



**Maine Department of Environmental Protection
Biological Monitoring Program
Aquatic Life Classification Attainment Report**

Station Information

Station Number: S-159	River Basin:	Maine Coastal	
Waterbody:	Tunk Stream - Station 159	HUC8 Name:	Maine Coastal
Town:	T10 Sd	Latitude:	44 36 35.37 N
Directions:	TUNK LAKE OUTLET: 10 M BELOW RT. 182 CROSSING	Longitude:	68 3 22.84 W
		Stream Order:	1

Sample Information

Log Number: 2485	Type of Sample:	ROCK BAG	Date Deployed:	7/18/2016	
Subsample Factor:	X1	Replicates:	3	Date Retrieved:	8/15/2016

Classification Attainment

Statutory Class: B	Final Determination: B	Date:	4/7/2017
Model Result with $P \geq 0.6$:	B	Reason for Determination:	Model
Date Last Calculated:	4/5/2017	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.57	Class C	0.04
Class B	0.38	NA	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	0.99	Class A	0.18
Class C or Non-Attainment	0.01	Class B or C or Non-Attainment	0.82

Model Variables

01 Total Mean Abundance	86.67	18 Relative Abundance Ephemeroptera	0.33
02 Generic Richness	27.00	19 EPT Generic Richness	12.00
03 Plecoptera Mean Abundance	2.67	21 Sum of Abundances: <i>Dicrotendipes</i> ,	0.00
04 Ephemeroptera Mean Abundance	28.67	<i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	
05 Shannon-Wiener Generic Diversity	3.26	23 Relative Generic Richness- Plecoptera	0.07
06 Hilsenhoff Biotic Index	4.62	25 Sum of Abundances: <i>Cheumatopsyche</i> ,	16.33
07 Relative Abundance - Chironomidae	0.04	<i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	
08 Relative Generic Richness Diptera	0.15	26 Sum of Abundances: <i>Acroneuria</i> ,	30.67
09 <i>Hydropsyche</i> Abundance	0.67	<i>Maccaffertium</i> , <i>Stenonema</i>	
11 <i>Cheumatopsyche</i> Abundance	16.33	28 EP Generic Richness/14	0.29
12 EPT Generic Richness/ Diptera	3.00	30 Presence of Class A Indicator Taxa/7	0.00
Generic Richness			
13 Relative Abundance - Oligochaeta	0.00	Five Most Dominant Taxa	
15 Perlidae Mean Abundance (Family	2.33	Rank	Taxon Name
Functional Group)		1	<i>Maccaffertium</i>
16 Tanypodinae Mean Abundance	2.22	2	<i>Cheumatopsyche</i>
(Family Functional Group)		3	<i>Neureclipsis</i>
17 Chironomini Abundance (Family	0.00	4	<i>Stenelmis</i>
Functional Group)		5	<i>Girardia</i>
			Percent
			32.69
			18.85
			12.69
			8.08
			5.38



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL COLE

Waterbody Information - Deployment

Temperature:	24 deg C
Dissolved Oxygen:	9.39 mg/l
Dissolved Oxygen Saturation:	112.1 %
Specific Conductance:	21.5 uS/cm
Velocity:	27.4 cm/s
pH:	6.57
Wetted Width:	6.6 m
Bankfull Width:	8.3 m
Depth:	55 cm

Waterbody Information - Retrieval

Temperature:	24.5 deg C
Dissolved Oxygen:	9.31 mg/l
Dissolved Oxygen Saturation:	111.8 %
Specific Conductance:	21.6 uS/cm
Velocity:	18.288 cm/s
pH:	6.42
Wetted Width:	4.8 m
Bankfull Width:	8.3 m
Depth:	47 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Upland Conifer	Dense	Rolling
Upland Hardwood		
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
Lake Outlet	Below Road Crossing	Boulder 55 %
	Lake Outlet	Gravel 5 %
		Rubble/Cobble 20 %
		Sand 20 %

Landcover Summary - 2004 Data

Sample Comments

FISH AND FROGS PRESENT.

