



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

**Station Information**

<b>Station Number:</b> S-412	River Basin: Saco
Waterbody: Red Brook - Station 412	HUC8 Name: Presumpscot
Town: South Portland	Latitude: 43 37 40.6 N
Directions: HQ - 100M BELOW HIGHWAY CULVERT	Longitude: 70 19 32.2 W
	Stream Order: 2

**Sample Information**

<b>Log Number:</b> 2396	Type of Sample: ROCK BAG	Date Deployed: 7/29/2015
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/26/2015

**Classification Attainment**

<b>Statutory Class:</b> C	<b>Final Determination:</b> NA	Date: 6/14/2016
Model Result with $P \geq 0.6$ : NA	<b>Reason for Determination:</b> Model	
Date Last Calculated: 6/14/2016	Comments:	

**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	0.00
Class C or Non-Attainment	1.00	Class B or C or Non-Attainment	1.00

**Model Variables**

01 Total Mean Abundance	220.00	18 Relative Abundance Ephemeroptera	0.00
02 Generic Richness	33.00	19 EPT Generic Richness	4.00
03 Plecoptera Mean Abundance	0.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	4.33
04 Ephemeroptera Mean Abundance	0.00	23 Relative Generic Richness- Plecoptera	0.00
05 Shannon-Wiener Generic Diversity	2.15	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	56.00
06 Hilsenhoff Biotic Index	4.81	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	0.00
07 Relative Abundance - Chironomidae	0.34	28 EP Generic Richness/14	0.00
08 Relative Generic Richness Diptera	0.42	30 Presence of Class A Indicator Taxa/7	0.00
09 <i>Hydropsyche</i> Abundance	0.00		
11 <i>Cheumatopsyche</i> Abundance	0.00		
12 EPT Generic Richness/ Diptera Generic Richness	0.29		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	0.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	1.33		
17 Chironomini Abundance (Family Functional Group)	6.00		

**Five Most Dominant Taxa**

Rank	Taxon Name	Percent
1	<i>Gammarus</i>	57.12
2	<i>Tanytarsus</i>	25.15
3	<i>Microtendipes</i>	2.12
4	<i>Dubiraphia</i>	2.12
5	<i>Micropsectra</i>	1.97
6	<i>Paratanytarsus</i>	1.97



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

**Station Number: S-412**      Town: South Portland      Date Deployed: 7/29/2015  
**Log Number: 2396**      Waterbody: Red Brook - Station 412      Date Retrieved: 8/26/2015

**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT      Taxonomist: ECOANALYSTS IDAHO

**Waterbody Information - Deployment**

Temperature: 19.5 deg C  
Dissolved Oxygen: 8.33 mg/l  
Dissolved Oxygen Saturation:  
Specific Conductance: 828 uS/cm  
Velocity: 3 cm/s  
pH: 7.08  
Wetted Width: 6.8 m  
Bankfull Width: 9 m  
Depth: 54 cm

**Waterbody Information - Retrieval**

Temperature: 19.6 deg C  
Dissolved Oxygen: 8.36 mg/l  
Dissolved Oxygen Saturation:  
Specific Conductance: 691 uS/cm  
Velocity:  
pH: 7.19  
Wetted Width: 7 m  
Bankfull Width: 9 m  
Depth: 55 cm

**Water Chemistry - 8/26/2015**

Nitrate+nitrite As N	0.14 mg/l	Total Phosphorus	17 ug/l
Total Kjeldahl Nitrogen	0.4 mg/l	Total Suspended Solids	3.6 mg/l
Dissolved Organic Carbon	5.2 mg/l	Total Dissolved Solids	930 mg/l
Orthophosphate As Phosphorus	2 ug/l		

**Summary of Habitat Characteristics**

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Upland Hardwood	Partly Open	Flat	
Urban			
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
Low Gradient	Below Road Crossing	Detritus	5 %
Nps Pollution	Below Urban NPS	Gravel	5 %
Urban Runoff		Sand	90 %

**Landcover Summary - 2004 Data**

Total Area (ac)	1839	High Int. Dev. %	6.6	Water %	1.5	Non-vegetated %	0.1
		Med Int. Dev. %	2.9	Wetland %	18.1	Tilled Agriculture %	0.1
		Low Int. Dev. %	11.0	Upland Woody %	40.2	Grassland %	4.8
		Development %	20.5	Natural %	58.7	Human Altered %	39.7
						Impervious %	15.5

**Sample Comments**

7/29/2015: FISH PRESENT. 90.7% DO.  
8/26/2015: 91.3% DO.



