



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

Station Information

Station Number: S-570	DEP Drainage: Piscataqua - Presumpscot - Saco
Waterbody: Long Creek - Station 570	HUC8: 01060001
Town: South Portland	HUC8 Name: Presumpscot
Directions: LC PUBLIC WORKS	Latitude: 43 38 38.2 N
	Longitude: 70 20 7.73 W
	Stream Order: 2

Sample Information

Log Number: 1944	Type of Sample: ROCK BAG	Date Deployed: 7/22/2010
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/18/2010

Classification Attainment

Statutory Class: C	Final Determination: C	Date: 3/7/2011
Model Result with P>.6: C	Reason for Determination: Model	
Date Last Calculated: 3/7/2011	Comments: Low Class C (.63)	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.00	Class A, B, or C	0.63
Class B	0.02	Non-Attainment	0.37
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	0.00	Class A	0.00
Class C or Non-Attainment	1.00	Class B or C or Non-Attainment	1.00

Model Variables

01 Total Mean Abundance	253.00	18 Relative Abundance Ephemeroptera	0.02
02 Generic Richness	55.00	19 EPT Generic Richness	12.00
03 Plecoptera Mean Abundance	0.00	21 Sum of Abundances: <i>Dicrotendipes</i> ,	4.69
04 Ephemeroptera Mean Abundance	6.00	<i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	
05 Shannon-Wiener Generic Diversity	3.90	23 Relative Generic Richness- Plecoptera	0.00
06 Hilsenhoff Biotic Index	5.85	25 Sum of Abundances: <i>Cheumatopsyche</i> ,	34.42
07 Relative Abundance - Chironomidae	0.52	<i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	
08 Relative Generic Richness Diptera	0.36	26 Sum of Abundances: <i>Acroneuria</i> ,	0.00
09 <i>Hydropsyche</i> Abundance	0.33	<i>Maccaffertium</i> , <i>Stenonema</i>	
11 <i>Cheumatopsyche</i> Abundance	3.00	28 EP Generic Richness/14	0.29
12 EPT Generic Richness/ Diptera	0.60	30 Presence of Class A Indicator Taxa/7	0.00
Generic Richness			

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Dubiraphia</i>	26.48
2	<i>Paratanytarsus</i>	14.82
3	<i>Tanytarsus</i>	12.42
4	<i>Rheotanytarsus</i>	10.58
5	<i>Microtendipes</i>	4.09



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Town: South Portland

Date Deployed: 7/22/2010

Log Number: 1944

Waterbody: Long Creek - Station 570

Date Retrieved: 8/18/2010

Sample Collection and Processing Information

Sampling Organization: DEP DWM

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 22.2 deg C
Dissolved Oxygen: 7.82 mg/l
Specific Conductance: 265 uS/cm
Velocity: 26 cm/s
pH:
Wetted Width: 1.672 m
Bankfull Width: 2.895 m
Depth: 20 cm

Waterbody Information - Retrieval

Temperature: 21.2 deg C
Dissolved Oxygen: 7.77 mg/l
Specific Conductance: 265 uS/cm
Velocity: 0.3 cm/s
pH: 7.53
Wetted Width: 1.7 m
Bankfull Width: 5.3 m
Depth: 12 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Swamp Conifer	Dense	Flat
Swamp Hardwood		
Urban		

<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
Altered Hydrology	Above Road Crossing	Gravel 5 %
	Below Urban NPS	Sand 65 %
		Silt 30 %

Landcover Summary - 2004 Data

Total Area (ac) 1282	High Int. Dev. % 13.2	Water % 0.0	Non-vegetated % 0.2
	Med Int. Dev. % 5.0	Wetland % 10.5	Tilled Agriculture % 0.7
	Low Int. Dev. % 6.7	Upland Woody % 28.5	Grassland % 3.5
	Development % 24.9	Natural % 39.1	Human Altered % 60.9
			Impervious % 20.5

Sample Comments

8/18/2010 NINE SALAMANDERS IN BAGS. D.O. METER: HACH OPTICAL CALIBRATED IN THE OFFICE (DOES NOT NEED TO BE CALIBRATED DAILY), PH METER: YSI 85, CALIBRATED BEFORE EACH DAY OF SAMPLING.

