Atlantic Salmon in Maine, USA; John Wiley & Sons Ltd., River Research and Applications, Volume 37, Issue 9, pp 1254-1264. (<https://doi.org/10.1002/rra.3835>)

➤ Flow Percentile Statistics

Flow Percentile Statistics Parameters [Statewide Annual SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	883	square miles	14.9	1419
ELEV	Mean Basin Elevation	612	feet	239	2120
SANDGRAVAF	Fraction of Sand and Gravel Aquifers	0.024	dimensionless	0	0.212

Flow Percentile Statistics Flow Report [Statewide Annual SIR 2015 5151]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR²: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	ASEp
1st Percentile Flow	77	ft ³ /s	144

Statistic	Value	Unit	ASEp
5th Percentile Flow	148	ft ³ /s	62
10th Percentile Flow	211	ft ³ /s	41
25th Percentile Flow	386	ft ³ /s	22
50th Percentile Flow Median	827	ft ³ /s	20
75th Percentile Flow	1980	ft ³ /s	17
90th Percentile Flow	4110	ft ³ /s	17
95th Percentile Flow	6100	ft ³ /s	18
99th Percentile Flow	10500	ft ³ /s	29

Flow Percentile Statistics Citations

Dudley, R.W., 2015, Regression equations for monthly and annual mean and selected percentile streamflows for ungaged rivers in Maine: U.S. Geological Survey Scientific Investigations Report 2015-5151, 35 p. (<http://dx.doi.org/10.3133/sir20155151>)

➤ Maximum Probable Flood Statistics

Maximum Probable Flood Statistics Parameters [Crippen Bue Region 1]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	883	square miles	0.1	10000

Maximum Probable Flood Statistics Flow Report [Crippen Bue Region 1]

Statistic	Value	Unit
Maximum Flood Crippen Bue Regional	216000	ft ³ /s

Maximum Probable Flood Statistics Citations

Crippen, J.R. and Bue, Conrad D. 1977, Maximum Floodflows in the Conterminous United States, Geological Survey Water-Supply Paper 1887, 52p. (<https://pubs.usgs.gov/wsp/1887/report.pdf>)

➤ NHD Features of Delineated Basin

NHD Streams Intersecting Basin Delineation Boundary

This functionality attempts to find the stream name at the delineation point. The name of the nearest intersecting National Hydrography Dataset (NHD) stream is selected by default to appear in the report above. NHD streams do not correspond to the StreamStats stream grid and may not be accurate. If you would like a different stream to appear in the above section, please make a selection below.

Watershed Boundary Dataset (WBD) HUC 8 Intersecting Basin Delineation Boundary

This functionality attempts to find the intersecting HUC 8 of the delineated watershed. HUC boundaries do not correspond to the StreamStats data and may not be accurate.

No WBD HUC8s intersect the delineated basin.

NHD Hydrologic Features Citations

**U.S. Geological Survey, 2022, USGS TNM - National Hydrography Dataset, accessed July 21, 2022 at URL <https://hydro.nationalmap.gov/arcgis/rest/services/nhd/MapServer/6>.
(<https://hydro.nationalmap.gov/arcgis/rest/services/nhd/MapServer/6>) U.S. Geological Survey, 2022, USGS TNM - National Hydrography Dataset, accessed July 21, 2022 at URL <https://hydro.nationalmap.gov/arcgis/rest/services/wbd/MapServer/4>.
(<https://hydro.nationalmap.gov/arcgis/rest/services/wbd/MapServer/4>)**

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Application Version: 4.37.1

SSHydro Services Version: 1.4.0

SSDelineate Services Version: 1.2.0

NSS Services Version: 2.5.0

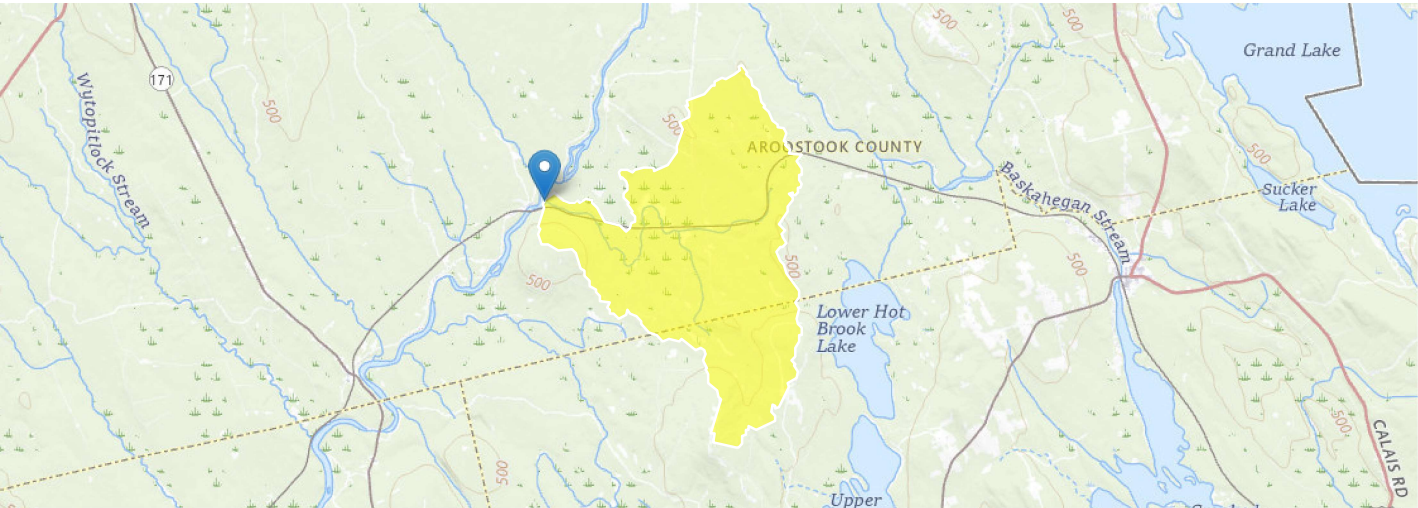
GageStats Services Version: 1.2.1

Pourpoint Services Version: 1.2.2

Batch Processor Version: 1.6.2

StreamStats Report Bog Brook

Region ID: ME
Workspace ID: ME20250409122416302000
Clicked Point (Latitude, Longitude): 45.67401, -68.02539
Time: 2025-04-09 08:25:04 -0400



+ Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	8.5	square miles
I24H100Y	Maximum 24-hour precipitation that occurs on average once in 100 years	5.31	inches
I24H10Y	Maximum 24-hour precipitation that occurs on average once in 10 years	3.65	inches
I24H200Y	Maximum 24-hour precipitation that occurs on average once in 200 years	5.87	inches
I24H25Y	Maximum 24-hour precipitation that occurs on average once in 25 years	4.3	inches
I24H2Y	Maximum 24-hour precipitation that occurs on average once in 2 years - Equivalent to precipitation intensity index	2.6	inches
I24H500Y	Maximum 24-hour precipitation that occurs on average once in 500 years	6.66	inches
I24H50Y	Maximum 24-hour precipitation that occurs on average once in 50 years	4.8	inches
I24H5Y	Maximum 24-hour precipitation that occurs on average once in 5 years	3.17	inches
STORAGE	Percentage of area of storage (lakes ponds reservoirs wetlands)	20.341	percent

Peak-Flow Statistics

Peak-Flow Statistics Parameters [Statewide multiparameter peakflows SIR 2020 5092]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	8.5	square miles	0.26	5680
I24H100Y	24 Hour 100 Year Precipitation	5.31	inches	3.99	9.88
I24H10Y	24 Hour 10 Year Precipitation	3.65	inches	2.84	6.38
I24H200Y	24 Hour 200 YearPrecipitation	5.87	inches	5.26	11.1
I24H25Y	24 Hour 25 Year Precipitation	4.3	inches	3.3	7.75
I24H2Y	24 Hour 2 Year Precipitation	2.6	inches	1.92	4.17
I24H500Y	24 Hour 500 Year Precipitation	6.66	inches	5.95	13.1
I24H50Y	24 Hour 50 Year Precipitation	4.8	inches	3.65	8.79
I24H5Y	24 Hour 5 Year Precipitation	3.17	inches	2.48	5.38

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
STORAGE	Percent Storage	20.341	percent	0	29.4

Peak-Flow Statistics Flow Report [Statewide multiparameter peakflows SIR 2020 5092]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR^2: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	PIL	PIU	ASEp
50-percent AEP flood	157	ft^3/s	83.8	294	39.1
20-percent AEP flood	229	ft^3/s	124	423	38.1
10-percent AEP flood	281	ft^3/s	150	526	38.9
4-percent AEP flood	347	ft^3/s	183	658	39.9
2-percent AEP flood	399	ft^3/s	207	770	39.7
1-percent AEP flood	452	ft^3/s	236	867	40.7
0.5-percent AEP flood	516	ft^3/s	260	1020	42.8
0.2-percent AEP flood	598	ft^3/s	297	1200	43.8

Peak-Flow Statistics Citations

Lombard, P.J., and Hodgkins, G.A.,2020, Estimating flood magnitude and frequency on gaged and ungaged streams in Maine: U.S. Geological Survey Scientific Investigations Report 2020–5092, 56 p. (<https://doi.org/10.3133/sir20205092>)

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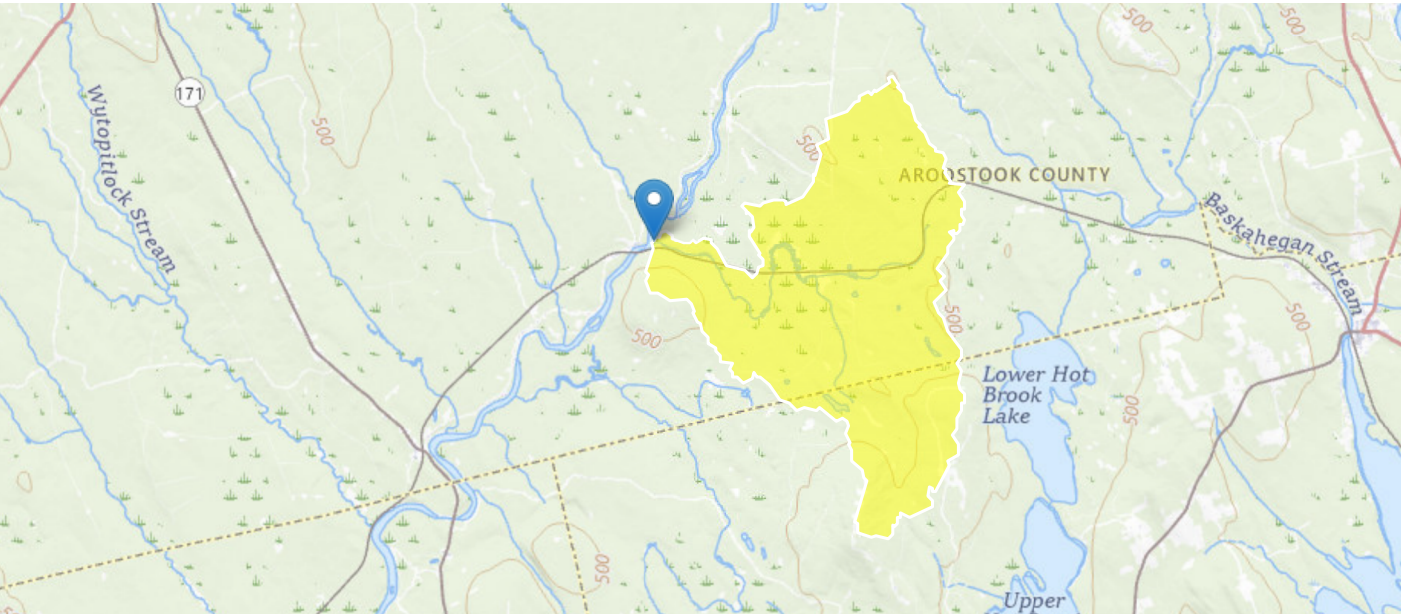
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Application Version: 4.28.1
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

3189 Bog Brook Supplemental StreamStats Report

Region ID: ME
Delineation Point (Latitude, Longitude): 45.67401, -68.02541
Time: 2026-09-09 16:54:02 -0400



StreamStats Update

Starting with version 4.30.0, the StreamStats application uses services that were redeveloped with open-source software components. Users may observe minor variations in computed results when compared to those from previous versions. These differences are expected and do not reflect errors in the underlying data or analytical methods. Users are advised to consider these potential variations when interpreting or comparing results generated across different versions of StreamStats. Please email streamstats@usgs.gov with any questions or concerns. A full list of changes can be found at <https://www.usgs.gov/streamstats/news/streamstats-data-updates-open-source-code-release> (<https://www.usgs.gov/streamstats/news/streamstats-data-updates-open-source-code-release>) .

Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BSLDEM10M	Mean basin slope computed from 10 m DEM	5.542	percent
COASTDIST	Shortest distance from the coastline to the basin centroid	98.41	miles
DRNAREA	Area that drains to a point on a stream	8.5	square miles
ELEV	Mean Basin Elevation	444	feet
ELEVMAX	Maximum basin elevation	914	feet
JULAVPRE	Mean July Precipitation	3.915	inches
LC06WATER	Percent of open water, class 11, from NLCD 2006	0.278	percent
PCTSNDGRV	Percentage of land surface underlain by sand and gravel deposits	0	percent
SANDGRAVAF	Fraction of land surface underlain by sand and gravel aquifers	0	dimensionless

Parameter Code	Parameter Description	Value	Unit
STATSGOA	Percentage of area of Hydrologic Soil Type A from STATSGO	1.743	percent

➤ Low-Flow Statistics

Low-Flow Statistics Parameters [Statewide LowFlow SIR 2004 5026]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	8.5	square miles	9.79	1418
SANDGRAVAF	Fraction of Sand and Gravel Aquifers	0	dimensionless	0	0.455

Low-Flow Statistics Disclaimers [Statewide LowFlow 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 [Statewide LowFlow SIR 2004 5026]

Statistic	Value	Unit
7 Day 10 Year Low Flow	0.283	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>)

➤ Annual Flow Statistics

Annual Flow Statistics Parameters [Statewide Annual SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	8.5	square miles	14.9	1419
ELEV	Mean Basin Elevation	444	feet	239	2120
SANDGRAVAF	Fraction of Sand and Gravel Aquifers	0	dimensionless	0	0.212

Annual Flow Statistics Disclaimers [Statewide Annual SIR 2015 5151]

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

Annual Flow Statistics Flow Report [Statewide Annual SIR 2015 5151]

Statistic	Value	Unit
Mean Annual Flow	18.4	ft ³ /s

Annual Flow Statistics Citations

➤ Monthly Flow Statistics

Monthly Flow Statistics Parameters [Statewide January SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	8.5	square miles	14.9	1419
STATSGOA	STATSGO Percent Hydrologic Soil Type A	1.743	percent	0	31.5

Monthly Flow Statistics Parameters [Statewide February SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
BSLDEM10M	Mean Basin Slope from 10m DEM	5.542	percent	1.5	26.6
COASTDIST	Distance From Coast To Basin Centroid	98.41	miles	46.6	193
DRNAREA	Drainage Area	8.5	square miles	14.9	1419

Monthly Flow Statistics Parameters [Statewide March SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
COASTDIST	Distance From Coast To Basin Centroid	98.41	miles	46.6	193
DRNAREA	Drainage Area	8.5	square miles	14.9	1419
LC06WATER	Percent_Water_from_NLCD2006	0.278	percent	0	6.2

Monthly Flow Statistics Parameters [Statewide April SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
COASTDIST	Distance From Coast To Basin Centroid	98.41	miles	46.6	193
DRNAREA	Drainage Area	8.5	square miles	14.9	1419
LC06WATER	Percent_Water_from_NLCD2006	0.278	percent	0	6.2

Monthly Flow Statistics Parameters [Statewide May SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
BSLDEM10M	Mean Basin Slope from 10m DEM	5.542	percent	1.5	26.6
DRNAREA	Drainage Area	8.5	square miles	14.9	1419
LC06WATER	Percent_Water_from_NLCD2006	0.278	percent	0	6.2

Monthly Flow Statistics Parameters [Statewide June SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
BSLDEM10M	Mean Basin Slope from 10m DEM	5.542	percent	1.5	26.6
DRNAREA	Drainage Area	8.5	square miles	14.9	1419
LC06WATER	Percent_Water_from_NLCD2006	0.278	percent	0	6.2

Monthly Flow Statistics Parameters [Statewide July SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	8.5	square miles	14.9	1419
ELEV	Mean Basin Elevation	444	feet	239	2120
SANDGRAVAF	Fraction of Sand and Gravel Aquifers	0	dimensionless	0	0.212

Monthly Flow Statistics Parameters [Statewide August SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	8.5	square miles	14.9	1419
ELEV	Mean Basin Elevation	444	feet	239	2120
SANDGRAVAF	Fraction of Sand and Gravel Aquifers	0	dimensionless	0	0.212

Monthly Flow Statistics Parameters [Statewide September SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	8.5	square miles	14.9	1419
ELEV	Mean Basin Elevation	444	feet	239	2120
SANDGRAVAF	Fraction of Sand and Gravel Aquifers	0	dimensionless	0	0.212

Monthly Flow Statistics Parameters [Statewide October SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	8.5	square miles	14.9	1419
ELEV	Mean Basin Elevation	444	feet	239	2120
SANDGRAVAF	Fraction of Sand and Gravel Aquifers	0	dimensionless	0	0.212

Monthly Flow Statistics Parameters [Statewide November SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	8.5	square miles	14.9	1419
ELEVMAX	Maximum Basin Elevation	914	feet	633	6290

Monthly Flow Statistics Parameters [Statewide December SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	8.5	square miles	14.9	1419
STATSGOA	STATSGO Percent Hydrologic Soil Type A	1.743	percent	0	31.5

Monthly Flow Statistics Disclaimers [Statewide January SIR 2015 5151]

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

Monthly Flow Statistics Flow Report [Statewide January SIR 2015 5151]

Statistic	Value	Unit
January 1st percentile flow	2.22	ft^3/s
January_5th_percentile_flow	3.32	ft^3/s

Statistic	Value	Unit
January_10th_percentile_flow	4.17	ft ³ /s
January 25th percentile flow	5.95	ft ³ /s
January_50th_percentile_flow	8.2	ft ³ /s
January 75th percentile flow	13.9	ft ³ /s
January_90th_percentile_flow	27.3	ft ³ /s
January 95th percentile flow	54.8	ft ³ /s
January 99th percentile flow	154	ft ³ /s
January Mean Flow	16.1	ft ³ /s

Monthly Flow Statistics Disclaimers [Statewide February SIR 2015 5151]

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

Monthly Flow Statistics Flow Report [Statewide February SIR 2015 5151]

Statistic	Value	Unit
February 1st percentile flow	1.87	ft ³ /s
February_5th_percentile_flow	2.02	ft ³ /s
February_10th_percentile_flow	2.29	ft ³ /s
February 25th percentile flow	3.01	ft ³ /s
February_50th_percentile_flow	4.3	ft ³ /s
February 75th percentile flow	8.15	ft ³ /s
February_90th_percentile_flow	14.3	ft ³ /s
February 95th percentile flow	28	ft ³ /s
February 99th percentile flow	72.9	ft ³ /s
February Mean Flow	8.01	ft ³ /s

Monthly Flow Statistics Disclaimers [Statewide March SIR 2015 5151]

