WIN:	25411.00	**Project Name:**	culvert replacement
Town:	Mapleton	**Stream Name:**	unnamed trib to Teakettle Brook
Route No.	Hughes Road	**Bridge Name:**	n.a.
Asset ID:	227865/227863	**Analysis by:**	MRL
Lat:	46.71405 **Long:** -68.16734	**Date:**	7/30/2021

Peak Flow Calculations by USGS Regression Equations (Lombard/Hodgkins, 2021; Hodgkins, 1999 & Lombard/Hodgkins, 2015)

Enter data in blue cells only!

ver. 2021 Jan 01

	km²	mi²	ac	*Enter data in [mi²]*
A	2.59	1.00	640.0	Watershed Area *DRNAREA*
W	0.22	0.09	54.9	Wetlands area (by NWI)
P_c	562021	5174098		watershed centroid (E, N; UTM 19N; meters)
County	Aroostook N			*choose county from drop-down menu*

Worksheet prepared by:
Charles S. Hebson, PE
Environmental Office
Maine Dept. Transportation
Augusta, ME 04333-0016
207-557-1052
Charles.Hebson@maine.gov

Watershed Characteristics from StreamStats

STORNWI	8.58	NWI Wetlands %
SANDGRAVF	0.00	sand & gravel aquifer as decimal fraction of watershed A
ELEV	687.4	mean basin elevation (ft)
BSLDEM10M	4.31	mean basin slope (%)
COASTDIST	166.00	distance from the coast (mi)
ELEVMAX	904.2	maximum basin elevation (ft)
LC06WATER	0	percent of drainage basin land cover as open water
PRECIP	37.1	mean annual precipitation
STATSGOA	0	mean basin percentage of hydrological soil group A

References:

Hodgkins, G.A., 1999.
Estimating the magnitude of peak flows for streams in Maine for Selected Recurrence Intervals
WRIR 99-4008, USGS Augusta, ME

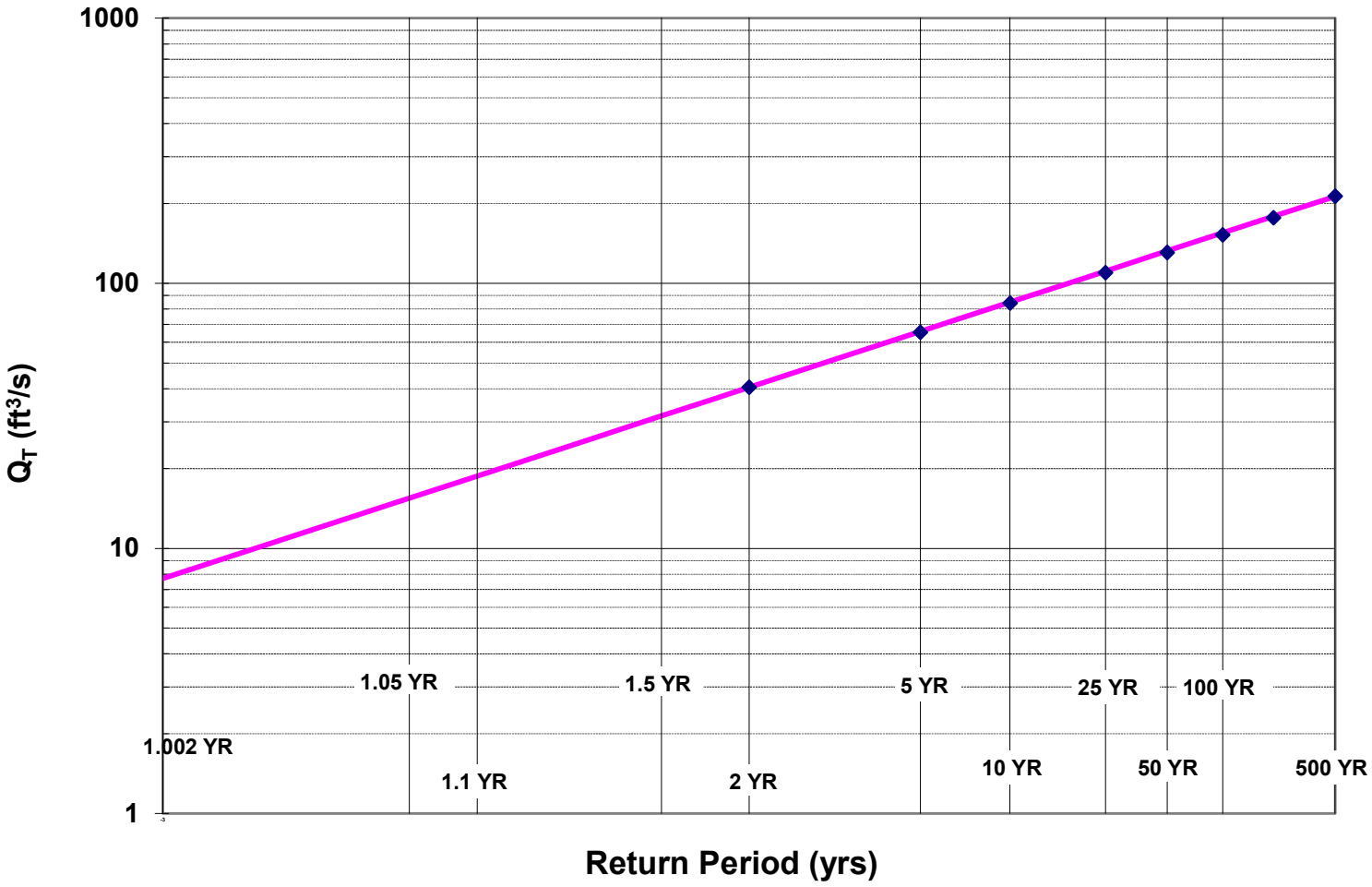
Lombard, P.J. & G.A. Hodgkins, 2015.
Peak flow regression equations for small, ungaged streams: in Maine: Comparing Map-Based to Field-Based Variables
SIR 2015-4059, USGS, Augusta, ME

