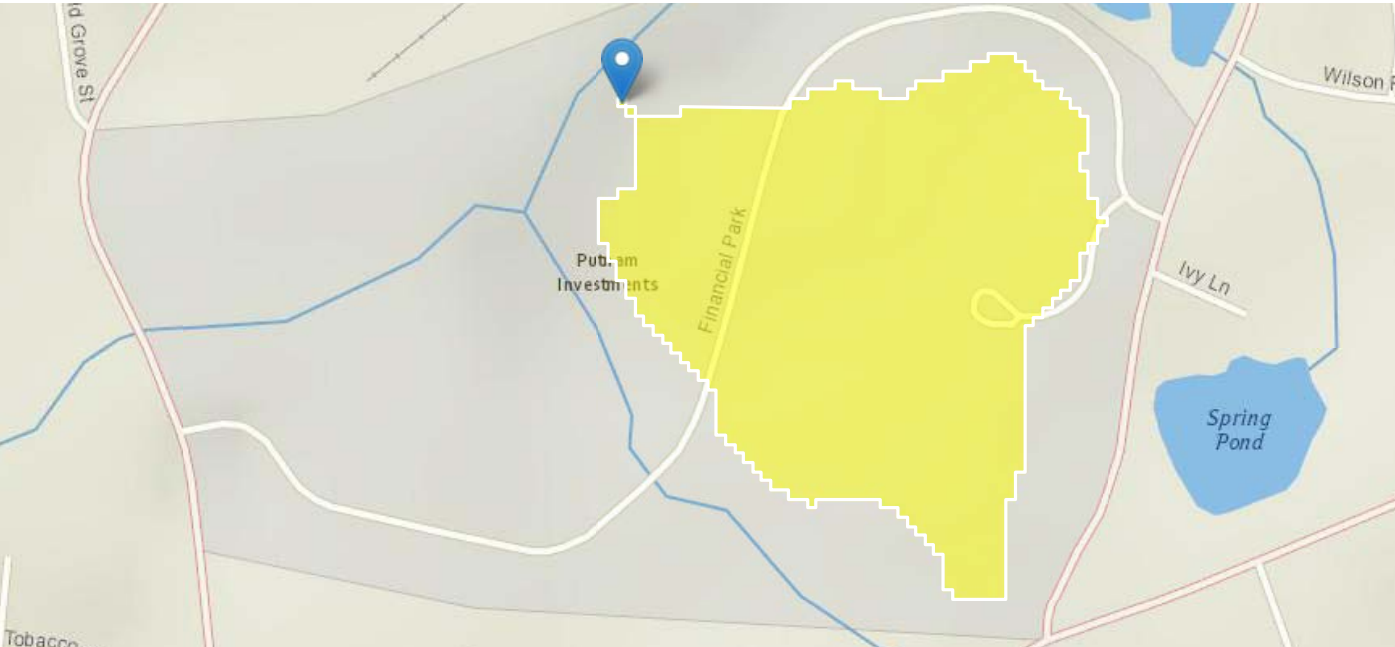


100 Financial Park, Franklin Wetland K StreamStats Report

Region ID: MA
Workspace ID: MA20230622181305778000
Clicked Point (Latitude, Longitude): 42.06400, -71.42178
Time: 2023-06-22 14:13:27 -0400



Collapse All

➤ Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BSLDEM10M	Mean basin slope computed from 10 m DEM	4.019	percent
BSLDEM250	Mean basin slope computed from 1:250K DEM	0.686	percent
DRFTPERSTR	Area of stratified drift per unit of stream length	-100000	square mile per mile
DRNAREA	Area that drains to a point on a stream	0.0788	square miles
ELEV	Mean Basin Elevation	260	feet
FOREST	Percentage of area covered by forest	40.78	percent
LC06STOR	Percentage of water bodies and wetlands determined from the NLCD 2006	4.17	percent
MAREGION	Region of Massachusetts 0 for Eastern 1 for Western	0	dimensionless
PCTSNDGRV	Percentage of land surface underlain by sand and gravel deposits	100	percent