7/22/2010 FOLLOWING A RECENT STORM, MODERATE FLOW. D.O. METER: HACH OPTICAL CALIBRATED IN THE OFFICE (DOES NOT NEED TO BE CALIBRATED DAILY), PH METER: YSI 85, CALIBRATED BEFORE EACH DAY OF SAMPLING.



Maine Department of Environmental Protection
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Aquatic Life Taxonomic Inventory Report

Station Number: S-570

Waterbody: Long Creek - Station 570

Town: South Portland

Log Number: 1944

Subsample Factor: X1

Replicates: 3

Calculated: 3/7/2011

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Hydra</i>	02010101001	0.33	0.33		PR	0.1	0.1
<i>Stylodrilus</i>	08020101004		2.00		--		0.8
<i>Stylodrilus heringianus</i>	08020101004001	2.00			--	0.8	
Enchytraeidae	08020201	0.67	0.67		--	0.3	0.3
Naididae	08020202	4.33			--	1.7	
<i>Chaetogaster</i>	08020202002		1.90		--		0.8
<i>Chaetogaster diastrophus</i>	08020202002002	0.67			--	0.3	
<i>Pristina</i>	08020202004		0.95		--		0.4
<i>Pristina leidy</i>	08020202004005	0.33			--	0.1	
<i>Nais</i>	08020202009		0.95		CG		0.4
<i>Nais variabilis</i>	08020202009009	0.33			--	0.1	
<i>Aulodrilus</i>	08020202018		1.90		--		0.8
<i>Aulodrilus limnobius</i>	08020202018002	0.67			--	0.3	
<i>Ilyodrilus</i>	08020202020		0.95		--		0.4
<i>Ilyodrilus templetoni</i>	08020202020001	0.33			--	0.1	
<i>Aeolosoma</i>	08020301001	0.33	0.33		--	0.1	0.1
<i>Glossiphonia</i>	08030101004		0.33		--		0.1
<i>Glossiphonia complanata</i>	08030101004001	0.33			--	0.1	
<i>Helobdella</i>	08030101005		4.33		--		1.7
<i>Helobdella elongata</i>	08030101005001	0.33			--	0.1	
<i>Helobdella stagnalis</i>	08030101005004	4.00			--	1.6	
<i>Placobdella</i>	08030101006		0.33		--		0.1
<i>Placobdella papillifera</i>	08030101006003	0.33			--	0.1	
<i>Erpobdella</i>	08030203002		0.33		--		0.1
<i>Erpobdella punctata</i>	08030203002001	0.33			--	0.1	
<i>Caecidotea</i>	09010101001	1.00	2.00	8	SH	0.4	0.8
<i>Caecidotea communis</i>	09010101001001	1.00			--	0.4	
<i>Crangonyx</i>	09010202004	3.33	3.33	8	--	1.3	1.3
<i>Hyalella</i>	09010203006		0.67	8	CG		0.3
<i>Hyalella azteca</i>	09010203006011	0.67			--	0.3	
<i>Calopteryx</i>	09020307043		1.00	5	PR		0.4
<i>Calopteryx maculata</i>	09020307043088	1.00			--	0.4	
<i>Centropilum</i>	09020401003	0.33	0.33	2	CG	0.1	0.1
<i>Pseudocloeon</i>	09020401006		0.67	4	SC		0.3
<i>Pseudocloeon frondale</i>	09020401006029	0.67			--	0.3	
<i>Procloeon</i>	09020401010	3.00	3.00		CG	1.2	1.2
<i>Caenis</i>	09020412040	2.00	2.00	7	CG	0.8	0.8
<i>Microvelia</i>	09020510025	1.33	1.33		PR	0.5	0.5