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

Monthly Flow Statistics Flow Report [Statewide March SIR 2015 5151]

Statistic	Value	Unit
March 1st percentile flow	2.32	ft ³ /s
March_5th_percentile_flow	3.08	ft ³ /s
March_10th_percentile_flow	4.15	ft ³ /s
March 25th percentile flow	6.66	ft ³ /s
March_50th_percentile_flow	12.7	ft ³ /s
March 75th percentile flow	27.7	ft ³ /s
March_90th_percentile_flow	67.4	ft ³ /s
March 95th percentile flow	106	ft ³ /s
March 99th percentile flow	328	ft ³ /s
March Mean Flow	29.4	ft ³ /s

Monthly Flow Statistics Disclaimers [Statewide April SIR 2015 5151]

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

Monthly Flow Statistics Flow Report [Statewide April SIR 2015 5151]

Statistic	Value	Unit
April 1st percentile flow	5.76	ft ³ /s
April_5th_percentile_flow	8.78	ft ³ /s
April_10th_percentile_flow	11.8	ft ³ /s
April 25th percentile flow	21.3	ft ³ /s
April_50th_percentile_flow	38.3	ft ³ /s
April 75th percentile flow	80	ft ³ /s
April_90th_percentile_flow	158	ft ³ /s
April 95th percentile flow	234	ft ³ /s
April 99th percentile flow	484	ft ³ /s
April Mean Flow	66.9	ft ³ /s

Monthly Flow Statistics Disclaimers [Statewide May SIR 2015 5151]

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

Monthly Flow Statistics Flow Report [Statewide May SIR 2015 5151]

Statistic	Value	Unit
May 1st percentile flow	1.64	ft ³ /s
May_5th_percentile_flow	2.64	ft ³ /s
May_10th_percentile_flow	3.45	ft ³ /s
May 25th percentile flow	5.47	ft ³ /s
May_50th_percentile_flow	9.06	ft ³ /s
May 75th percentile flow	15.5	ft ³ /s
May_90th_percentile_flow	28.1	ft ³ /s
May 95th percentile flow	44	ft ³ /s
May 99th percentile flow	99.2	ft ³ /s
May Mean Flow	14.4	ft ³ /s

Monthly Flow Statistics Disclaimers [Statewide June SIR 2015 5151]

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

Monthly Flow Statistics Flow Report [Statewide June SIR 2015 5151]

Statistic	Value	Unit
June 1st percentile flow	1.03	ft ³ /s
June 5th percentile flow	1.37	ft ³ /s
June_10th_percentile_flow	1.64	ft ³ /s

Statistic	Value	Unit
June 25th percentile flow	2.7	ft ³ /s
June_50th_percentile_flow	4.96	ft ³ /s
June 75th percentile flow	12	ft ³ /s
June_90th_percentile_flow	31.8	ft ³ /s
June 95th percentile flow	65.5	ft ³ /s
June 99th percentile flow	220	ft ³ /s
June Mean Flow	13.7	ft ³ /s

Monthly Flow Statistics Disclaimers [Statewide July SIR 2015 5151]

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

Monthly Flow Statistics Flow Report [Statewide July SIR 2015 5151]

Statistic	Value	Unit
July 1st percentile flow	0.154	ft ³ /s
July_5th_percentile_flow	0.312	ft ³ /s
July_10th_percentile_flow	0.422	ft ³ /s
July 25th percentile flow	0.71	ft ³ /s
July_50th_percentile_flow	1.64	ft ³ /s
July 75th percentile flow	4.56	ft ³ /s
July_90th_percentile_flow	11.8	ft ³ /s
July 95th percentile flow	21.2	ft ³ /s
July 99th percentile flow	55.4	ft ³ /s
July Mean Flow	5.11	ft ³ /s

Monthly Flow Statistics Disclaimers [Statewide August SIR 2015 5151]

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

Monthly Flow Statistics Flow Report [Statewide August SIR 2015 5151]

Statistic	Value	Unit
August 1st percentile flow	0.0101	ft ³ /s
August_5th_percentile_flow	0.0363	ft ³ /s
August_10th_percentile_flow	0.0571	ft ³ /s
August 25th percentile flow	0.265	ft ³ /s
August_50th_percentile_flow	0.665	ft ³ /s
August 75th percentile flow	2.4	ft ³ /s
August_90th_percentile_flow	6.83	ft ³ /s
August 95th percentile flow	11.9	ft ³ /s
August 99th percentile flow	40.2	ft ³ /s
August Mean Flow	2.85	ft ³ /s

Monthly Flow Statistics Disclaimers [Statewide September SIR 2015 5151]

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

Monthly Flow Statistics Flow Report [Statewide September SIR 2015 5151]

Statistic	Value	Unit
September 1st percentile flow	0.00863	ft ³ /s
September_5th_percentile_flow	0.0137	ft ³ /s
September_10th_percentile_flow	0.0722	ft ³ /s
September 25th percentile flow	0.215	ft ³ /s
September_50th_percentile_flow	0.689	ft ³ /s
September 75th percentile flow	2.59	ft ³ /s
September_90th_percentile_flow	6.64	ft ³ /s
September 95th percentile flow	13.5	ft ³ /s
September 99th percentile flow	54.3	ft ³ /s
September Mean Flow	3.24	ft ³ /s

Monthly Flow Statistics Disclaimers [Statewide October SIR 2015 5151]

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

Monthly Flow Statistics Flow Report [Statewide October SIR 2015 5151]

Statistic	Value	Unit
October 1st percentile flow	0.0838	ft ³ /s
October_5th_percentile_flow	0.134	ft ³ /s
October_10th_percentile_flow	0.311	ft ³ /s
October 25th percentile flow	1.12	ft ³ /s
October_50th_percentile_flow	3.99	ft ³ /s
October 75th percentile flow	13.5	ft ³ /s
October_90th_percentile_flow	36	ft ³ /s
October 95th percentile flow	66.6	ft ³ /s
October 99th percentile flow	197	ft ³ /s
October Mean Flow	15.3	ft ³ /s

Monthly Flow Statistics Disclaimers [Statewide November SIR 2015 5151]

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

Monthly Flow Statistics Flow Report [Statewide November SIR 2015 5151]

Statistic	Value	Unit
November 1st percentile flow	0.734	ft ³ /s
November_5th_percentile_flow	1.31	ft ³ /s
November_10th_percentile_flow	3.01	ft ³ /s