Lombard, P.J. & G.A. Hodgkins, 2021.
Estimating Flood Magnitude and Frequency on Gaged and Ungaged Streams in Maine
SIR 2021-xxxx, USGS, Augusta, ME.

Ret Pd T (yr)	I24	Q_T (ft³/s) *1999 / 2015*	Q_T (ft³/s) *2021*	Q_T (ft³/s) ***Design***
1.1			19	***20***
2	2.31	48	41	***40***
5	2.84	75	65	***65***
10	3.29	94	84	***85***
25	3.90	123	110	***110***
50	4.37	143	131	***130***
100	4.85	167	152	***150***
200	5.37	191	177	***175***

Instructions:
Enter values in blue cells only, watershed data from StreamStats
Generate "I24" table from NOAA Atlas 14, copy CSV file into I24 page
Use results under "Design"
Check against gage data and FEMA studies if available
Questions? Check with ENV / Hydrology Section

Log-Normal Probability Plot



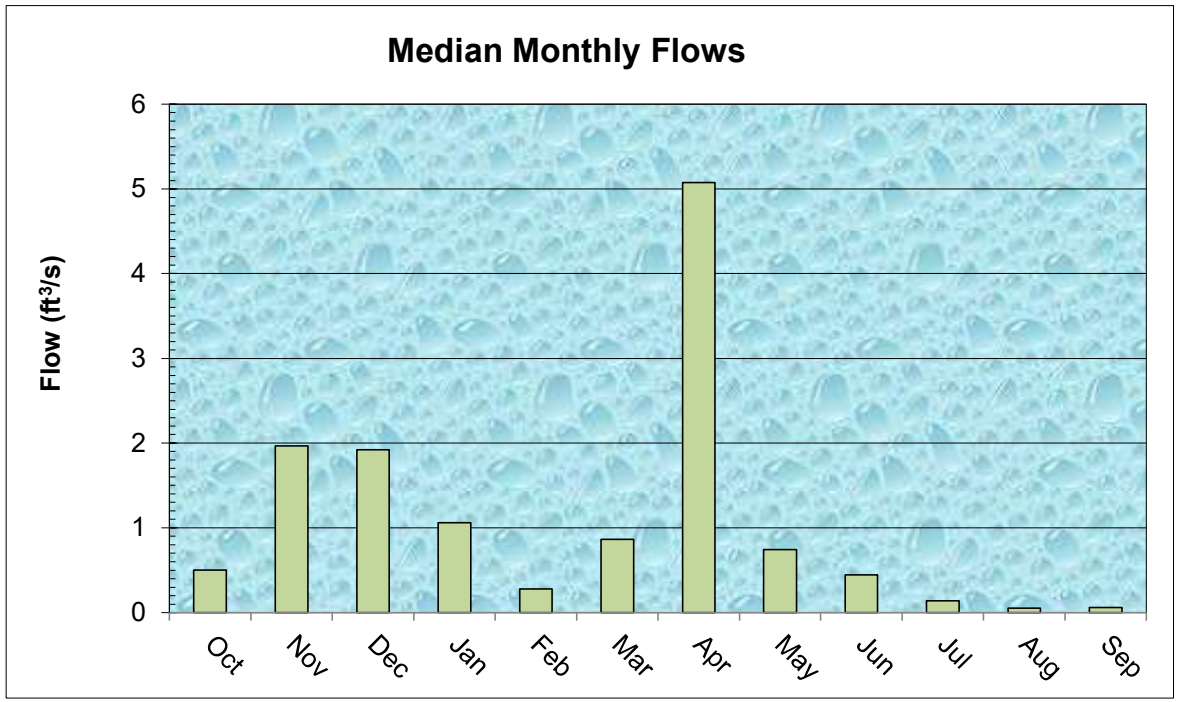
WIN:	25411.00	**Project Name:**	culvert replacement
Town:	Mapleton	**Stream Name:**	unnamed trib to Teakettle Brook
Route No.	Hughes Road	**Bridge Name:**	n.a.
Asset ID:	227865/227863	**Analysis by:**	MRL
Lat:	46.71405 **Long:** -68.16734	**Date:**	7/30/2021

