

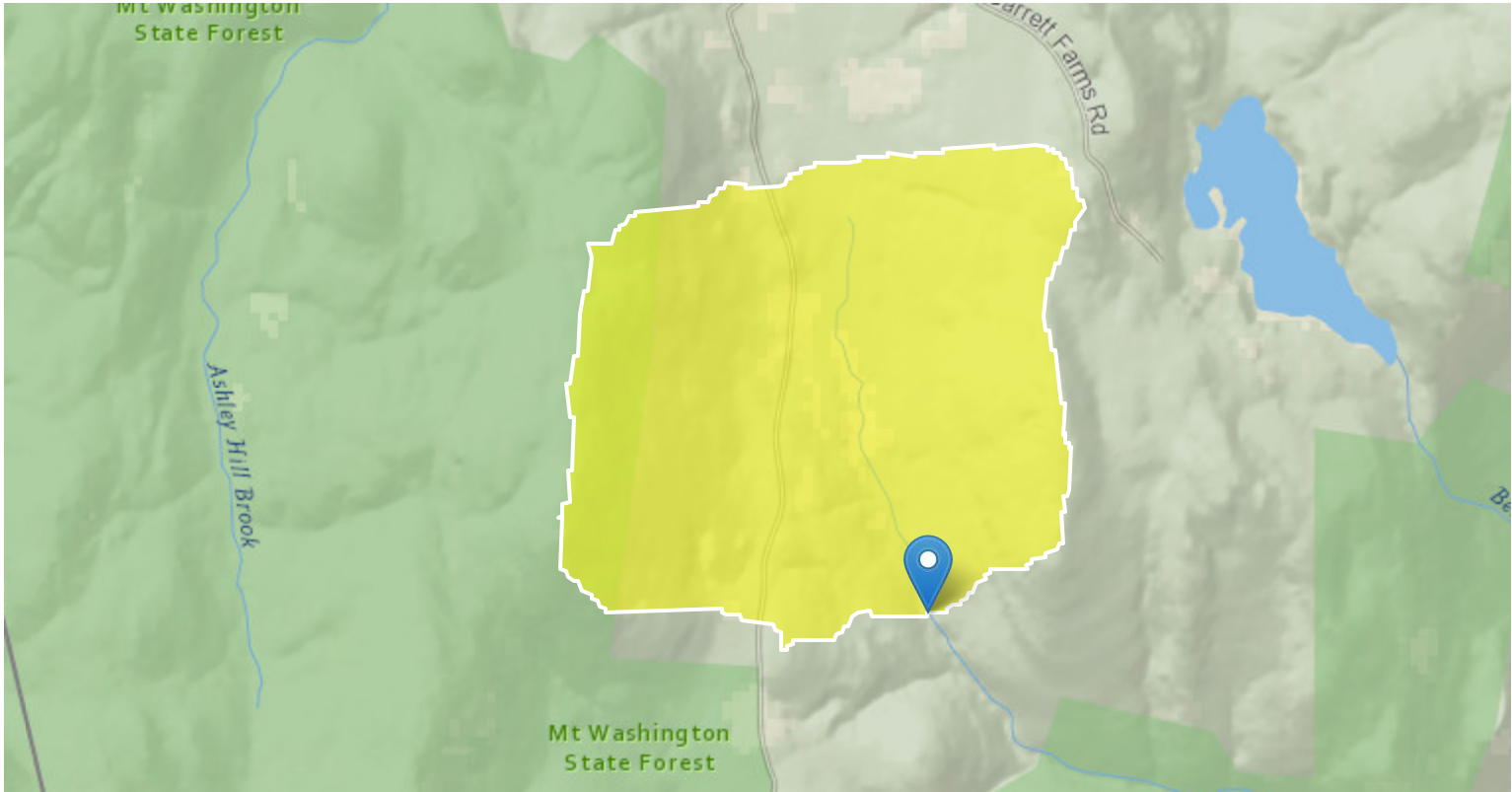
# StreamStats Report

Region ID: MA

Workspace ID: MA20200518150849008000

Clicked Point (Latitude, Longitude): 42.05828, -73.45931

Time: 2020-05-18 11:09:04 -0400



## Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	1.05	square miles
BSLDEM250	Mean basin slope computed from 1:250K DEM	14.078	percent
DRFTPERSTR	Area of stratified drift per unit of stream length	0.04	square mile per mile
MAREGION	Region of Massachusetts 0 for Eastern 1 for Western	1	dimensionless
ELEV	Mean Basin Elevation	1840	feet
LC06STOR	Percentage of water bodies and wetlands determined from the NLCD 2006	7.64	percent
PCTSNDGRV	Percentage of land surface underlain by sand and gravel deposits	2.89	percent
FOREST	Percentage of area covered by forest	80.85	percent

