



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

Station Information

Station Number: S-505
Waterbody: French Stream - Station 505
Town: Exeter
Directions: DOWNSTREAM SITE - CRANE ROAD

DEP Drainage: Penobscot
HUC8: 01020005
HUC8 Name: Lower Penobscot
Latitude: 44 59 18.35 N
Longitude: 69 5 5.96 W
Stream Order: 3

Sample Information

Log Number: 2039
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:

Date: 9/5/2012

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.52	Class A, B, or C	1.00
Class B	0.45	Non-Attainment	0.00
Class C			
	0.03		
NA			
	0.00		
B or Better Model		A Model	
Class A or B	1.00	Class A	0.77
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.23

Model Variables

01 Total Mean Abundance	360.67	18 Relative Abundance Ephemeroptera	0.65
02 Generic Richness	57.00	19 EPT Generic Richness	22.00
03 Plecoptera Mean Abundance	1.67	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	1.74
04 Ephemeroptera Mean Abundance	234.00	23 Relative Generic Richness- Plecoptera	0.04
05 Shannon-Wiener Generic Diversity	3.88	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	12.14
06 Hilsenhoff Biotic Index	5.04	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	65.36
07 Relative Abundance - Chironomidae	0.08	28 EP Generic Richness/14	1.07
08 Relative Generic Richness Diptera	0.33	30 Presence of Class A Indicator Taxa/7	0.14
09 <i>Hydropsyche</i> Abundance	1.67		
11 <i>Cheumatopsyche</i> Abundance	1.33		
12 EPT Generic Richness/ Diptera	1.16		
Generic Richness			
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family	1.67		
Functional Group)			
16 Tanypodinae Mean Abundance	2.44		
(Family Functional Group)			
17 Chironomini Abundance (Family	10.46		
Functional Group)			

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Stenacron</i>	26.27
2	<i>Maccaffertium</i>	17.75
3	<i>Psephenus</i>	10.35
4	<i>Choroterpes</i>	8.87
5	<i>Dubiraphia</i>	5.36



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Waterbody: French Stream - Station 505

Date Retrieved: 8/16/2011

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 23.8 deg C
Dissolved Oxygen: 7.3 mg/l
Specific Conductance: 171 uS/cm
Velocity: 42 cm/s
pH: 7.35
Wetted Width: 7.1 m
Bankfull Width: 9.1 m
Depth: 30 cm

Waterbody Information - Retrieval

Temperature: 19.9 deg C
Dissolved Oxygen: 7.4 mg/l
Specific Conductance: 196 uS/cm
Velocity: 31 cm/s
pH: 7.03
Wetted Width: 7.6 m
Bankfull Width: 9.1 m
Depth: 30 cm

Water Chemistry - 8/16/2011

Ammonia As Nitrogen	0.01 mg/l	Soluble Reactive Phosphorus	3 ug/l
Nitrate+nitrite As N	0.13 mg/l	Total Phosphorus	0.033 mg/l
Total Kjeldahl Nitrogen	0.5 mg/l	Total Suspended Solids	2.3 mg/l
Dissolved Organic Carbon	5.5 mg/l	Total Dissolved Solids	130 mg/l

Summary of Habitat Characteristics

Landuse Name

Canopy Cover

Terrain

Cultivated

Open

Flat

Pasture

Swamp Hardwood

Upland Hardwood

Potential Stressor

Location

Substrate

Agricultural Runoff

Below Agriculture NPS

Boulder 5 %

Below Road Crossing

Gravel 10 %

Rubble/Cobble 85 %

Landcover Summary - 2004 Data

Total Area (ac)	23851	High Int. Dev. %	0.1	Water %	0.2	Non-vegetated %	0.0
		Med Int. Dev. %	0.3	Wetland %	6.2	Tilled Agriculture %	13.8
		Low Int. Dev. %	3.7	Upland Woody %	70.6	Grassland %	5.2
		Development %	4.1	Natural %	76.9	Human Altered %	22.9
						Impervious %	2.3

Sample Comments

7/14/11: FISH, CRAYFISH, AND SOME SILTATION OBSERVED.

8/16/11: FISH OBSERVED.