LOCAL RESIDENT SAID STREAM WAS PART OF A SALMON HATCHERY IN THE 1940'S.



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Aquatic Life Taxonomic Inventory Report**

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Waterbody: Tunk Stream - Station 159

Town: T10 Sd

Log Number: 2485

Subsample Factor: X1

Replicates: 3

Calculated: 4/5/2017

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Girardia</i>	03010102002	4.67	4.67		--	5.4	5.4
<i>Leuctra</i>	09020204020	0.33	0.33	0	SH	0.4	0.4
<i>Acroneuria</i>	09020209042	0.67	2.33	0	PR	0.8	2.7
<i>Acroneuria abnormis</i>	09020209042121	1.67		0	PR	1.9	
<i>Boyeria</i>	09020301004		0.33	2	PR		0.4
<i>Boyeria vinosa</i>	09020301004012	0.33			--	0.4	
Gomphidae	09020302	0.33	0.33		--	0.4	0.4
<i>Baetis</i>	09020401001	0.33	0.33	4	CG	0.4	0.4
<i>Maccaffertium</i>	09020402015	15.33	28.33	4	SC	17.7	32.7
<i>Maccaffertium modestum</i>	09020402015051	13.00			--	15.0	
<i>Metrobates</i>	09020506020	0.67	0.67		PR	0.8	0.8
<i>Neureclipsis</i>	09020603008	11.00	11.00	7	CF	12.7	12.7
<i>Cheumatopsyche</i>	09020604015	16.33	16.33	5	CF	18.8	18.8
<i>Hydropsyche</i>	09020604016		0.67	4	CF		0.8
<i>Hydropsyche betteni</i>	09020604016037	0.67			--	0.8	
<i>Macrostemum</i>	09020604018	1.00	1.00	3	CF	1.2	1.2
<i>Helicopsyche</i>	09020616070	0.67	0.67	3	SC	0.8	0.8
Leptoceridae	09020618	0.67			--	0.8	
<i>Ceraclea</i>	09020618072	1.00	1.17	3	CG	1.2	1.3
<i>Triaenodes</i>	09020618077	0.33	0.39	6	SH	0.4	0.4
<i>Oecetis</i>	09020618078	1.33	3.11	8	PR	1.5	3.6
<i>Oecetis persimilis</i>	09020618078157	1.33			--	1.5	
<i>Nigronia</i>	09020701003		1.33	0	PR		1.5
<i>Nigronia serricornis</i>	09020701003003	1.33			--	1.5	
Chironomidae	09021011	0.33			--	0.4	
<i>Thienemannimyia</i>	09021011020		2.22	3	PR		2.6
<i>Thienemannimyia group</i>	09021011020041	2.00			--	2.3	
<i>Corynoneura</i>	09021011036	0.33	0.37	7	CG	0.4	0.4
<i>Tvetenia</i>	09021011065		0.74	5	CG		0.9
<i>Tvetenia vitracies</i>	09021011065113	0.67			--	0.8	
<i>Hemerodromia</i>	09021016057	0.33	0.33	3	PR	0.4	0.4
<i>Macronychus</i>	09021113065		0.33	4	--		0.4
<i>Macronychus glabratus</i>	09021113065040	0.33			--	0.4	
<i>Microcyloopus</i>	09021113066		0.67	3	--		0.8
<i>Microcyloopus pusillus</i>	09021113066041	0.67			--	0.8	
<i>Stenelmis</i>	09021113070	4.67	7.00	5	SC	5.4	8.1
<i>Stenelmis crenata</i>	09021113070055	2.33			--	2.7	



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<i>Amnicola</i>	10010104013	0.33	0.33		SC	0.4	0.4
<i>Sphaeriidae</i>	10020201	0.67			CF	0.8	
<i>Pisidium</i>	10020201002	0.33	0.56		CF	0.4	0.6
<i>Sphaerium</i>	10020201003	0.67	1.11		CF	0.8	1.3