Statistic	Value	Unit
November 25th percentile flow	7.97	ft ³ /s
November_50th_percentile_flow	15.2	ft ³ /s
November 75th percentile flow	28.7	ft ³ /s
November_90th_percentile_flow	55.5	ft ³ /s
November 95th percentile flow	83.5	ft ³ /s
November 99th percentile flow	188	ft ³ /s
November Mean Flow	25.6	ft ³ /s

Monthly Flow Statistics Disclaimers [Statewide December SIR 2015 5151]

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

Monthly Flow Statistics Flow Report [Statewide December SIR 2015 5151]

Statistic	Value	Unit
December 1st percentile flow	0.842	ft ³ /s
December_5th_percentile_flow	2.47	ft ³ /s
December_10th_percentile_flow	4.82	ft ³ /s
December 25th percentile flow	8.4	ft ³ /s
December_50th_percentile_flow	14.4	ft ³ /s
December 75th percentile flow	22.7	ft ³ /s
December_90th_percentile_flow	41.7	ft ³ /s
December 95th percentile flow	73.3	ft ³ /s
December 99th percentile flow	176	ft ³ /s
December Mean Flow	23	ft ³ /s

Monthly Flow Statistics Flow Report [Area-Averaged]

Statistic	Value	Unit
January 1st percentile flow	2.22	ft ³ /s
January_5th_percentile_flow	3.32	ft ³ /s
January_10th_percentile_flow	4.17	ft ³ /s
January 25th percentile flow	5.95	ft ³ /s
January_50th_percentile_flow	8.2	ft ³ /s
January 75th percentile flow	13.9	ft ³ /s
January_90th_percentile_flow	27.3	ft ³ /s
January 95th percentile flow	54.8	ft ³ /s
January 99th percentile flow	154	ft ³ /s
January Mean Flow	16.1	ft ³ /s
February 1st percentile flow	1.87	ft ³ /s
February_5th_percentile_flow	2.02	ft ³ /s
February_10th_percentile_flow	2.29	ft ³ /s
February 25th percentile flow	3.01	ft ³ /s

Statistic	Value	Unit
February_50th_percentile_flow	4.3	ft^3/s
February 75th percentile flow	8.15	ft^3/s
February_90th_percentile_flow	14.3	ft^3/s
February 95th percentile flow	28	ft^3/s
February 99th percentile flow	72.9	ft^3/s
February Mean Flow	8.01	ft^3/s
March 1st percentile flow	2.32	ft^3/s
March_5th_percentile_flow	3.08	ft^3/s
March_10th_percentile_flow	4.15	ft^3/s
March 25th percentile flow	6.66	ft^3/s
March_50th_percentile_flow	12.7	ft^3/s
March 75th percentile flow	27.7	ft^3/s
March_90th_percentile_flow	67.4	ft^3/s
March 95th percentile flow	106	ft^3/s
March 99th percentile flow	328	ft^3/s
March Mean Flow	29.4	ft^3/s
April 1st percentile flow	5.76	ft^3/s
April_5th_percentile_flow	8.78	ft^3/s
April_10th_percentile_flow	11.8	ft^3/s
April 25th percentile flow	21.3	ft^3/s
April_50th_percentile_flow	38.3	ft^3/s
April 75th percentile flow	80	ft^3/s
April_90th_percentile_flow	158	ft^3/s
April 95th percentile flow	234	ft^3/s
April 99th percentile flow	484	ft^3/s
April Mean Flow	66.9	ft^3/s
May 1st percentile flow	1.64	ft^3/s
May_5th_percentile_flow	2.64	ft^3/s
May_10th_percentile_flow	3.45	ft^3/s
May 25th percentile flow	5.47	ft^3/s
May_50th_percentile_flow	9.06	ft^3/s
May 75th percentile flow	15.5	ft^3/s
May_90th_percentile_flow	28.1	ft^3/s
May 95th percentile flow	44	ft^3/s
May 99th percentile flow	99.2	ft^3/s
May Mean Flow	14.4	ft^3/s
June 1st percentile flow	1.03	ft^3/s
June 5th percentile flow	1.37	ft^3/s
June_10th_percentile_flow	1.64	ft^3/s
June 25th percentile flow	2.7	ft^3/s

Statistic	Value	Unit
June_50th_percentile_flow	4.96	ft^3/s
June 75th percentile flow	12	ft^3/s
June_90th_percentile_flow	31.8	ft^3/s
June 95th percentile flow	65.5	ft^3/s
June 99th percentile flow	220	ft^3/s
June Mean Flow	13.7	ft^3/s
July 1st percentile flow	0.154	ft^3/s
July_5th_percentile_flow	0.312	ft^3/s
July_10th_percentile_flow	0.422	ft^3/s
July 25th percentile flow	0.71	ft^3/s
July_50th_percentile_flow	1.64	ft^3/s
July 75th percentile flow	4.56	ft^3/s
July_90th_percentile_flow	11.8	ft^3/s
July 95th percentile flow	21.2	ft^3/s
July 99th percentile flow	55.4	ft^3/s
July Mean Flow	5.11	ft^3/s
August 1st percentile flow	0.0101	ft^3/s
August_5th_percentile_flow	0.0363	ft^3/s
August_10th_percentile_flow	0.0571	ft^3/s
August 25th percentile flow	0.265	ft^3/s
August_50th_percentile_flow	0.665	ft^3/s
August 75th percentile flow	2.4	ft^3/s
August_90th_percentile_flow	6.83	ft^3/s
August 95th percentile flow	11.9	ft^3/s
August 99th percentile flow	40.2	ft^3/s
August Mean Flow	2.85	ft^3/s
September 1st percentile flow	0.00863	ft^3/s
September_5th_percentile_flow	0.0137	ft^3/s
September_10th_percentile_flow	0.0722	ft^3/s
September 25th percentile flow	0.215	ft^3/s
September_50th_percentile_flow	0.689	ft^3/s
September 75th percentile flow	2.59	ft^3/s
September_90th_percentile_flow	6.64	ft^3/s
September 95th percentile flow	13.5	ft^3/s
September 99th percentile flow	54.3	ft^3/s
September Mean Flow	3.24	ft^3/s
October 1st percentile flow	0.0838	ft^3/s
October_5th_percentile_flow	0.134	ft^3/s
October_10th_percentile_flow	0.311	ft^3/s
October 25th percentile flow	1.12	ft^3/s