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

MAINE MONTHLY MEDIAN FLOWS and HYDRAULIC GEOMETRY BY USGS REGRESSION EQUATIONS (2004, 2013, 2015)

	Value	Variable	Explanation
	1.00	*A*	Area (mi^2)
562020.8	5174098	P_c	Watershed centroid (E,N; UTM; Zone 19; meters)
	165.01	*DIST*	Distance from Coastal reference line (mi)
	37.1	*pptA*	Mean Annual Precipitation (inches)
	0.00	*SG*	Sand & Gravel Aquifer (decimal fraction of watershed area)

Month	Q_{median} (ft3/s)	(m^3/s)
Jan	**1.06**	0.0300
Feb	**0.28**	0.0078
Mar	**0.86**	0.0245
Apr	**5.07**	0.1437
May	**0.74**	0.0210
Jun	**0.44**	0.0126
Jul	**0.14**	0.0039
Aug	**0.05**	0.0014
Sep	**0.06**	0.0017
Oct	**0.50**	0.0142
Nov	**1.97**	0.0558
Dec	**1.92**	0.0544



Q_{bf}	**5.2**	
ann avg	**2.4**	
ann med	**1.0**	
$Q_{1.002}$	**7.7**	
$Q_{1.01}$	**10.6**	
$Q_{1.05}$	**15.5**	
Q_{bf}	**25.1**	assume v = 4ft/s

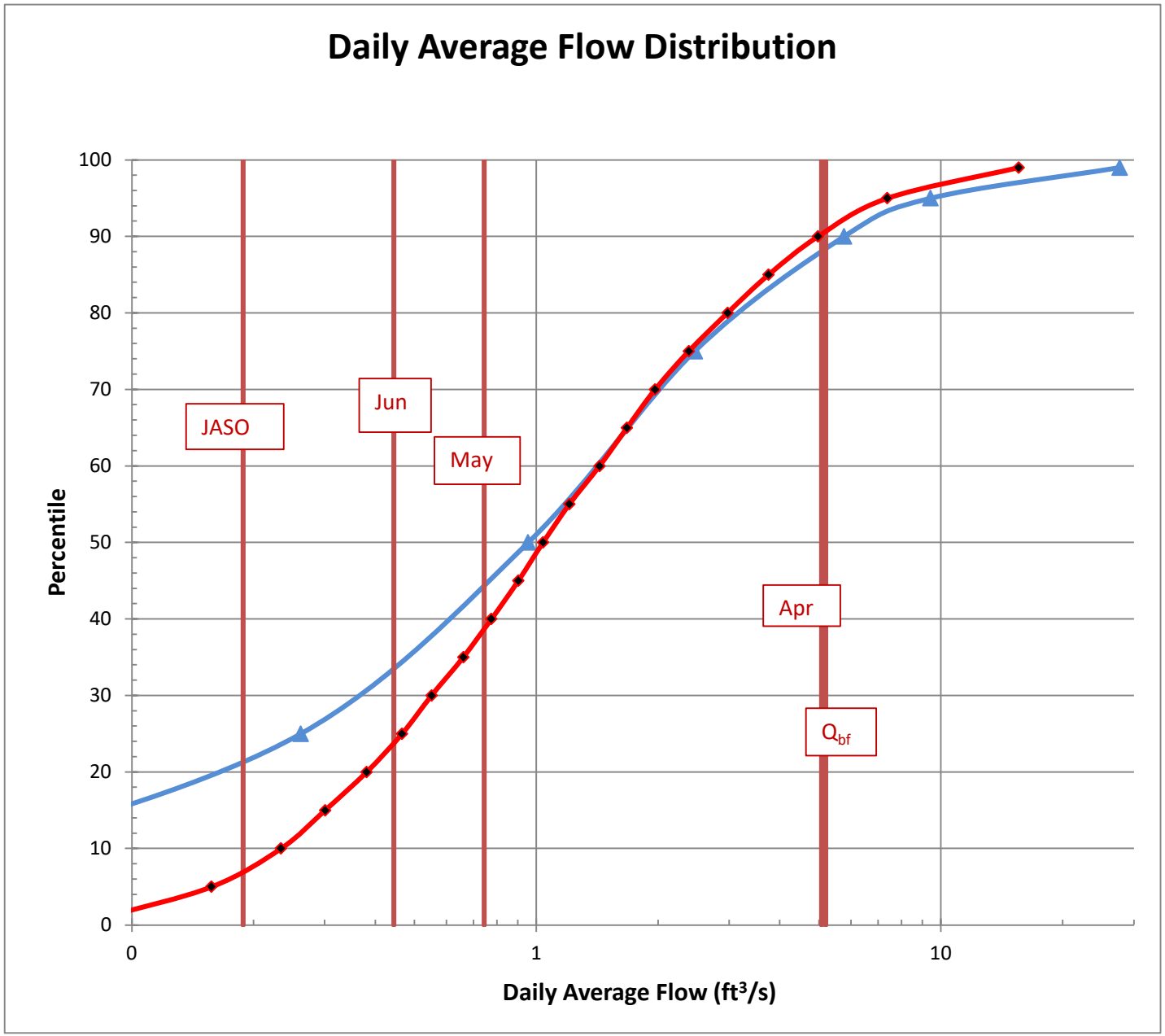
W_{bf}	**10.6**	estimated bankfull width (ft)
d_{bf}	**0.6**	estimated bankfull depth (ft)
A_{bf}	**4.6**	estimated bankfull flow area (ft^2)