➤ Peak-Flow Statistics

Peak-Flow Statistics Parameters [Peak Statewide 2016 5156]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.0788	square miles	0.16	512
ELEV	Mean Basin Elevation	260	feet	80.6	1948
LC06STOR	Percent Storage from NLCD2006	4.17	percent	0	32.3

Peak-Flow Statistics Disclaimers [Peak Statewide 2016 5156]

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

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

Statistic	Value	Unit
50-percent AEP flood	5.58	ft ³ /s
20-percent AEP flood	9.64	ft ³ /s
10-percent AEP flood	13	ft ³ /s
4-percent AEP flood	17.9	ft ³ /s
2-percent AEP flood	22.1	ft ³ /s
1-percent AEP flood	26.6	ft ³ /s
0.5-percent AEP flood	31.5	ft ³ /s
0.2-percent AEP flood	38.8	ft ³ /s

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>)

➤ Low-Flow Statistics

Low-Flow Statistics Parameters [Statewide Low Flow WRIR00 4135]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.0788	square miles	1.61	149
BSLDEM250	Mean Basin Slope from 250K DEM	0.686	percent	0.32	24.6
DRFTPERSTR	Stratified Drift per Stream Length	-100000	square mile per mile	0	1.29
MAREGION	Massachusetts Region	0	dimensionless	0	1

Low-Flow Statistics Disclaimers [Statewide Low Flow WRIR00 4135]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors. Equation M7D2Y in GC320 could not be calculated due to undefined basin characteristic. Equation M7D10Y in GC320 could not be

calculated due to undefined basin characteristic.

Low-Flow Statistics Flow Report [Statewide Low Flow WRIR00 4135]

Statistic	Value	Unit
7 Day 2 Year Low Flow	undefined	ft^3/s
7 Day 10 Year Low Flow	undefined	ft^3/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/>)

➤ Flow-Duration Statistics

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

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.0788	square miles	1.61	149
DRFTPERSTR	Stratified Drift per Stream Length	-100000	square mile per mile	0	1.29
MAREGION	Massachusetts Region	0	dimensionless	0	1
BSLDEM250	Mean Basin Slope from 250K DEM	0.686	percent	0.32	24.6

Flow-Duration Statistics Disclaimers [Statewide Low Flow WRIR00 4135]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors. Equation D60 in GC320 could not be calculated due to undefined basin characteristic. Equation D70 in GC320 could not be calculated due to undefined basin characteristic. Equation D75 in GC320 could not be calculated due to undefined basin characteristic. Equation D80 in GC320 could not be calculated due to undefined basin characteristic. Equation D85 in GC320 could not be calculated due to undefined basin characteristic. Equation D90 in GC320 could not be calculated due to undefined basin characteristic. Equation D95 in GC320 could not be calculated due to undefined basin characteristic. Equation D98 in GC320 could not be calculated due to undefined basin characteristic. Equation D99 in GC320 could not be calculated due to undefined basin characteristic.

Flow-Duration Statistics Flow Report [Statewide Low Flow WRIR00 4135]

Statistic	Value	Unit
50 Percent Duration	0.0715	ft^3/s
60 Percent Duration	undefined	ft^3/s
70 Percent Duration	undefined	ft^3/s
75 Percent Duration	undefined	ft^3/s
80 Percent Duration	undefined	ft^3/s
85 Percent Duration	undefined	ft^3/s
90 Percent Duration	undefined	ft^3/s
95 Percent Duration	undefined	ft^3/s
98 Percent Duration	undefined	ft^3/s
99 Percent Duration	undefined	ft^3/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/>)

➤ August Flow-Duration Statistics

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

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.0788	square miles	1.61	149
BSLDEM250	Mean Basin Slope from 250K DEM	0.686	percent	0.32	24.6
DRFTPERSTR	Stratified Drift per Stream Length	-100000	square mile per mile	0	1.29
MAREGION	Massachusetts Region	0	dimensionless	0	1

August Flow-Duration Statistics Disclaimers [Statewide Low Flow WRIR00 4135]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors. Equation AUGD50 in GC320 could not be calculated due to undefined basin characteristic.