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Town: South Portland

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Replicates: 3

Calculated: 3/7/2011

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Phylocentropus</i>	09020603011	8.67	8.67	5	CF	3.4	3.4
<i>Cheumatopsyche</i>	09020604015	3.00	3.00	5	CF	1.2	1.2
<i>Hydropsyche</i>	09020604016		0.33	4	CF		0.1
<i>Hydropsyche depravata complex</i>	09020604016041	0.33			CF	0.1	
<i>Oligostomis</i>	09020608039	0.33	0.33	2	PR	0.1	0.1
<i>Limnephilus</i>	09020610055	0.33	0.33	3	SH	0.1	0.1
<i>Frenesia</i>	09020610058		3.33	0	SH		1.3
<i>Frenesia difficilis</i>	09020610058117	3.33			--	1.3	
<i>Lepidostoma</i>	09020611064			1	SH		
Leptoceridae	09020618				--		
<i>Mystacides</i>	09020618075		0.33	4	CG		0.1
<i>Mystacides sepulchralis</i>	09020618075147	0.33			--	0.1	
<i>Oecetis</i>	09020618078		0.33	8	PR		0.1
<i>Oecetis inconspicua complex</i>	09020618078156	0.33			--	0.1	
<i>Tipula</i>	09021001002	0.33	0.33	4	SH	0.1	0.1
<i>Antocha</i>	09021001004			3	CG		
Chironomidae	09021011	8.67			--	3.4	
<i>Conchapelopia</i>	09021011004	0.33	0.36	6	PR	0.1	0.1
<i>Labrundinia</i>	09021011008		1.43	7	PR		0.6
<i>Labrundinia pilosella</i>	09021011008022	1.33			--	0.5	
<i>Nilotanytus fimbriatus</i>	09021011012027				--		
<i>Procladius</i>	09021011015	0.67	0.71	9	PR	0.3	0.3
<i>Zavrelimyia</i>	09021011022			8	PR		
<i>Prodiamesa</i>	09021011031		0.36	3	CG		0.1
<i>Prodiamesa olivacea</i>	09021011031048	0.33			--	0.1	
<i>Brillia</i>	09021011033		0.36	5	SH		0.1
<i>Brillia flavifrons</i>	09021011033049	0.33			--	0.1	
<i>Parakiefferiella</i>	09021011052	1.33	1.43		CG	0.5	0.6
<i>Parametriocnemus</i>	09021011053	3.33	3.57	5	CG	1.3	1.4
<i>Thienemanniella</i>	09021011062		1.79	6	CG		0.7
<i>Thienemanniella lobapodema</i>	09021011062114	1.67			--	0.7	
<i>Cladotanytarsus</i>	09021011068	0.67	0.71	7	CG	0.3	0.3
<i>Paratanytarsus</i>	09021011071	35.00	37.49	6	--	13.8	14.8
<i>Rheotanytarsus</i>	09021011072	25.00	26.78	6	CF	9.9	10.6
<i>Stempellinella</i>	09021011074		1.07	2	--		0.4
<i>Stempellinella leptocelloides</i>	09021011074001	0.33			--	0.1	
<i>Stempellinella fimbriata</i>	09021011074002	0.67			--	0.3	
<i>Tanytarsus</i>	09021011076	29.33	31.42	6	CF	11.6	12.4



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Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Dicrotendipes</i>	09021011085	0.33	0.36	8	CG	0.1	0.1
<i>Microtendipes</i>	09021011094		10.35	6	CF		4.1
<i>Microtendipes rydalensis</i> group	09021011094168	9.67			--	3.8	
<i>Paratendipes</i>	09021011100		2.86	8	CG		1.1
<i>Paratendipes albimanus</i> group	09021011100176	2.67			--	1.1	
<i>Phaenopsectra</i>	09021011101		0.36	7	SC		0.1
<i>Phaenopsectra obediens</i>	09021011101182	0.33			SC	0.1	
<i>Polypedilum</i>	09021011102		9.28	6	SH		3.7
<i>Polypedilum illinoense</i> group	09021011102185	1.00			--	0.4	
<i>Polypedilum scalaenum</i> group	09021011102189	7.00			--	2.8	
<i>Polypedilum angulum</i>	09021011102198	0.67			--	0.3	
<i>Helopelopia</i>	09021011114			6	PR		
<i>Simulium tuberosum</i> complex	09021012047071				CF		
<i>Chrysops</i>	09021014052	0.67	0.67	6	CG	0.3	0.3
<i>Dubiraphia</i>	09021113064	67.00	67.00	6	--	26.5	26.5
<i>Macronychus</i>	09021113065		4.67	4	--		1.8
<i>Macronychus glabratus</i>	09021113065040	4.67			--	1.8	
<i>Stenelmis</i>	09021113070	1.00	1.67	5	SC	0.4	0.7
<i>Stenelmis crenata</i>	09021113070055	0.67			--	0.3	
Basommatophora	100102	0.33	0.33		--	0.1	0.1
<i>Pisidium</i>	10020201002	1.00	1.33		CF	0.4	0.5
<i>Pisidium compressum</i>	10020201002007	0.33			CF	0.1	