Statistic	Value	Unit
October_50th_percentile_flow	3.99	ft^3/s
October 75th percentile flow	13.5	ft^3/s
October_90th_percentile_flow	36	ft^3/s
October 95th percentile flow	66.6	ft^3/s
October 99th percentile flow	197	ft^3/s
October Mean Flow	15.3	ft^3/s
November 1st percentile flow	0.734	ft^3/s
November_5th_percentile_flow	1.31	ft^3/s
November_10th_percentile_flow	3.01	ft^3/s
November 25th percentile flow	7.97	ft^3/s
November_50th_percentile_flow	15.2	ft^3/s
November 75th percentile flow	28.7	ft^3/s
November_90th_percentile_flow	55.5	ft^3/s
November 95th percentile flow	83.5	ft^3/s
November 99th percentile flow	188	ft^3/s
November Mean Flow	25.6	ft^3/s
December 1st percentile flow	0.842	ft^3/s
December_5th_percentile_flow	2.47	ft^3/s
December_10th_percentile_flow	4.82	ft^3/s
December 25th percentile flow	8.4	ft^3/s
December_50th_percentile_flow	14.4	ft^3/s
December 75th percentile flow	22.7	ft^3/s
December_90th_percentile_flow	41.7	ft^3/s
December 95th percentile flow	73.3	ft^3/s
December 99th percentile flow	176	ft^3/s
December Mean Flow	23	ft^3/s

Monthly Flow Statistics Citations

Dudley, R.W.,2015, Regression equations for monthly and annual mean and selected percentile streamflows for ungaged rivers in Maine: U.S. Geological Survey Scientific Investigations Report 2015–5151, 35 p.
(<http://dx.doi.org/10.3133/sir20155151>)

➤ Base Flow Statistics

Base Flow Statistics Parameters [Maine August Unit Baseflow RivResAppl 2021]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
JULAVPRE	Mean July Precipitation	3.915	inches	3.3	4.9
PCTSDGRV	Percent Underlain By Sand And Gravel	0	percent	0	73

Base Flow Statistics Flow Report [Maine August Unit Baseflow RivResAppl 2021]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR^2: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	SE
Mean August unit baseflow	0.321	ft^3/s/mi^2	20.8

Base Flow Statistics Citations

2021, Pamela J. Lombard, Robert W. Dudley, Mathias J. Collins, Rory Saunders, Earnie AtkinsonModel estimated baseflow for streams with endangered Atlantic Salmon in Maine, USA; John Wiley & Sons Ltd., River Research and Applications, Volume 37, Issue 9, pp 1254-1264. (<https://doi.org/10.1002/rra.3835>)

➤ Flow Percentile Statistics

Flow Percentile Statistics Parameters [Statewide Annual SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	8.5	square miles	14.9	1419
ELEV	Mean Basin Elevation	444	feet	239	2120
SANDGRAVAF	Fraction of Sand and Gravel Aquifers	0	dimensionless	0	0.212

Flow Percentile Statistics Disclaimers [Statewide Annual SIR 2015 5151]

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

Flow Percentile Statistics Flow Report [Statewide Annual SIR 2015 5151]

Statistic	Value	Unit
1st Percentile Flow	0.0384	ft^3/s
5th Percentile Flow	0.208	ft^3/s
10th Percentile Flow	0.533	ft^3/s
25th Percentile Flow	2.39	ft^3/s
50th Percentile Flow Median	7.72	ft^3/s
75th Percentile Flow	19.9	ft^3/s
90th Percentile Flow	44.8	ft^3/s
95th Percentile Flow	70.6	ft^3/s
99th Percentile Flow	171	ft^3/s

Flow Percentile Statistics Citations

Dudley, R.W.,2015, Regression equations for monthly and annual mean and selected percentile streamflows for ungaged rivers in Maine: U.S. Geological Survey Scientific Investigations Report 2015–5151, 35 p. (<http://dx.doi.org/10.3133/sir20155151>)

➤ Maximum Probable Flood Statistics

Maximum Probable Flood Statistics Parameters [Crippen Bue Region 1]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	8.5	square miles	0.1	10000

Maximum Probable Flood Statistics Flow Report [Crippen Bue Region 1]

Statistic	Value	Unit
Maximum Flood Crippen Bue Regional	16800	ft ³ /s

Maximum Probable Flood Statistics Citations

Crippen, J.R. and Bue, Conrad D.1977, Maximum Floodflows in the Conterminous United States, Geological Survey Water-Supply Paper 1887, 52p. (<https://pubs.usgs.gov/wsp/1887/report.pdf>)

➤ NHD Features of Delineated Basin

NHD Streams Intersecting Basin Delineation Boundary

This functionality attempts to find the stream name at the delineation point. The name of the nearest intersecting National Hydrography Dataset (NHD) stream is selected by default to appear in the report above. NHD streams do not correspond to the StreamStats stream grid and may not be accurate. If you would like a different stream to appear in the above section, please make a selection below.

No NHD streams intersect the delineated basin.

Watershed Boundary Dataset (WBD) HUC 8 Intersecting Basin Delineation Boundary

This functionality attempts to find the intersecting HUC 8 of the delineated watershed. HUC boundaries do not correspond to the StreamStats data and may not be accurate.

No WBD HUC8s intersect the delineated basin.

NHD Hydrologic Features Citations

U.S. Geological Survey, 2022, USGS TNM - National Hydrography Dataset, accessed July 21, 2022 at URL <https://hydro.nationalmap.gov/arcgis/rest/services/nhd/MapServer/6>. (<https://hydro.nationalmap.gov/arcgis/rest/services/nhd/MapServer/6>) U.S. Geological Survey, 2022, USGS TNM - National Hydrography Dataset, accessed July 21, 2022 at URL <https://hydro.nationalmap.gov/arcgis/rest/services/wbd/MapServer/4>. (<https://hydro.nationalmap.gov/arcgis/rest/services/wbd/MapServer/4>)

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Application Version: 4.37.1

SSHydro Services Version: 1.4.0

SSDelineate Services Version: 1.2.0

NSS Services Version: 2.5.0

GageStats Services Version: 1.2.1

Pourpoint Services Version: 1.2.2

Batch Processor Version: 1.6.2

Joint Probability of Coincident Flows

Estimating Joint Probabilities of Design Coincident Flows at Stream Confluences

NOTES AND ASSUMPTIONS

- The joint probabilities are determined in accordance with the provisions of NCHRP Report 15-36.
- The purpose of this calculation is to determine the joint probabilities of coincident flows.
- Develop combinations using Alternative Method (Copula-based Method) found in NCHRP Report 15-36, Appendix G. Rounded Return Period to nearest Design Returned.
- Application of the methods found in NCHRP Report 15-36 are limited to watershed pairs satisfying three conditions:
 - Neither watershed in the pair is substantially affected by regulation
 - The sum of the watershed areas is less than 9,000 mi²
 - The drainage area of the smaller watershed of the pair exceeds 1 mi²
- The watersheds satisfy the three conditions stated above. Additionally, the smaller watershed is less than 400 sq. mi. so equations 4.3 and 4.4 are used per Table G.11.
- The Best-fit equations were used over the Envelope equations because the Envelope equations would determine larger water surface elevations which would result in smaller velocities and therefore would be unconservative for a scour analysis.
- Per NCHRP Report 15-36 Section G.4.5.1, if the design site is more likely to be influence by the main stream because it is closer to the main stream than the upstream end of the influence reach, then use of the POM equations might be justified. Smith Brook Bridge is very close to the Mattawamkeag River, so the POM values will be used if the Kendall's τ values differ.
- Bog Brook will be assumed to have the same return period as Smith Brook since the Bog Brook watershed is smaller than the Smith Brook watershed.

