



United States Department of the Interior



U. S. FISH & WILDLIFE SERVICE

Maine Fish and Wildlife Conservation Office
306 Hatchery Way
East Orland, Maine 04431
(207) 902-1566

March 8, 2019

Benjamin Matthews
Watershed Restoration Specialist
14 Maine Street
Suite 401
Brunswick, ME 04011

Dear: Mr. Matthews

Attached are data in regards to our July 3, 2018 electrofishing sampling at Snow Brook on Rt 15 in Sedgewick, Hancock County, ME. Coordinates: -68.657342 44.370458 Decimal Degrees.

Sampling conditions were not ideal as water discharge was very high for this date, water clarity was slightly compromised from high flows and/or organic tannin's, the sky was clear and this made netting difficult (shadows), and air temperature was near 90°F (32°C); thus this single pass electrofishing survey undoubtedly underestimates actual fish numbers.

However, I feel the survey did a good job at identifying species composition (we observed eight) and we identified a high priority tributary that was acting as thermal refugia for wild Brook Trout.

We sampled three locations and observed 80 fish. 1) Below Rt 15, 2) above Rt 15 and 3) a small tributary on the Right Bank above Rt 15. See location, habitat and fish data in the attached tables.

Since this location has high native species diversity and the road is a barrier to upstream fish, I highly support your intentions of replacing this crossing with an open bottom structure that will pass flood events exceeding 100 year frequencies as shown in the attached Stream Stats outputs.

If you have any comments or questions pertaining to these data, please contact me at 207-902-1566 or scott_craig@fws.gov.

Sincerely,

Scott D. Craig



Location and Habitat Data. Coordinates UTM Zone 19N NAD83

Location	Top UTM X	Top UTM Y	Btm UTM X	Btm UTM Y	Length Section (m)	Ave Width (m)	Water Temp (C)	Habitat (%)				
								Riffle	Pool	Run	Cascade	Deadwater
Below Rt 15	527,292	4,913,081	527,255	4,913,090	38	4.4	22.4	67	15	15	3	
Above Rt 15	527,342	4,913,068	527,307	4,913,075	37	4.4	23.2	5	3	90		2
RB Trib.	527,322	4,913,077	527,321	4,913,075	2	1.5	20.1			100		

Channel Substrates:

Below Rt 15, predominantly small boulder with low embeddedness- Excellent Eel habitat!

Above Rt 15, predominantly gravel with some embedded small boulders.

Right Bank Tributary, 100% small gravel with some sand.

80 fish were observed and total length measurements were obtained from 64 individuals

Species	Below Rt 15	Above Rt 15	Right Bank Trib.	Total
Brook Trout	1	2	7	10
Blacknose Dace	2	21		23
Common Shiner	1			1
American Eel	40	1		41
Longnose Dace	1			1
Pumkinseed	1			1
Juvenile Alewife	1			1
White Sucker		2		2
Total	47	26	7	80



Picture of Brook Trout caught below Rt 15 (64 mm 2.4 g). Photo courtesy TNC staff.

Below Rt 15- Species, Total Length and Weight. Sorted by species and length.

Sample Location	Species	Length (mm)	Weight (g)
Below Rt 15	American Eel	380	81.8
		310	53.6
		260	27.0
		202	14.2
		200	11.5
		183	9.3
		170	6.9
		154	6.0
		148	
		113	
		106	
		105	
		105	
		104	1.5
		104	1.5
		103	
		103	
		98	
		98	
		98	
	98		
	98		
	90	6.0	
	90		
	83		
	78		
	Blacknose Dace	68	2.7
		50	1.1
	Brook Trout	64	2.4
	Common Shiner	68	2.6
Juvenile Alewife	40	0.4	
Longnose Dace	78	3.7	
Pumkinseed	108	22.6	



Above Rt 15- Species, Total Length and Weight

Sample Location	Species	Length (mm)	Weight (g)
Above Rt 15	Blacknose Dace	79	4.6
		73	4.0
		68	3.2
		68	3.2
		66	2.6
		65	2.2
		65	
		64	
		62	2.1
		60	2.3
		60	
		56	
		47	
		45	1.0
		44	
		43	
		42	1.0
		42	1.0
	42		
	42		
40	0.9		
Brook Trout	230	125.0	
	125	19.6	
White Sucker	140	30.0	



Right Bank Tributary- Species, Total Length and Weight

Sample Location	Species	Length (mm)	Weight (g)
RB Trib.	Brook Trout	55	1.8
		50	1.2
		50	1.3
		50	2.3
		48	0.8
		47	1.1
		40	0.7

Stream Stats Output:

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	6.3	square miles	2.92	298
<i>Bankfull Statistics Flow Report (Central and Coastal Bankfull 2004 5042)</i>					
Statistic		Value		Unit	
Bankfull Streamflow		35.8		ft ³ /s	
Bankfull Width		20		ft	
Bankfull Depth		1.11		ft	
Bankfull Area		22.2		ft ²	
<i>Bankfull Statistics Citations</i>					
Dudley, R.W.,2004, Hydraulic-Geometry Relations for Rivers in Coastal and Central Maine: U.S. Geological Survey Scientific Investigations Report 2004-5042, 30 p (http://pubs.usgs.gov/sir/2004/5042/pdf/sir2004-5042.pdf)					
<i>Peak-Flow Statistics Parameters (Statewide Peak Flow DALT 12sqmi 2015 5046)</i>					
Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	6.3	square miles	0.31	12
STORNWI	Percentage of Storage from NWI	17.3	percent	0	22.2
<i>Peak-Flow Statistics Flow Report (Statewide Peak Flow DALT 12sqmi 2015 5046)</i>					
PII: Prediction Interval-Lower, PIu: Prediction Interval-Upper, SEp: Standard Error of Prediction, SE: Standard Error (other -- see report)					
Statistic		Value		Unit	SEp
1.01 Year Peak Flood		46.5		ft ³ /s	38
2 Year Peak Flood		155		ft ³ /s	34
5 Year Peak Flood		240		ft ³ /s	35
10 Year Peak Flood		297		ft ³ /s	37
25 Year Peak Flood		390		ft ³ /s	39
50 Year Peak Flood		448		ft ³ /s	41
100 Year Peak Flood		524		ft ³ /s	42
250 Year Peak Flood		582		ft ³ /s	44



Maine Habitat Viewer: Rt 15 Crossing. Site ID: [50875](#) Barrier. 48 x 7 ft perched culvert