



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

Station Information

**Station Number: S-510**  
Waterbody: Crooked Brook - Station 510  
Town: Corinth  
Directions: DOWNSTREAM OF RTE 11/43. USED TO BE  
UPSTREAM BUT MOVED IT IN 2011 BECAUSE OF  
SITE ACCESS.  
DEP Drainage: Penobscot  
HUC8: 01020005  
HUC8 Name: Lower Penobscot  
Latitude: 44 59 41.38 N  
Longitude: 69 3 9.33 W  
Stream Order: 3

Sample Information

**Log Number: 2041**  
Subsample Factor: X1  
Type of Sample: ROCK BAG  
Replicates: 3  
Date Deployed: 7/14/2011  
Date Retrieved: 8/16/2011

Classification Attainment

**Statutory Class: B**  
Model Result with P>.6: A  
Date Last Calculated: 6/29/2012  
**Final Determination: A**  
**Reason for Determination: Model**  
Comments:

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.62	Class A, B, or C	1.00
Class B	0.37	Non-Attainment	0.00
B or Better Model		A Model	
Class A or B	1.00	Class A	0.82
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.18

Model Variables

01 Total Mean Abundance	320.67	18 Relative Abundance Ephemeroptera	0.40
02 Generic Richness	59.00	19 EPT Generic Richness	26.00
03 Plecoptera Mean Abundance	4.67	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.38
04 Ephemeroptera Mean Abundance	128.00	23 Relative Generic Richness- Plecoptera	0.05
05 Shannon-Wiener Generic Diversity	4.42	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	42.78
06 Hilsenhoff Biotic Index	5.04	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	58.28
07 Relative Abundance - Chironomidae	0.25	28 EP Generic Richness/14	1.00
08 Relative Generic Richness Diptera	0.32	30 Presence of Class A Indicator Taxa/7	0.14
09 <i>Hydropsyche</i> Abundance	25.00		
11 <i>Cheumatopsyche</i> Abundance	14.00		
12 EPT Generic Richness/ Diptera Generic Richness	1.37		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	4.67		
16 Tanypodinae Mean Abundance (Family Functional Group)	1.92		
17 Chironomini Abundance (Family Functional Group)	10.74		

Five Most Dominant Taxa		
Rank	Taxon Name	Percent
1	<i>Maccaffertium</i>	17.73
2	<i>Rheotanytarsus</i>	10.53
3	<i>Stenacron</i>	9.99
4	<i>Hydropsyche</i>	7.80
5	<i>Psephenus</i>	6.96



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**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

**Waterbody Information - Deployment**

Temperature: 21.9 deg C  
Dissolved Oxygen: 8 mg/l  
Specific Conductance: 129 uS/cm  
Velocity: 22 cm/s  
pH: 7.37  
Wetted Width: 5.4 m  
Bankfull Width: 8.4 m  
Depth: 30 cm

**Waterbody Information - Retrieval**

Temperature: 20 deg C  
Dissolved Oxygen: 7.8 mg/l  
Specific Conductance: 140 uS/cm  
Velocity: 41 cm/s  
pH: 7.72  
Wetted Width: 8.4 m  
Bankfull Width: 8.4 m  
Depth: 40 cm

**Water Chemistry**

**Summary of Habitat Characteristics**

Landuse Name

Canopy Cover

Terrain

Cultivated

Open

Flat

Pasture

Swamp Conifer

Upland Hardwood

Potential Stressor

Location

Substrate

Agricultural Runoff

Below Agriculture NPS

Boulder 20 %

Below Road Crossing

Gravel 15 %

Rubble/Cobble 60 %

Sand 5 %

**Landcover Summary - 2004 Data**

Total Area (ac)	11798	High Int. Dev. %	0.3	Water %	0.0	Non-vegetated %	0.8
		Med Int. Dev. %	0.5	Wetland %	9.3	Tilled Agriculture %	11.5
		Low Int. Dev. %	3.5	Upland Woody %	68.5	Grassland %	5.1
		Development %	4.3	Natural %	78.0	Human Altered %	22.0
						Impervious %	2.6

**Sample Comments**

S-510 USED TO BE UPSTREAM OF ROAD CROSSING, BUT NOW INACCESSIBLE DUE TO ELECTRIC FENCING - STILL THE SAME SITE. FISH OBSERVED DURING DEPLOYMENT. BANK IS UNDERCUT, VERY LARGE CULVERT AT SITE.

RAINED DURING RETRIEVAL. FISH OBSERVED DURING RETRIEVAL.