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Station Number: S-505

Waterbody: French Stream - Station 505

Town: Exeter

Log Number: 2039

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
<i>Hyalella</i>	09010203006		0.67	8	CG		0.2
<i>Hyalella azteca</i>	09010203006011	0.67			--	0.2	
<i>Orconectes</i>	09010301008		0.67		CG		0.2
<i>Orconectes virilis</i>	09010301008016	0.67			--	0.2	
<i>Acroneuria</i>	09020209042	0.67	1.33	0	PR	0.2	0.4
<i>Acroneuria lycorias</i>	09020209042125	0.67			--	0.2	
<i>Neoperla</i>	09020209048	0.33	0.33	1	PR	0.1	0.1
Calopterygidae	09020307	0.33	0.33		--	0.1	0.1
Coenagrionidae	09020309	0.33	0.33		--	0.1	0.1
<i>Argia</i>	09020309048	1.33	1.33	7	PR	0.4	0.4
Baetidae	09020401	0.33			--	0.1	
<i>Baetis</i>	09020401001	0.33	3.37	4	CG	0.1	0.9
<i>Baetis flavistriga</i>	09020401001004	0.67			--	0.2	
<i>Baetis intercalaris</i>	09020401001008	2.33			--	0.6	
<i>Acerpenna</i>	09020401007	0.33	15.17	5	CG	0.1	4.2
<i>Acerpenna pygmaea</i>	09020401007011	14.67			--	4.1	
<i>Proclleon</i>	09020401010	10.33	10.45		CG	2.9	2.9
<i>Iswaeon</i>	09020401015	0.33	0.34		--	0.1	0.1
Heptageniidae	09020402	14.67			--	4.1	
<i>Epeorus</i>	09020402009	0.33	0.37	0	SC	0.1	0.1
<i>Leucrocuta</i>	09020402011	5.33	5.85	1	SC	1.5	1.6
<i>Stenacron</i>	09020402014	32.67	94.76	7	SC	9.1	26.3
<i>Stenacron interpunctatum</i>	09020402014045	53.67			--	14.9	
<i>Maccaffertium</i>	09020402015	8.00	64.02	4	SC	2.2	17.8
<i>Maccaffertium luteum</i>	09020402015049	50.00			--	13.9	
<i>Maccaffertium mediopunctatum</i>	09020402015050	0.33			--	0.1	
Leptophlebiidae	09020406	30.33			--	8.4	
<i>Choroterpes</i>	09020406022	4.00	32.00	2	CG	1.1	8.9
<i>Leptophlebia</i>	09020406025	0.33	2.67	4	CG	0.1	0.7
<i>Ephemera</i>	09020407027	0.67	0.67	1	CG	0.2	0.2
<i>Tricorythodes</i>	09020411038	1.00	1.00	4	CG	0.3	0.3
<i>Caenis</i>	09020412040	3.33	3.33	7	CG	0.9	0.9
<i>Nyctiophylax</i>	09020603009		0.33	5	PR		0.1
<i>Nyctiophylax moestus</i>	09020603009013	0.33			--	0.1	
<i>Polycentropus</i>	09020603010	8.00	8.00	6	PR	2.2	2.2
<i>Cheumatopsyche</i>	09020604015	1.33	1.33	5	CF	0.4	0.4
<i>Hydropsyche</i>	09020604016	1.00	1.67	4	CF	0.3	0.5
<i>Hydropsyche bronta</i>	09020604016029	0.33			--	0.1	



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Waterbody: French Stream - Station 505