References

Dudley, 2013. FY2013 Progress Report - Phase 1 …, USFWS QRP Project

Dudley, 2004. Estimating Monthly Streamflows … , SIR 2004-5026

Dudley, 2015. Regression Equations for Monthly & Annual Mean..., USGS SIR 2015-5151



Daily Avg Flow Dist		
A_{ws} = (mi^2)		1.0
Q (ft^3/s)		
Pctl	Median	84th pctl
1	0.09	0.15
5	0.16	0.25
10	0.23	0.35
15	0.30	0.44
20	0.38	0.53
25	0.47	0.62
30	0.55	0.71
35	0.66	0.81
40	0.77	0.93
45	0.90	1.06
50	1.04	1.25
55	1.21	1.45
60	1.43	1.70
65	1.68	1.98
70	1.97	2.32
75	2.38	2.78
80	2.97	3.32
85	3.75	4.26
90	4.97	5.72
95	7.37	8.90
99	15.59	20.53

Q_{bf}	5.2
$Q_{1.002}$	7.7
$Q_{1.1}$	18.8
Q_2	40.5

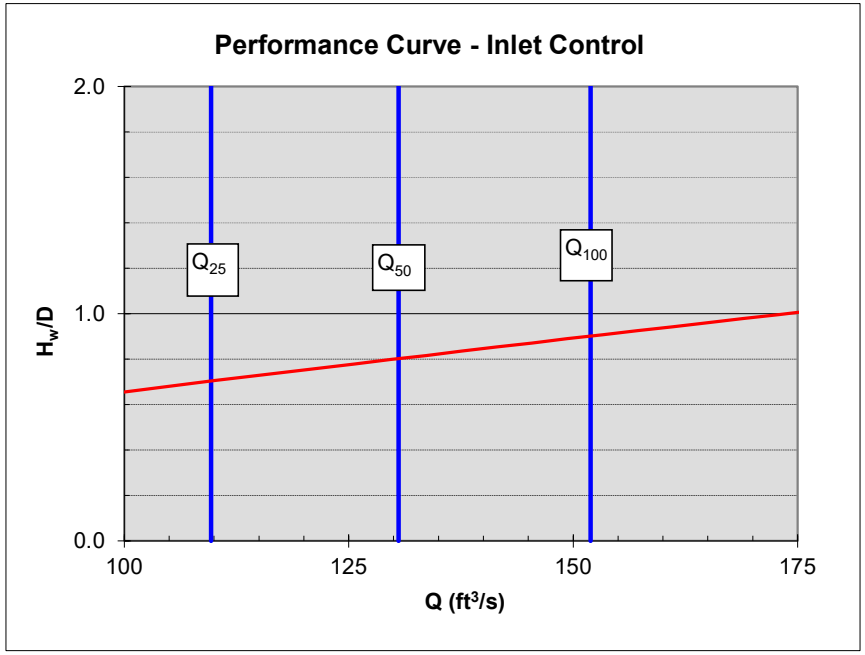
NOTE: ***This page is for preliminary sizing only.***
Final design should be done with HY8 or HDS-5