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

**Station Number: S-412**  
**Log Number: 2396**

Waterbody: Red Brook - Station 412  
Subsample Factor: X1

Town: South Portland  
Calculated: 6/14/2016

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Nais</i>	08020202009	0.33	0.33		CG	0.2	0.2
<i>Aulodrilus</i>	08020202018		0.33		--		0.2
<i>Aulodrilus pluriset</i>	08020202018004	0.33			--	0.2	
<i>Gammarus</i>	09010201003	125.67	125.67	4	--	57.1	57.1
<i>Crangonyx</i>	09010202004	1.00	1.00	8	--	0.5	0.5
<i>Cordulegaster</i>	09020303019		0.33	3	PR		0.2
<i>Cordulegaster maculata</i>	09020303019042	0.33			--	0.2	
<i>Calopteryx</i>	09020307043	0.33	0.33	5	PR	0.2	0.2
<i>Polycentropus</i>	09020603010	4.00	4.00	6	PR	1.8	1.8
<i>Phylocentropus</i>	09020603011	0.67	0.67	5	CF	0.3	0.3
<i>Mystacides</i>	09020618075		0.33	4	CG		0.2
<i>Mystacides sepulchralis</i>	09020618075147	0.33			--	0.2	
<i>Oecetis</i>	09020618078	0.33	0.33	8	PR	0.2	0.2
Tipulidae	09021001	0.33	0.33		--	0.2	0.2
<i>Ablabesmyia</i>	09021011001		0.33	8	PR		0.2
<i>Ablabesmyia mallochii</i>	09021011001004	0.33			--	0.2	
<i>Thienemannimyia</i>	09021011020		1.00	3	PR		0.5
<i>Thienemannimyia group</i>	09021011020041	1.00			--	0.5	
<i>Brillia</i>	09021011033	0.33	0.33	5	SH	0.2	0.2
<i>Cricotopus</i>	09021011037		0.33	7	SH		0.2
<i>Cricotopus bicinctus</i>	09021011037057	0.33			--	0.2	
<i>Parakiefferiella</i>	09021011052	0.67	0.67		CG	0.3	0.3
<i>Parametrioctenemus</i>	09021011053	2.00	2.00	5	CG	0.9	0.9
<i>Micropsectra</i>	09021011070	4.33	4.33	7	CG	2.0	2.0
<i>Paratanytarsus</i>	09021011071	4.33	4.33	6	--	2.0	2.0
<i>Stempellinella</i>	09021011074	0.67	0.67	2	--	0.3	0.3
<i>Tanytarsus</i>	09021011076	55.33	55.33	6	CF	25.2	25.2
<i>Microtendipes</i>	09021011094		4.67	6	CF		2.1
<i>Microtendipes pedellus group</i>	09021011094166	1.33			--	0.6	
<i>Microtendipes rydalensis group</i>	09021011094168	3.33			--	1.5	
<i>Phaenopsectra</i>	09021011101	0.33	0.33	7	SC	0.2	0.2
<i>Polypedilum</i>	09021011102		1.00	6	SH		0.5
<i>Polypedilum aviceps</i>	09021011102181	0.67			--	0.3	
<i>Polypedilum scalaenum group</i>	09021011102189	0.33			--	0.2	
<i>Ancyronyx</i>	09021113063		0.33	6	--		0.2
<i>Ancyronyx variegatus</i>	09021113063034	0.33			CG	0.2	
<i>Dubiraphia</i>	09021113064	4.67	4.67	6	--	2.1	2.1



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

**Station Number: S-412**

Waterbody: Red Brook - Station 412

Town: South Portland

**Log Number: 2396**

Subsample Factor: X1

Replicates: 3

Calculated: 6/14/2016

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Macronychus</i>	09021113065		0.33	4	--		0.2
<i>Macronychus glabratus</i>	09021113065040	0.33			--	0.2	
<i>Stenelmis</i>	09021113070	2.33	2.33	5	SC	1.1	1.1
<i>Torrenticola</i>	09030104001	0.33	0.33		--	0.2	0.2
<i>Amnicola</i>	10010104013	1.67	1.67		SC	0.8	0.8
<i>Physa</i>	10010202027	0.67	0.67		SC	0.3	0.3
<i>Ferrissia</i>	10010204035	0.33	0.33		SC	0.2	0.2
<i>Pisidium</i>	10020201002	0.33	0.33		CF	0.2	0.2