Town: Exeter

Log Number: 2039

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
<i>Hydropsyche depravata complex</i>	09020604016041	0.33			CF	0.1	
<i>Hydroptila</i>	09020607026	2.67	2.67	6	P	0.7	0.7
<i>Pycnopsyche</i>	09020610049			4	SH		
<i>Apatania</i>	09020610061	0.67	0.67		SC	0.2	0.2
<i>Oecetis</i>	09020618078	0.67	2.00	8	PR	0.2	0.6
<i>Oecetis persimilis</i>	09020618078157	1.33			--	0.4	
<i>Nigronia</i>	09020701003		2.33	0	PR		0.6
<i>Nigronia serricornis</i>	09020701003003	2.33			--	0.6	
<i>Sialis</i>	09020702004	0.33	0.33	4	PR	0.1	0.1
Chironomidae	09021011	1.33			--	0.4	
<i>Ablabesmyia</i>	09021011001		1.39	8	PR		0.4
<i>Ablabesmyia mallochi</i>	09021011001004	1.33			--	0.4	
<i>Conchapelopia</i>	09021011004	0.33	0.35	6	PR	0.1	0.1
<i>Paramerina</i>	09021011013	0.33	0.35		--	0.1	0.1
<i>Thienemannimyia</i>	09021011020	0.33	0.35	3	PR	0.1	0.1
<i>Pagastia</i>	09021011025		0.35	1	--		0.1
<i>Pagastia orthogonia</i>	09021011025001	0.33			--	0.1	
<i>Cricotopus</i>	09021011037		1.05	7	SH		0.3
<i>Cricotopus bicinctus</i>	09021011037057	1.00			--	0.3	
<i>Parametriocnemus</i>	09021011053	1.00	1.05	5	CG	0.3	0.3
<i>Tvetenia vitracies</i>	09021011065113				--		
<i>Micropsectra</i>	09021011070	0.67	0.70	7	CG	0.2	0.2
<i>Paratanytarsus</i>	09021011071	0.33	0.35	6	--	0.1	0.1
<i>Rheotanytarsus</i>	09021011072	5.00	5.23	6	CF	1.4	1.5
<i>Stempellinella</i>	09021011074		0.35	2	--		0.1
<i>Stempellinella fimbriata</i>	09021011074002	0.33			--	0.1	
<i>Tanytarsus</i>	09021011076	8.00	8.37	6	CF	2.2	2.3
<i>Dicrotendipes</i>	09021011085	0.33	1.05	8	CG	0.1	0.3
<i>Dicrotendipes neomodestus</i>	09021011085152	0.67			--	0.2	
<i>Microtendipes</i>	09021011094		4.18	6	CF		1.2
<i>Microtendipes pedellus group</i>	09021011094166	4.00			--	1.1	
<i>Paratendipes</i>	09021011100		1.74	8	CG		0.5
<i>Paratendipes albimanus group</i>	09021011100176	1.67			--	0.5	
<i>Phaenopsectra</i>	09021011101		2.44	7	SC		0.7
<i>Phaenopsectra obediens</i>	09021011101182	2.33			SC	0.6	
<i>Polypedilum</i>	09021011102		1.05	6	SH		0.3
<i>Polypedilum flavum</i>	09021011102182	0.33			--	0.1	
<i>Polypedilum illinoense group</i>	09021011102185	0.33			--	0.1	



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Calculated: 6/29/2012

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Polypedilum scalaenum group</i>	09021011102189	0.33			--	0.1	
<i>Helopelopia</i>	090210111114			6	PR		
<i>Simulium</i>	09021012047		0.33	4	CF		0.1
<i>Simulium jenningsi complex</i>	09021012047070	0.33			CF	0.1	
<i>Atherix</i>	09021015055	0.33	0.33	2	PR	0.1	0.1
<i>Psephenus</i>	09021108058		37.33	4	SC		10.4
<i>Psephenus herricki</i>	09021108058028	37.33			--	10.4	
<i>Ectopria</i>	09021109059	1.00	1.00	5	SC	0.3	0.3
<i>Dubiraphia</i>	09021113064	19.33	19.33	6	--	5.4	5.4
<i>Macronychus</i>	09021113065		2.33	4	--		0.6
<i>Macronychus glabratus</i>	09021113065040	2.33			--	0.6	
<i>Optioservus</i>	09021113067	1.00	1.00	3	SC	0.3	0.3
<i>Promoresia</i>	09021113069		4.33		--		1.2
<i>Promoresia elegans</i>	09021113069051	4.33			--	1.2	
<i>Stenelmis</i>	09021113070	1.33	2.67	5	SC	0.4	0.7
<i>Stenelmis concinna</i>	09021113070054	0.67			--	0.2	
<i>Stenelmis crenata</i>	09021113070055	0.67			--	0.2	
<i>Ferrissia</i>	10010204035	0.33	2.00		SC	0.1	0.6
<i>Ferrissia rivularis</i>	10010204035066	1.67			--	0.5	
<i>Pisidium</i>	10020201002	0.33	1.33		CF	0.1	0.4
<i>Pisidium casertanum</i>	10020201002006	1.00			CF	0.3	