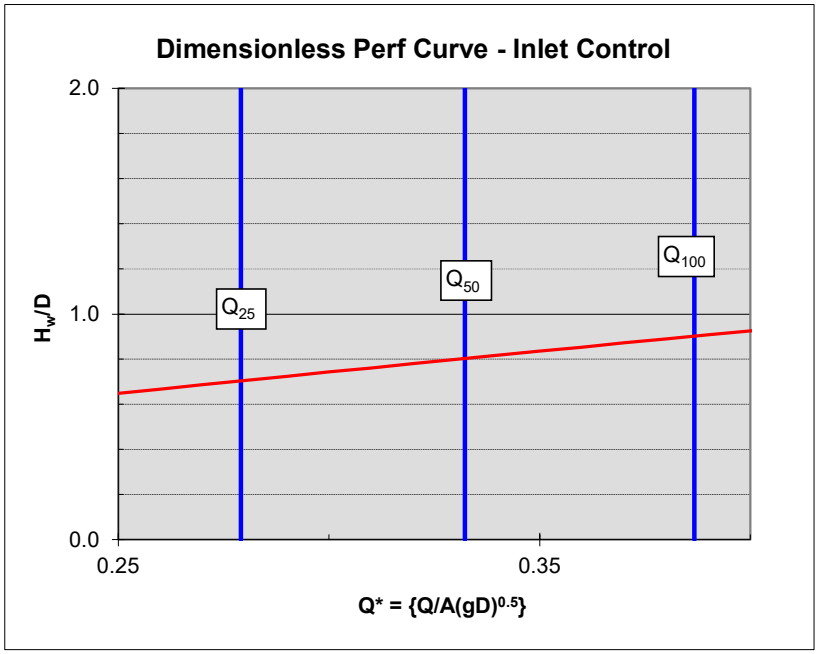
Note:
culvert dimensions are for open flow area; adjust for lost capacity due to embedding / backfilling (min {2' / 25% rise} embedment)
Finish analysis with HY-8

Preliminary Culvert Sizing - Round & Box Culverts

Choose shape and inlet type by pull-down menu in green cells

Shape:	Round						
Inlet Type:	Circ CMP Proj		Q_{25}	109.7			
D or R (ft)	6	*diam / rise*	Q_{50}	130.6	trial D / R =	5.9	
w (ft)		*box span*	Q_{100}	152.0	trial w: BFW =	10.6	
Slope (ft/ft)	0.01						
A (ft^2)	28.27						
g (ft/s^2)	32.2						