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Subsample Factor: X1

Replicates: 3

Calculated: 6/29/2012

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		--	0.1	0.1
Perlidae	09020209	0.33			--	0.1	
<i>Acroneuria</i>	09020209042	0.67	1.44	0	PR	0.2	0.4
<i>Acroneuria abnormis</i>	09020209042121	0.33		0	PR	0.1	
<i>Acroneuria lycorias</i>	09020209042125	0.33			--	0.1	
<i>Neoperla</i>	09020209048	1.33	1.44	1	PR	0.4	0.4
<i>Agnetina</i>	09020209050		1.79	2	PR		0.6
<i>Agnetina capitata</i>	09020209050152	1.67		2	PR	0.5	
<i>Boyeria</i>	09020301004		0.67	2	PR		0.2
<i>Boyeria vinosa</i>	09020301004012	0.67			--	0.2	
Calopterygidae	09020307	2.33	2.33		--	0.7	0.7
<i>Calopteryx</i>	09020307043		0.33	5	PR		0.1
<i>Calopteryx maculata</i>	09020307043088	0.33			--	0.1	
Baetidae	09020401	2.33			--	0.7	
<i>Baetis</i>	09020401001	4.00	7.82	4	CG	1.2	2.4
<i>Baetis flavistriga</i>	09020401001004	2.33			--	0.7	
<i>Baetis intercalaris</i>	09020401001008	0.67			--	0.2	
<i>Acerpenna</i>	09020401007	3.67	5.58	5	CG	1.1	1.7
<i>Acerpenna pygmaea</i>	09020401007011	1.33			--	0.4	
<i>Procloeon</i>	09020401010	8.00	8.93		CG	2.5	2.8
Heptageniidae	09020402	3.00			--	0.9	
<i>Leucrocota</i>	09020402011	3.67	3.79	1	SC	1.1	1.2
<i>Stenacron</i>	09020402014	20.67	32.04	7	SC	6.4	10.0
<i>Stenacron interpunctatum</i>	09020402014045	10.33			--	3.2	
<i>Maccaffertium</i>	09020402015	18.67	56.84	4	SC	5.8	17.7
<i>Maccaffertium luteum</i>	09020402015049	36.33			--	11.3	
<i>Isonychia</i>	09020404018	1.67	1.67	2	CF	0.5	0.5
Leptophlebiidae	09020406	1.67	1.67		--	0.5	0.5
<i>Ephemerella</i>	09020410035	2.00	2.00	1	CG	0.6	0.6
<i>Tricorythodes</i>	09020411038	5.33	5.33	4	CG	1.7	1.7
<i>Caenis</i>	09020412040	2.33	2.33	7	CG	0.7	0.7
<i>Chimarra</i>	09020601003	0.33	0.33	2	CF	0.1	0.1
Psychomyiidae	09020602	0.33	0.33		--	0.1	0.1
<i>Psychomyia</i>	09020602005		0.33	2	CG		0.1
<i>Psychomyia flavida</i>	09020602005006	0.33			--	0.1	
Polycentropodidae	09020603	0.33			--	0.1	
<i>Cernotina</i>	09020603006	2.33	2.37		PR	0.7	0.7
<i>Nyctiophylax</i>	09020603009		0.68	5	PR		0.2