Mattawamkeag River Drainage Area = 882.68 sq. mi
 Smith Brook Drainage Area = 15.11 sq. mi
 Total Drainage Area = 897.79 sq. mi
 Area Ratio, RA = 58.42

	Best-Fit Equations	Envelope Equations	
Kendall's τ , POM	0.4 Eq. 4.3	0.6 Eq. 4.11	POM = "Peaks on Main"
Kendall's τ , POT	0.4 Eq. 4.4	0.7 Eq. 4.12	POT = "Peaks on Tributary"

Combination	Mattawamkeag River	Smith & Bog Brooks	Joint Return	AEP	Mattawamkeag Discharge	Smith Discharge	Bog Discharge	Total Discharge	Notes
1	1.1	1.1	1.1-yr Return	91%	5536	245	79	5859	Not a Joint Probability; used for low flow condition
2	2	10	10-yr Return	10%	9130	910	281	10321	Use Q10 in place of Q9
3	10	2	10-yr Return	10%	13900	490	157	14547	Use Q10 in place of Q9
4	1.1	25	25-yr Return	4%	5536	1140	347	7023	Use Q1.1 in place of Q1.25
5	25	1.1	25-yr Return	4%	16200	245	79	16524	Use Q1.1 in place of Q1.25
6	1.1	50	50-yr Return	2%	5536	1320	399	7255	Use Q1.1 in place of Q1.25
7	25	25	50-yr Return	2%	16200	1140	347	17687	
8	50	1.1	50-yr Return	2%	17900	245	79	18224	Use Q1.1 in place of Q1.25
9	1.1	100	100-yr Return	1%	5536	1500	452	7488	Use Q1.1 in place of Q1.25
10	50	50	100-yr Return	1%	17900	1320	399	19619	Use Q50 in place of Q49
11	100	1.1	100-yr Return	1%	19600	245	79	19924	Use Q1.1 in place of Q1.25
12	1.1	500	500-yr Return	0.2%	5536	1950	598	8084	Use Q1.1 in place of Q1.25
13	500	1.1	500-yr Return	0.2%	23400	245	79	23724	Use Q500 & Q1.1 in place of Q499 & Q1.25, respectively

Table G.12. 10-yr Joint Return Periods.

Kendall's τ	Return Period on One Stream				
	1.25	2	5	10	Equal
0.2	9	7	3	4	
0.3	10	8	5	5	
0.4	-	9	6	6	
0.5	-	10	8	6	
0.6	-	-	9	7	
0.7	-	-	10	8	
0.8	-	-	-	9	
0.9	-	-	-	9	

Table G.13. 25-yr Joint Return Periods.

Kendall's τ	Return Period on One Stream				
	1.25	2	5	10	Equal
0.2	23	20	13	7	8
0.3	24	22	17	11	11
0.4	25	24	21	16	13
0.5	-	25	23	20	15
0.6	-	-	24	22	17
0.7	-	-	25	24	19
0.8	-	-	-	25	21
0.9	-	-	-	-	23

Table G.14. 50-yr Joint Return Periods.

Kendall's τ	Return Period on One Stream				
	1.25	2	5	10	Equal
0.2	47	41	30	21	15
0.3	49	46	39	31	20
0.4	50	49	45	40	25
0.5	-	50	48	45	30
0.6	-	-	50	48	34
0.7	-	-	-	50	39
0.8	-	-	-	-	43
0.9	-	-	-	-	46

10-year Design Joint Returns

Combination	Matta. River	Smith brook	Notes
1	2	9	Most likely to develop scouring velocities.
2	5	6	Omitted. Most likely not to govern.
3	6	6	Omitted. Most likely not to govern.
4	6	5	Omitted. Most likely not to govern.
5	9	2	Include to check Water Surface Elevation.

25-year

Combination	Matta. River	Smith brook	Notes
1	1.25	25	Most likely to develop scouring velocities.
2	2	24	Omitted. Most likely not to govern.
3	5	21	Omitted. Most likely not to govern.
4	10	16	Omitted. Most likely not to govern.
5	13	13	Omitted. Most likely not to govern.
6	16	10	Omitted. Most likely not to govern.
7	21	5	Omitted. Most likely not to govern.
8	24	2	Omitted. Most likely not to govern.
9	25	1.25	Include to check Water Surface Elevation.

50-year

Combination	Matta. River	Smith brook	Notes
1	1.25	50	Most likely to develop scouring velocities.
2	2	49	Omitted. Most likely not to govern.
3	5	45	Omitted. Most likely not to govern.
4	10	40	Omitted. Most likely not to govern.
5	25	25	Include for comparison
6	40	10	Omitted. Most likely not to govern.
7	45	5	Omitted. Most likely not to govern.
8	49	2	Omitted. Most likely not to govern.
9	50	1.25	Include to check Water Surface Elevation.

Estimating Joint Probabilities of Design Coincident Flows at Stream Confluences

Table G.15. 100-yr Joint Return Periods

Kendall's τ	Return Period on One Stream						
	1.25	2	5	10	25	50	Equal
0.2	95	86	67	53	32	12	28
0.3	98	94	84	74	54	28	39
0.4	100	98	94	88	73	48	49
0.5	-	100	98	95	87	68	59
0.6	-	-	100	99	95	83	68
0.7	-	-	-	100	99	93	77
0.8	-	-	-	-	100	99	85
0.9	-	-	-	-	-	100	93

100-year

Combination	Matta. River	Smith brook	Notes
1	1.25	100	Most likely to develop scouring velocities.
2	2	98	Omitted. Most likely not to govern.
3	5	94	Omitted. Most likely not to govern.
4	10	88	Omitted. Most likely not to govern.
5	25	73	Omitted. Most likely not to govern.
6	50	48	Omitted. Most likely not to govern.
7	49	49	Omitted. Most likely not to govern.
8	48	50	Include for comparison
9	73	25	Omitted. Most likely not to govern.
10	88	10	Omitted. Most likely not to govern.
11	94	5	Omitted. Most likely not to govern.
12	98	2	Omitted. Most likely not to govern.
13	100	1.25	Include to check Water Surface Elevation.