National Flood Hazard Layer FIRMette

FEMA

68°10'21"W 46°43'4"N

68°9'44"W 46°42'39"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

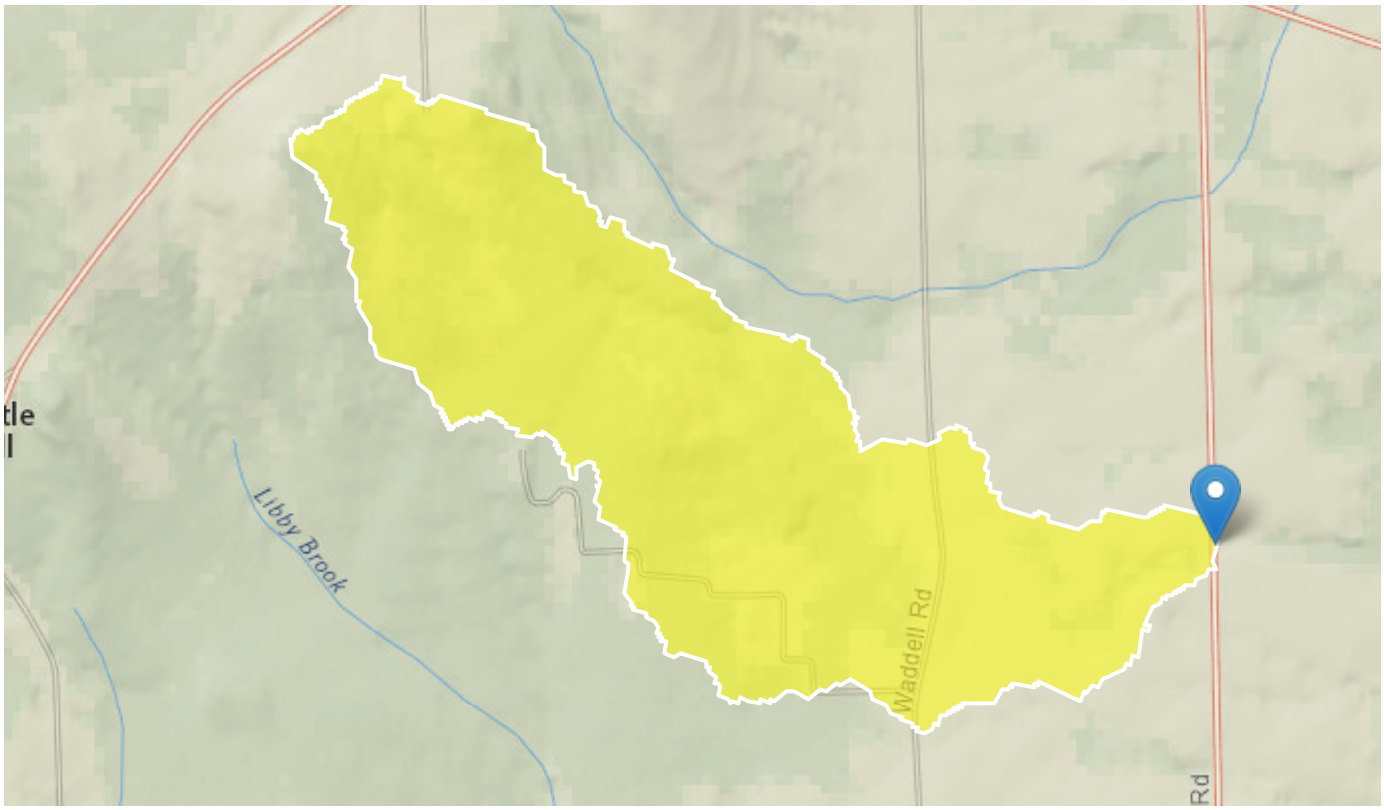
This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 1/8/2026 at 2:43 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Mapleton Hughes Rd WIN 25411.00 StreamStats Report

Region ID: ME
Workspace ID: ME20210730184132403000
Clicked Point (Latitude, Longitude): 46.71445, -68.16733
Time: 2021-07-30 14:41:49 -0400



XC-227865 (northerly) 18" CMP XC-227863 (southerly) 30" CMP MRL 7-30-2021

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	1	square miles
STORNWI	Percentage of strorage (combined water bodies and wetlands) from the Nationa Wetlands Inventory	8.58	percent

Parameter Code	Parameter Description	Value	Unit
SANDGRAVAF	Fraction of land surface underlain by sand and gravel aquifers	0	dimensionless
ELEV	Mean Basin Elevation	687.4	feet
STATSGOA	Percentage of area of Hydrologic Soil Type A from STATSGO	0	percent
COASTDIST	Shortest distance from the coastline to the basin centroid	166	miles
BSLDEM10M	Mean basin slope computed from 10 m DEM	4.31	percent
LC06WATER	Percent of open water, class 11, from NLCD 2006	0	percent
ELEVMAX	Maximum basin elevation	904.2	feet
CENTROIDX	Basin centroid horizontal (x) location in state plane coordinates	562020.8	meters
CENTROIDY	Basin centroid vertical (y) location in state plane units	5174097.58	meters
LC11DEV	Percentage of developed (urban) land from NLCD 2011 classes 21-24	2.45	percent
LC11IMP	Average percentage of impervious area determined from NLCD 2011 impervious dataset	0.59	percent
PRDECFEB90	Basin average mean precipitation for December to February from PRISM 1961-1990	7.48	inches
PRECIP	Mean Annual Precipitation	37.1	inches
SANDGRAVAP	Percentage of land surface underlain by sand and gravel aquifers	0	percent

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

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	1	square miles	0.31	12
STORNWI	Percentage of Storage from NWI	8.58	percent	0	22.2

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

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

Statistic	Value	Unit	ASEp
99-percent AEP flood	14.5	ft^3/s	38
50-percent AEP flood	47.7	ft^3/s	34
20-percent AEP flood	74.8	ft^3/s	35
10-percent AEP flood	94	ft^3/s	37
4-percent AEP flood	123	ft^3/s	39
2-percent AEP flood	143	ft^3/s	41
1-percent AEP flood	167	ft^3/s	42
0.4-percent AEP flood	189	ft^3/s	44
0.2-percent AEP flood	225	ft^3/s	47

