



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

Station Information

Station Number: S-415	DEP Drainage: Piscataqua - Presumpscot - Saco
Waterbody: Long Creek - Station 415	HUC8: 01060001
Town: South Portland	HUC8 Name: Presumpscot
Directions: (LEFT BRANCH FACING UPSTREAM) 40 M UPSTREAM OF CONFLUENCE WITH VTEC RIGHT BRANCH	Latitude: 43 38 5.85 N Longitude: 70 19 36.67 W Stream Order: 2

Sample Information

Log Number: 1926	Type of Sample: ROCK BAG	Date Deployed: 7/12/2010
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/13/2010

Classification Attainment

Statutory Class: C	Final Determination: NA	Date: 4/25/2011
Model Result with P>.6: I	Reason for Determination: Best Professional Judgement	
Date Last Calculated: 4/11/2011	Comments: Urban impacts such as hydrological modification effecting Total Mean Abundance and number of sensitive taxa present.	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.00	Class A, B, or C	0.00
Class B	0.00	Non-Attainment	1.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	0.00	Class A	0.01
Class C or Non-Attainment	1.00	Class B or C or Non-Attainment	0.99

Model Variables

01 Total Mean Abundance	44.67	18 Relative Abundance Ephemeroptera	0.00
02 Generic Richness	20.00	19 EPT Generic Richness	1.00
03 Plecoptera Mean Abundance	0.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	0.00	23 Relative Generic Richness- Plecoptera	0.00
05 Shannon-Wiener Generic Diversity	2.95	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	1.37
06 Hilsenhoff Biotic Index	5.65	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	0.00
07 Relative Abundance - Chironomidae	0.26	28 EP Generic Richness/14	0.00
08 Relative Generic Richness Diptera	0.40	30 Presence of Class A Indicator Taxa/7	0.00
09 <i>Hydropsyche</i> Abundance	0.00		
11 <i>Cheumatopsyche</i> Abundance	0.67		
12 EPT Generic Richness/ Diptera Generic Richness	0.13		
13 Relative Abundance - Oligochaeta	0.04		
15 Perlidae Mean Abundance (Family Functional Group)	0.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	1.06		
17 Chironomini Abundance (Family Functional Group)	9.19		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Stenelmis</i>	31.34
2	<i>Dubiraphia</i>	24.63
3	<i>Polypedilum</i>	18.20
4	<i>Physa</i>	5.22
5	<i>Macronychus</i>	2.99



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Station Number: S-415 Town: South Portland Date Deployed: 7/12/2010
Log Number: 1926 Waterbody: Long Creek - Station 415 Date Retrieved: 8/13/2010

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT
 Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment	
Temperature:	21.5 deg C
Dissolved Oxygen:	6.5 mg/l
Specific Conductance:	490 uS/cm
Velocity:	
pH:	
Wetted Width:	3.3 m
Bankfull Width:	9.1 m
Depth:	15 cm

Waterbody Information - Retrieval	
Temperature:	19.5 deg C
Dissolved Oxygen:	6.7 mg/l
Specific Conductance:	576 uS/cm
Velocity:	
pH:	6.88
Wetted Width:	2.75 m
Bankfull Width:	9.1 m
Depth:	11 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Urban	Dense	Rolling	
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
Altered Hydrology	Below Urban NPS	Clay	5 %
Sedimentation		Detritus	20 %
Urban Runoff		Muck	5 %
		Rubble/Cobble	5 %
		Sand	60 %
		Silt	5 %

Landcover Summary - 2004 Data

Total Area (ac)	1423	High Int. Dev. %	17.1	Water %	0.0	Non-vegetated %	0.2
		Med Int. Dev. %	6.3	Wetland %	9.4	Tilled Agriculture %	0.7
		Low Int. Dev. %	6.3	Upland Woody %	26.5	Grassland %	3.1
		Development %	29.7	Natural %	36.1	Human Altered %	63.9
						Impervious %	24.3

Sample Comments

8/13/2010 FLOW VISIBLE BUT VELOCITY NOT MEASURABLE.
 7/12/2010 BANKS HEAVILY CUT, A LOT OF ACCUMULATION OF DEBRIS AND SAND IN THE SYSTEM. FLOW VISIBLE BUT VELOCITY NOT MEASURABLE.



**Maine Department of Environmental Protection
Biological Monitoring Program
Aquatic Life Taxonomic Inventory Report**

Station Number: S-415

Waterbody: Long Creek - Station 415

Town: South Portland

Log Number: 1926

Subsample Factor: X1

Replicates: 3

Calculated: 4/11/2011

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
Dugesidae	03010102	0.33	0.33		--	0.7	0.7
<i>Stylodrilus</i>	08020101004		0.67		--		1.5
<i>Stylodrilus heringianus</i>	08020101004001	0.67			--	1.5	
Naididae	08020202	0.67	0.67		--	1.5	1.5
Lumbricidae	08020205	0.33	0.33		--	0.7	0.7
<i>Erpobdella</i>	08030203002		0.33		--		0.7
<i>Erpobdella punctata</i>	08030203002001	0.33			--	0.7	
<i>Crangonyx</i>	09010202004	1.00	1.00	8	--	2.2	2.2
<i>Microvelia</i>	09020510025	0.33	0.33		PR	0.7	0.7
<i>Cheumatopsyche</i>	09020604015	0.67	0.67	5	CF	1.5	1.5
Chironomidae	09021011	0.67			--	1.5	
<i>Labrundinia</i>	09021011008		0.71	7	PR		1.6
<i>Labrundinia pilosella</i>	09021011008022	0.67			--	1.5	
<i>Paramerina</i>	09021011013	0.33	0.35		--	0.7	0.8
<i>Nanocladius</i>	09021011049	0.33	0.35	3	CG	0.7	0.8
<i>Rheotanytarsus</i>	09021011072	0.33	0.35	6	CF	0.7	0.8
<i>Tanytarsus</i>	09021011076	0.67	0.71	6	CF	1.5	1.6
<i>Paratendipes</i>	09021011100		0.71	8	CG		1.6
<i>Paratendipes albimanus group</i>	09021011100176	0.33			--	0.7	
<i>Paratendipes subaequalis group</i>	09021011100178	0.33			--	0.7	
<i>Phaenopsectra</i>	09021011101		0.35	7	SC		0.8
<i>Phaenopsectra obediens</i>	09021011101182	0.33			SC	0.7	
<i>Polypedilum</i>	09021011102		8.13	6	SH		18.2
<i>Polypedilum scalaenum group</i>	09021011102189	7.67			--	17.2	
<i>Dubiraphia</i>	09021113064	11.00	11.00	6	--	24.6	24.6
<i>Macronychus</i>	09021113065	1.33	1.33	4	--	3.0	3.0
<i>Stenelmis</i>	09021113070	13.67	14.00	5	SC	30.6	31.3
<i>Stenelmis crenata</i>	09021113070055	0.33			--	0.7	
<i>Physa</i>	10010202026	2.33	2.33		SC	5.2	5.2