Table G.16. 500-yr Joint Return Periods

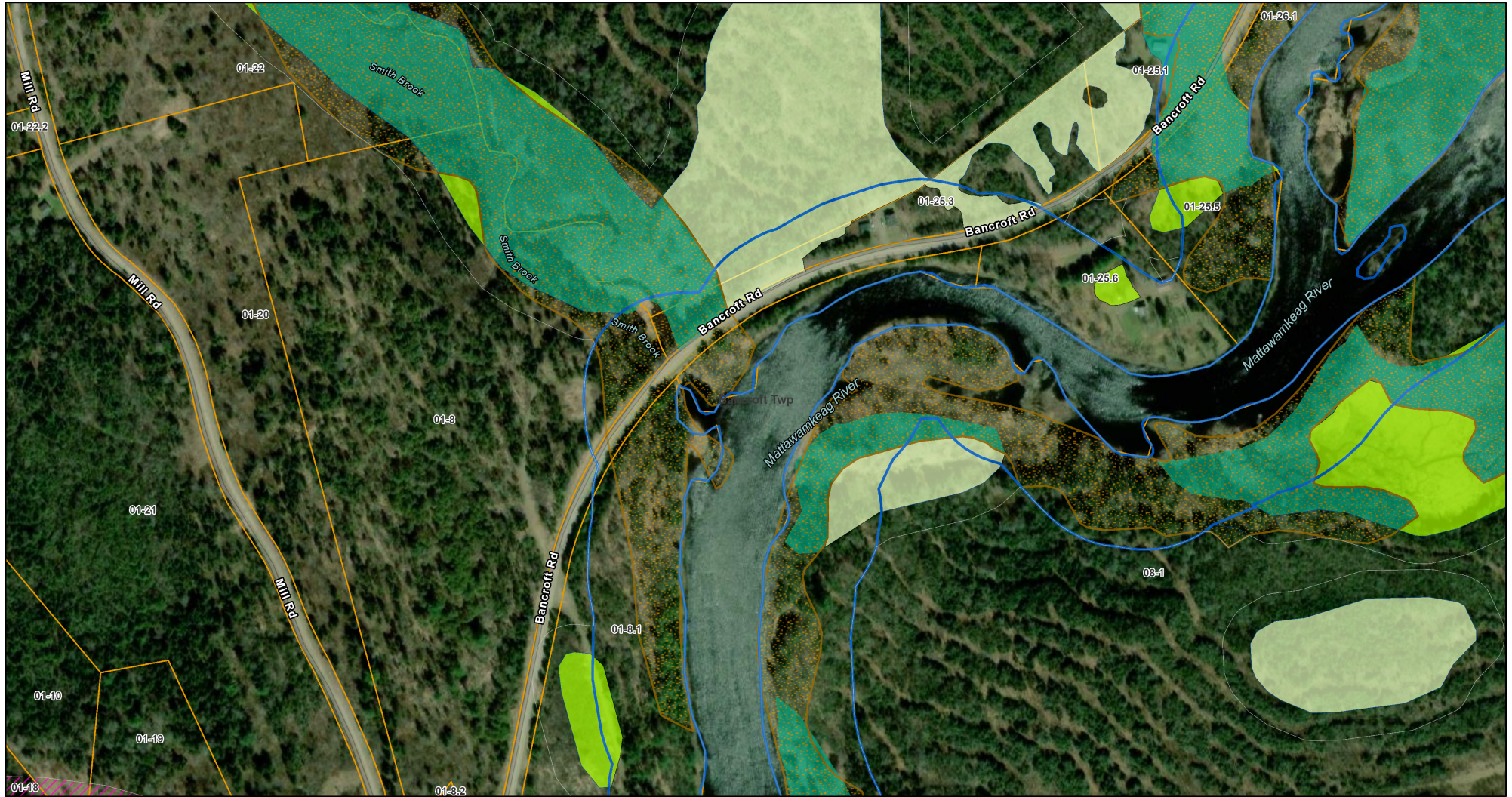
Kendall's τ	Return Period on One Stream						
	1.25	2	5	10	25	50	Equal
0.2	485	452	395	354	294	239	132
0.3	496	486	462	439	398	353	286
0.4	499	497	489	480	459	431	381
0.5	-	500	498	496	488	474	445
0.6	-	-	-	500	498	494	481
0.7	-	-	-	-	500	499	497
0.8	-	-	-	-	-	500	426
0.9	-	-	-	-	-	500	464

500-year

Combination	Matta. River	Smith brook	Notes
1	1.25	499	Most likely to develop scouring velocities.
2	2	497	Omitted. Most likely not to govern.
3	5	489	Omitted. Most likely not to govern.
4	10	480	Omitted. Most likely not to govern.
5	25	459	Omitted. Most likely not to govern.
6	50	431	Omitted. Most likely not to govern.
7	100	381	Omitted. Most likely not to govern.
8	243	243	Omitted. Most likely not to govern.
9	381	100	Omitted. Most likely not to govern.
10	431	50	Omitted. Most likely not to govern.
11	459	25	Omitted. Most likely not to govern.
12	480	10	Omitted. Most likely not to govern.
13	489	5	Omitted. Most likely not to govern.
14	497	2	Omitted. Most likely not to govern.
15	499	1.25	Include to check Water Surface Elevation.

LUPC Zoning & Parcel Viewer Map

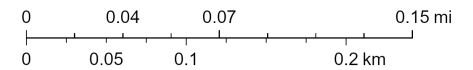
LUPC Zoning and Parcel Viewer



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- | | | |
|--|--|---|
|  Towns |  P-FP: Flood Prone Area Protection |  P-WL2: Scrub-shrub Wetlands Protection |
| LUPC Zones |  P-SL1: Shoreland - 250' Protection |  P-WL3: Forested Wetlands Protection |
|  D-GN: General Development |  P-SL2: Shoreland - 75' Protection |  Unorganized Territory Parcels |
|  M-GN: General Management |  P-WL1: Wetlands of Special Significance Protection | |

1:4,440



Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, (c) OpenStreetMap contributors, and the GIS User Community. Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

LUPC Zoning and Parcel Viewer



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 ArcGIS World Geocoding Service Maine and New Hampshire View
LUPC Zones
 P-FP: Flood Prone Area Protection
World Imagery
Low Resolution 15m Imagery

High Resolution 60cm Imagery
High Resolution 30cm Imagery
Citations
60cm Resolution Metadata