Peak-Flow Statistics Citations

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

Flow-Duration Statistics Parameters [Statewide Annual SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	1	square miles	14.9	1419
SANDGRAVAF	Fraction of Sand and Gravel Aquifers	0	dimensionless	0	0.212
ELEV	Mean Basin Elevation	687.4	feet	239	2120

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

Statistic	Value	Unit

Statistic	Value	Unit
1 Percent Duration	0.00181	ft^3/s
5 Percent Duration	0.0139	ft^3/s
10 Percent Duration	0.0434	ft^3/s
25 Percent Duration	0.262	ft^3/s
50 Percent Duration	0.954	ft^3/s
75 Percent Duration	2.47	ft^3/s
90 Percent Duration	5.76	ft^3/s
95 Percent Duration	9.43	ft^3/s
99 Percent Duration	27.7	ft^3/s

Flow-Duration 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)

Annual Flow Statistics Parameters [Statewide Annual SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	1	square miles	14.9	1419
SANDGRAVAF	Fraction of Sand and Gravel Aquifers	0	dimensionless	0	0.212
ELEV	Mean Basin Elevation	687.4	feet	239	2120

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	2.44	ft^3/s

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 Parameters [Statewide January SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	1	square miles	14.9	1419
STATSGOA	STATSGO Percent Hydrologic Soil Type A	0	percent	0	31.5

Monthly Flow Statistics Parameters [Statewide February SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	1	square miles	14.9	1419
COASTDIST	Distance From Coast To Basin Centroid	166	miles	46.6	193
BSLDEM10M	Mean Basin Slope from 10m DEM	4.31	percent	1.5	26.6

Monthly Flow Statistics Parameters [Statewide March SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	1	square miles	14.9	1419
COASTDIST	Distance From Coast To Basin Centroid	166	miles	46.6	193
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
DRNAREA	Drainage Area	1	square miles	14.9	1419

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
COASTDIST	Distance From Coast To Basin Centroid	166	miles	46.6	193
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
DRNAREA	Drainage Area	1	square miles	14.9	1419
BSLDEM10M	Mean Basin Slope from 10m DEM	4.31	percent	1.5	26.6
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
DRNAREA	Drainage Area	1	square miles	14.9	1419
BSLDEM10M	Mean Basin Slope from 10m DEM	4.31	percent	1.5	26.6
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	1	square miles	14.9	1419
SANDGRAVAF	Fraction of Sand and Gravel Aquifers	0	dimensionless	0	0.212
ELEV	Mean Basin Elevation	687.4	feet	239	2120

Monthly Flow Statistics Parameters [Statewide August SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	1	square miles	14.9	1419

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
SANDGRAVAF	Fraction of Sand and Gravel Aquifers	0	dimensionless	0	0.212
ELEV	Mean Basin Elevation	687.4	feet	239	2120

Monthly Flow Statistics Parameters [Statewide September SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	1	square miles	14.9	1419
SANDGRAVAF	Fraction of Sand and Gravel Aquifers	0	dimensionless	0	0.212
ELEV	Mean Basin Elevation	687.4	feet	239	2120

Monthly Flow Statistics Parameters [Statewide October SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	1	square miles	14.9	1419
SANDGRAVAF	Fraction of Sand and Gravel Aquifers	0	dimensionless	0	0.212
ELEV	Mean Basin Elevation	687.4	feet	239	2120

Monthly Flow Statistics Parameters [Statewide November SIR 2015 5151]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	1	square miles	14.9	1419
ELEVMAX	Maximum Basin Elevation	904.2	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	1	square miles	14.9	1419
STATSGOA	STATSGO Percent Hydrologic Soil Type A	0	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 Mean Flow	2.4	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 Mean Flow	0.583	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 Mean Flow	2.79	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 Mean Flow	10.1	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 Mean Flow	1.27	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 Mean Flow	1.56	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 Mean Flow	0.552	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 Mean Flow	0.305	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

Statistic	Value	Unit
September Mean Flow	0.397	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 Mean Flow	2.46	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 Mean Flow	3.72	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 Mean Flow	3.16	ft^3/s

Monthly Flow Statistics Flow Report [Area-Averaged]