Parameter Code	Parameter Description	Value	Unit
BSLDEM10M	Mean basin slope computed from 10 m DEM	17.475	percent
ACRSDFE	Area underlain by stratified drift	0.0308	square miles
CENTROIDX	Basin centroid horizontal (x) location in state plane coordinates	37483.8	meters
CENTROIDY	Basin centroid vertical (y) location in state plane units	870206.1	meters
CRSDFE	Percentage of area of coarse-grained stratified drift	2.89	percent
LAKEAREA	Percentage of Lakes and Ponds	0.13	percent
LC11DEV	Percentage of developed (urban) land from NLCD 2011 classes 21-24	1.79	percent
LC11IMP	Average percentage of impervious area determined from NLCD 2011 impervious dataset	0.0458	percent
MAXTEMPC	Mean annual maximum air temperature over basin area, in degrees Centigrade	11.7	feet per mi
OUTLETX	Basin outlet horizontal (x) location in state plane coordinates	37835	feet
OUTLETY	Basin outlet vertical (y) location in state plane coordinates	869405	feet
PRECPRI00	Basin average mean annual precipitation for 1971 to 2000 from PRISM	54.3	inches
STRMTOT	total length of all mapped streams (1:24,000-scale) in the basin	0.77	miles
WETLAND	Percentage of Wetlands	5.72	percent

Low-Flow Statistics Parameters<sup>[Statewide Low Flow WRIR00 4135]</sup>

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	1.05	square miles	1.61	149
BSLDEM250	Mean Basin Slope from 250K DEM	14.078	percent	0.32	24.6
DRFTPERSTR	Stratified Drift per Stream Length	0.04	square mile per mile	0	1.29
MAREGION	Massachusetts Region	1	dimensionless	0	1

Low-Flow Statistics Disclaimers<sup>[Statewide Low Flow WRIR00 4135]</sup>

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

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.11	ft <sup>3</sup> /s
7 Day 10 Year Low Flow	0.059	ft <sup>3</sup> /s

*Low-Flow Statistics Citations*

**Ries, K.G., III,2000, Methods for estimating low-flow statistics for Massachusetts streams: U.S. Geological Survey Water Resources Investigations Report 00-4135, 81 p.**  
**(<http://pubs.usgs.gov/wri/wri004135/>)**

## Peak-Flow Statistics Parameters[Peak Statewide 2016 5156]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	1.05	square miles	0.16	512
ELEV	Mean Basin Elevation	1840	feet	80.6	1948
LC06STOR	Percent Storage from NLCD2006	7.64	percent	0	32.3

## Peak-Flow Statistics Flow Report[Peak Statewide 2016 5156]

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

Statistic	Value	Unit	PII	Plu	SEp
2 Year Peak Flood	77.9	ft <sup>3</sup> /s	35.4	172	42.3
5 Year Peak Flood	138	ft <sup>3</sup> /s	61.6	311	43.4
10 Year Peak Flood	191	ft <sup>3</sup> /s	82.7	443	44.7
25 Year Peak Flood	274	ft <sup>3</sup> /s	113	662	47.1
50 Year Peak Flood	345	ft <sup>3</sup> /s	137	870	49.4
100 Year Peak Flood	425	ft <sup>3</sup> /s	162	1110	51.8
200 Year Peak Flood	514	ft <sup>3</sup> /s	189	1400	54.1
500 Year Peak Flood	648	ft <sup>3</sup> /s	224	1870	57.6

*Peak-Flow Statistics Citations*

**Zarriello, P.J.,2017, Magnitude of flood flows at selected annual exceedance probabilities for streams in Massachusetts: U.S. Geological Survey Scientific Investigations Report 2016-5156, 99 p.**  
**(<https://dx.doi.org/10.3133/sir20165156>)**

## August Flow-Duration Statistics Parameters[Statewide Low Flow WRIR00 4135]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	1.05	square miles	1.61	149
BSLDEM250	Mean Basin Slope from 250K DEM	14.078	percent	0.32	24.6
DRFTPERSTR	Stratified Drift per Stream Length	0.04	square mile per mile	0	1.29
MAREGION	Massachusetts Region	1	dimensionless	0	1