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		Actual	Adjusted			Actual	Adjusted
<i>Nyctiophylax moestus</i>	09020603009013	0.67			--	0.2	
<i>Polycentropus</i>	09020603010	16.00	16.28	6	PR	5.0	5.1
<i>Cheumatopsyche</i>	09020604015	14.00	14.00	5	CF	4.4	4.4
<i>Hydropsyche</i>	09020604016	3.67	25.00	4	CF	1.1	7.8
<i>Hydropsyche bronta</i>	09020604016029	19.00			--	5.9	
<i>Hydropsyche morosa</i>	09020604016030	1.67			--	0.5	
<i>Hydropsyche placoda</i>	09020604016059	0.67			--	0.2	
<i>Rhyacophila</i>	09020605019	1.00	1.00	2	PR	0.3	0.3
<i>Hydroptila</i>	09020607026	0.33	0.33	6	P	0.1	0.1
<i>Apatania</i>	09020610061	1.00	1.00		SC	0.3	0.3
<i>Oecetis</i>	09020618078	2.00	4.33	8	PR	0.6	1.4
<i>Oecetis avara</i>	09020618078153	2.00			--	0.6	
<i>Oecetis persimilis</i>	09020618078157	0.33			--	0.1	
<i>Nigronia</i>	09020701003		2.00	0	PR		0.6
<i>Nigronia serricornis</i>	09020701003003	2.00			--	0.6	
<i>Antocha</i>	09021001004	0.33	0.33	3	CG	0.1	0.1
Chironomidae	09021011	10.33			--	3.2	
<i>Ablabesmyia</i>	09021011001		0.38	8	PR		0.1
<i>Ablabesmyia mallochi</i>	09021011001004	0.33			--	0.1	
<i>Nilotanyus</i>	09021011012		1.53	6	PR		0.5
<i>Nilotanyus fimbriatus</i>	09021011012027	1.33			--	0.4	
<i>Potthastia</i>	09021011026		0.38	2	CG		0.1
<i>Potthastia gaedii</i>	09021011026045	0.33			--	0.1	
<i>Cricotopus</i>	09021011037	1.00	16.88	7	SH	0.3	5.3
<i>Cricotopus bicinctus</i>	09021011037057	3.67			--	1.1	
<i>Cricotopus vierriensis</i>	09021011037071	0.33			--	0.1	
<i>Cricotopus politus</i>	09021011037077	8.00			--	2.5	
<i>Cricotopus triannulatus/infuscatus</i>	09021011037078	1.67			SH	0.5	
<i>Orthocladius</i>	09021011050		0.38	6	CG		0.1
<i>Symposiocladius lignicola</i>	09021011050100	0.33			--	0.1	
<i>Orthocladius lignicola</i>	09021011050100	0.33			--	0.1	
<i>Rheocricotopus</i>	09021011057		0.38	6	CG		0.1
<i>Rheocricotopus robacki</i>	09021011057105	0.33			--	0.1	
<i>Synorthocladius</i>	09021011061			2	CG		
<i>Tvetenia</i>	09021011065		0.38	5	CG		0.1
<i>Tvetenia paucunca</i>	09021011065114	0.33			--	0.1	
<i>Paratanytarsus</i>	09021011071	0.33	0.38	6	--	0.1	0.1
<i>Rheotanytarsus</i>	09021011072	29.33	33.77	6	CF	9.1	10.5



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<i>Stempellinella</i>	09021011074		0.38	2	--		0.1
<i>Stempellinella fimbriata</i>	09021011074002	0.33			--	0.1	
<i>Sublettea</i>	09021011075	1.00	1.15		--	0.3	0.4
<i>Tanytarsus</i>	09021011076	10.00	11.51	6	CF	3.1	3.6
<i>Dicrotendipes</i>	09021011085	0.33	0.38	8	CG	0.1	0.1
<i>Microtendipes</i>	09021011094		4.60	6	CF		1.4
<i>Microtendipes pedellus group</i>	09021011094166	4.00			--	1.2	
<i>Phaenopsectra</i>	09021011101		1.15	7	SC		0.4
<i>Phaenopsectra obediens</i>	09021011101182	1.00			SC	0.3	
<i>Polypedilum</i>	09021011102	0.33	4.60	6	SH	0.1	1.4
<i>Polypedilum aviceps</i>	09021011102181	2.67			--	0.8	
<i>Polypedilum flavum</i>	09021011102182	1.00			--	0.3	
<i>Hayesomyia</i>	09021011112		0.38		--		0.1
<i>Hayesomyia senata</i>	09021011112001	0.33			--	0.1	
<i>Helopelopia</i>	09021011114			6	PR		
<i>Simulium jenningsi</i>	09021012047060				--		
<i>Hemerodromia</i>	09021016057	0.67	0.67	3	PR	0.2	0.2
<i>Sperchopsis</i>	09021105050	0.33	0.33		--	0.1	0.1
<i>Psephenus</i>	09021108058		22.33	4	SC		7.0
<i>Psephenus herricki</i>	09021108058028	22.33			--	7.0	
<i>Ectopria</i>	09021109059	1.67	1.67	5	SC	0.5	0.5
<i>Dubiraphia</i>	09021113064	4.33	4.33	6	--	1.3	1.4
<i>Macronychus</i>	09021113065		1.33	4	--		0.4
<i>Macronychus glabratus</i>	09021113065040	1.33			--	0.4	
<i>Optioservus</i>	09021113067		0.33	3	SC		0.1
<i>Optioservus fastiditus</i>	09021113067044	0.33			--	0.1	
<i>Promoresia</i>	09021113069	1.00	4.00		--	0.3	1.2
<i>Promoresia elegans</i>	09021113069051	2.67			--	0.8	
<i>Promoresia tardella</i>	09021113069052	0.33			--	0.1	
<i>Stenelmis</i>	09021113070	0.33	1.67	5	SC	0.1	0.5
<i>Stenelmis crenata</i>	09021113070055	1.33			--	0.4	
<i>Ferrissia</i>	10010204035		0.67		SC		0.2
<i>Ferrissia rivularis</i>	10010204035066	0.67			--	0.2	