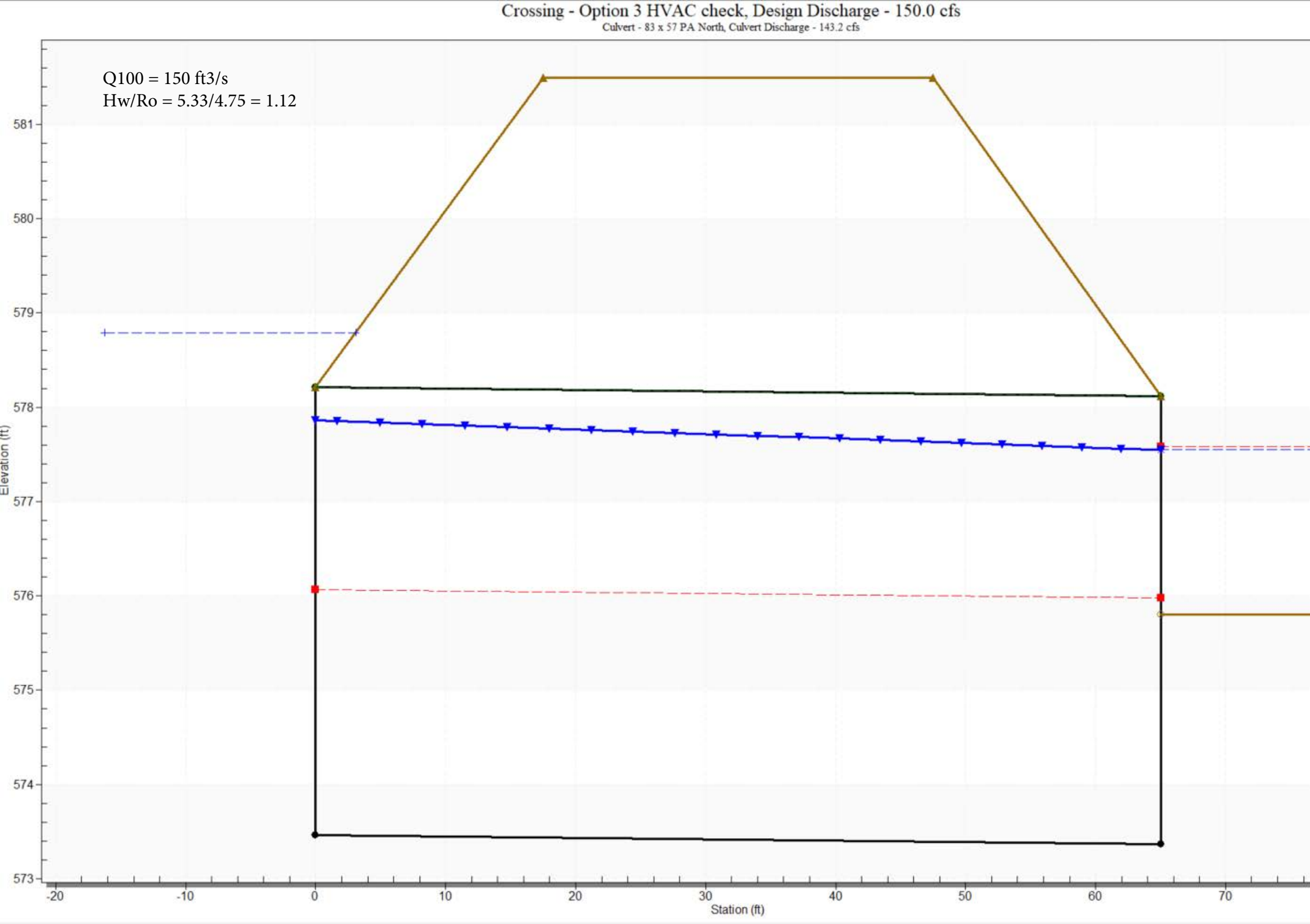
Statistic	Value	Unit
January Mean Flow	2.4	ft^3/s
February Mean Flow	0.583	ft^3/s
March Mean Flow	2.79	ft^3/s
April Mean Flow	10.1	ft^3/s

Statistic	Value	Unit
May Mean Flow	1.27	ft^3/s
June Mean Flow	1.56	ft^3/s
July Mean Flow	0.552	ft^3/s
August Mean Flow	0.305	ft^3/s
September Mean Flow	0.397	ft^3/s
October Mean Flow	2.46	ft^3/s
November Mean Flow	3.72	ft^3/s
December Mean Flow	3.16	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)

Application Version: 4.6.1
StreamStats Services Version: 1.2.22
NSS Services Version: 2.1.2


Crossing - Option 3 HVAC check, Design Discharge - 150.0 cfs
Culvert - 83 x 57 PA North, Culvert Discharge - 143.2 cfs
Q100 = 150 ft3/s
Hw/Ro = 5.33/4.75 = 1.12
Elevation (ft)
581
580
579
578
577
576
575
574
573
-20
-10
0
10
20
30
40
50
60
70
Station (ft)