August Flow-Duration Statistics Disclaimers<sup>[Statewide Low Flow WRIR00 4135]</sup>

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

August Flow-Duration Statistics Flow Report<sup>[Statewide Low Flow WRIR00 4135]</sup>

Statistic	Value	Unit
August 50 Percent Duration	0.252	ft <sup>3</sup> /s

*August Flow-Duration Statistics Citations*

**Ries, K.G., III, 2000, Methods for estimating low-flow statistics for Massachusetts streams: U.S. Geological Survey Water Resources Investigations Report 00-4135, 81 p.**  
[\(http://pubs.usgs.gov/wri/wri004135/\)](http://pubs.usgs.gov/wri/wri004135/)

Flow-Duration Statistics Parameters<sup>[Statewide Low Flow WRIR00 4135]</sup>

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	1.05	square miles	1.61	149
DRFTPERSTR	Stratified Drift per Stream Length	0.04	square mile per mile	0	1.29
MAREGION	Massachusetts Region	1	dimensionless	0	1
BSLDEM250	Mean Basin Slope from 250K DEM	14.078	percent	0.32	24.6

Flow-Duration Statistics Disclaimers<sup>[Statewide Low Flow WRIR00 4135]</sup>

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

Flow-Duration Statistics Flow Report<sup>[Statewide Low Flow WRIR00 4135]</sup>

Statistic	Value	Unit
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Statistic	Value	Unit
50 Percent Duration	1	ft <sup>3</sup> /s
60 Percent Duration	0.631	ft <sup>3</sup> /s
70 Percent Duration	0.419	ft <sup>3</sup> /s
75 Percent Duration	0.33	ft <sup>3</sup> /s
80 Percent Duration	0.316	ft <sup>3</sup> /s
85 Percent Duration	0.251	ft <sup>3</sup> /s
90 Percent Duration	0.206	ft <sup>3</sup> /s
95 Percent Duration	0.131	ft <sup>3</sup> /s
98 Percent Duration	0.0849	ft <sup>3</sup> /s
99 Percent Duration	0.0613	ft <sup>3</sup> /s

*Flow-Duration Statistics Citations*

**Ries, K.G., III, 2000, Methods for estimating low-flow statistics for Massachusetts streams: U.S. Geological Survey Water Resources Investigations Report 00-4135, 81 p.**  
**(<http://pubs.usgs.gov/wri/wri004135/>)**

Probability Statistics Parameters<sup>[Perennial Flow Probability]</sup>

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	1.05	square miles	0.01	1.99
PCTSNDGRV	Percent Underlain By Sand And Gravel	2.89	percent	0	100
FOREST	Percent Forest	80.85	percent	0	100
MAREGION	Massachusetts Region	1	dimensionless	0	1

Probability Statistics Flow Report<sup>[Perennial Flow Probability]</sup>

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

Statistic	Value	Unit	PC
Probability Stream Flowing Perennially	0.853	dim	71

*Probability Statistics Citations*

**Bent, G.C., and Steeves, P.A., 2006, A revised logistic regression equation and an automated procedure for mapping the probability of a stream flowing perennially in Massachusetts: U.S. Geological Survey Scientific Investigations Report 2006-5031, 107 p.**  
**([http://pubs.usgs.gov/sir/2006/5031/pdfs/SIR\\_2006-5031rev.pdf](http://pubs.usgs.gov/sir/2006/5031/pdfs/SIR_2006-5031rev.pdf))**

**Bankfull Statistics Parameters**[Bankfull Statewide SIR2013 5155]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	1.05	square miles	0.6	329
BSLDEM10M	Mean Basin Slope from 10m DEM	17.475	percent	2.2	23.9

**Bankfull Statistics Flow Report**[Bankfull Statewide SIR2013 5155]

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

Statistic	Value	Unit	SEp
Bankfull Width	17.9	ft	21.3
Bankfull Depth	1.09	ft	19.8
Bankfull Area	19.3	ft <sup>2</sup>	29
Bankfull Streamflow	76.6	ft <sup>3</sup> /s	55

*Bankfull Statistics Citations*

**Bent, G.C., and Waite, A.M., 2013, Equations for estimating bankfull channel geometry and discharge for streams in Massachusetts: U.S. Geological Survey Scientific Investigations Report 2013–5155, 62 p., (<http://pubs.usgs.gov/sir/2013/5155/>)**

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