August Flow-Duration Statistics Flow Report [Statewide Low Flow WRIR00 4135]

Statistic	Value	Unit
August 50 Percent Duration	undefined	ft ³ /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/>)

➤ Bankfull Statistics

Bankfull Statistics Parameters [Bankfull Statewide SIR2013 5155]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.0788	square miles	0.6	329
BSLDEM10M	Mean Basin Slope from 10m DEM	4.019	percent	2.2	23.9

Bankfull Statistics Parameters [Appalachian Highlands D Bieger 2015]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.0788	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	0.0788	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	0.0788	square miles	0.07722	59927.7393

Bankfull Statistics Disclaimers [Bankfull Statewide SIR2013 5155]

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

Bankfull Statistics Flow Report [Bankfull Statewide SIR2013 5155]

Statistic	Value	Unit
Bankfull Width	5.01	ft
Bankfull Depth	0.423	ft
Bankfull Area	2.08	ft^2
Bankfull Streamflow	3.52	ft^3/s

Bankfull Statistics Flow Report [Appalachian Highlands D Bieger 2015]

Statistic	Value	Unit
Bieger_D_channel_width	5.29	ft
Bieger_D_channel_depth	0.541	ft
Bieger_D_channel_cross_sectional_area	2.88	ft^2

Bankfull Statistics Disclaimers [New England P Bieger 2015]

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

Bankfull Statistics Flow Report [New England P Bieger 2015]

Statistic	Value	Unit
Bieger_P_channel_width	12.4	ft
Bieger_P_channel_depth	0.786	ft
Bieger_P_channel_cross_sectional_area	9.47	ft^2

Bankfull Statistics Flow Report [USA Bieger 2015]

Statistic	Value	Unit
Bieger_USA_channel_width	5.06	ft
Bieger_USA_channel_depth	0.702	ft
Bieger_USA_channel_cross_sectional_area	4.33	ft^2

Bankfull Statistics Flow Report [Area-Averaged]

Statistic	Value	Unit
Bankfull Width	5.01	ft

Statistic	Value	Unit
Bankfull Depth	0.423	ft
Bankfull Area	2.08	ft^2
Bankfull Streamflow	3.52	ft^3/s
Bieger_D_channel_width	5.29	ft
Bieger_D_channel_depth	0.541	ft
Bieger_D_channel_cross_sectional_area	2.88	ft^2
Bieger_P_channel_width	12.4	ft
Bieger_P_channel_depth	0.786	ft
Bieger_P_channel_cross_sectional_area	9.47	ft^2
Bieger_USA_channel_width	5.06	ft
Bieger_USA_channel_depth	0.702	ft
Bieger_USA_channel_cross_sectional_area	4.33	ft^2

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/>)

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=PDFCoverPage)

➤ Probability Statistics

Probability Statistics Parameters [Perennial Flow Probability]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.0788	square miles	0.01	1.99
PCTSNDGRV	Percent Underlain By Sand And Gravel	100	percent	0	100
FOREST	Percent Forest	40.78	percent	0	100
MAREGION	Massachusetts Region	0	dimensionless	0	1

Probability Statistics Flow Report [Perennial Flow Probability]

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

Statistic	Value	Unit	PC
Probability Stream Flowing Perennially	0.612	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)

➤ Maximum Probable Flood Statistics

Maximum Probable Flood Statistics Parameters [Crippen Bue Region 2]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.0788	square miles	0.1	3000

Maximum Probable Flood Statistics Disclaimers [Crippen Bue Region 2]

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

Maximum Probable Flood Statistics Flow Report [Crippen Bue Region 2]

Statistic	Value	Unit
Maximum Flood Crippen Bue Regional	890	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>)

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StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1