



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

Station Information

Station Number: S-768
Waterbody: Carrying Place Stream - Station 768
Town: Carrying Place Twp
Directions: RT 16 TO RIDGE RD, TAKE CARRYING POND RD TO MILE-2 BRIDGE

DEP Drainage: Kennebec
HUC8: 01030003
HUC8 Name: Lower Kennebec
Latitude: 45 10 53.36 N
Longitude: 70 0 59.33 W
Stream Order: 2

Sample Information

Log Number: 2118
Subsample Factor: X1

Type of Sample: ROCK BAG
Replicates: 3

Date Deployed: 7/24/2012
Date Retrieved: 8/20/2012

Classification Attainment

Statutory Class: A
Model Result with P>.6: A
Date Last Calculated: 3/7/2013

Final Determination: A
Reason for Determination: Model
Comments:

Date: 3/7/2013

Model Probabilities

<u>First Stage Model</u>				<u>C or Better Model</u>	
Class A	0.95	Class C	0.00	Class A, B, or C	1.00
Class B	0.05	NA	0.00	Non-Attainment	0.00
<u>B or Better Model</u>				<u>A Model</u>	
Class A or B		1.00		Class A	1.00
Class C or Non-Attainment		0.00		Class B or C or Non-Attainment	0.00

Model Variables

01 Total Mean Abundance	169.00	18 Relative Abundance Ephemeroptera	0.32
02 Generic Richness	51.00	19 EPT Generic Richness	28.00
03 Plecoptera Mean Abundance	28.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	1.39
04 Ephemeroptera Mean Abundance	54.00	23 Relative Generic Richness- Plecoptera	0.18
05 Shannon-Wiener Generic Diversity	4.58	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	1.73
06 Hilsenhoff Biotic Index	3.30	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	10.64
07 Relative Abundance - Chironomidae	0.16	28 EP Generic Richness/14	1.50
08 Relative Generic Richness Diptera	0.33	30 Presence of Class A Indicator Taxa/7	0.57
09 <i>Hydropsyche</i> Abundance	30.67		
11 <i>Cheumatopsyche</i> Abundance	0.00		
12 EPT Generic Richness/ Diptera Generic Richness	1.65		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	14.67		
16 Tanypodinae Mean Abundance (Family Functional Group)	1.04		
17 Chironomini Abundance (Family Functional Group)	7.97		

Five Most Dominant Taxa		
Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	18.15
2	<i>Ephemerella</i>	10.42
3	<i>Paragnetina</i>	6.46
4	<i>Maccaffertium</i>	6.10
5	<i>Tvetenia</i>	5.33



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 19.1 deg C
Dissolved Oxygen: 7.1 mg/l
Specific Conductance: 68 uS/cm
Velocity: 23.6 cm/s
pH: 7.17
Wetted Width: 11.7 m
Bankfull Width: 11.7 m
Depth: 40 cm

Waterbody Information - Retrieval

Temperature: 18.2 deg C
Dissolved Oxygen: 8.9 mg/l
Specific Conductance: 25 uS/cm
Velocity: 24 cm/s
pH: 7.35
Wetted Width: 11.7 m
Bankfull Width: 11.7 m
Depth: 55 cm

Water Chemistry - 8/20/2012

Ammonia As Nitrogen	<0.01 mg/l	Soluble Reactive Phosphorus	2 ug/l
Nitrate+nitrite As N	0.03 mg/l	Total Phosphorus	0.009 mg/l
Total Kjeldahl Nitrogen	0.3 mg/l	Total Suspended Solids	<2 mg/l
Dissolved Organic Carbon	6.4 mg/l	Total Dissolved Solids	37 mg/l

Summary of Habitat Characteristics

Landuse Name

Swamp Conifer

Swamp Hardwood

Canopy Cover

Partly Open

Terrain

Rolling

Potential Stressor

Altered Habitat

Location

Below Forestry NPS

Substrate

Bedrock	50 %
Boulder	25 %
Gravel	4 %
Rubble/Cobble	20 %
Sand	1 %

Landcover Summary - 2004 Data

Total Area (ac)	6557	High Int. Dev. %	0.0	Water %	4.9	Non-vegetated %	0.3
		Med Int. Dev. %	0.0	Wetland %	2.5	Tilled Agriculture %	0.0
		Low Int. Dev. %	0.8	Upland Woody %	91.6	Grassland %	0.1
		Development %	0.8	Natural %	94.3	Human Altered %	0.8
						Impervious %	0.1

Sample Comments

7/24/12: SPC CHANGED FROM 28 US/CM (5YR AGO) TO 68 US/CM. BLOW-DOWNS LAYING ACROSS STREAM ABOVE AND BELOW SAMPLING LOCATION. LOGGING WITHIN WATERSHED (FRESH CUTS ADJACENT TO STREAM). NEW CAMPSITE CREATED SINCE LAST SAMPLING. FISH OBSERVED DURING DEPLOYMENT AND RETRIEVAL.



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Log Number: 2118

Subsample Factor: X1

Replicates: 3

Calculated: 3/7/2013

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Leuctra</i>	09020204020	0.33	4.00	0	SH	0.2	2.4
<i>Leuctra ferruginea</i>	09020204020050	2.33			--	1.4	
<i>Leuctra truncata</i>	09020204020058	1.33			--	0.8	
<i>Pteronarcys</i>	09020205023		0.67	0	SH		0.4
<i>Pteronarcys biloba</i>	09020205023061	0.67			--	0.4	
<i>Tallaperla</i>	09020206025	5.33	5.33		SH	3.2	3.2
Perlodidae	09020207	1.67	1.67		--	1.0	1.0
<i>Isoperla</i>	09020207026	0.33	0.33	2	PR	0.2	0.2
<i>Sweltsa</i>	09020208040	1.33	1.33		PR	0.8	0.8
Perlidae	09020209	0.33			--	0.2	
<i>Acroneuria</i>	09020209042		0.34	0	PR		0.2
<i>Acroneuria abnormis</i>	09020209042121	0.33		0	PR	0.2	
<i>Paragnetina</i>	09020209049	4.33	10.91	1	PR	2.6	6.5
<i>Paragnetina immarginata</i>	09020209049149	6.33			--	3.7	
<i>Agnatina</i>	09020209050		3.41	2	PR		2.0
<i>Agnatina capitata</i>	09020209050152	3.33		2	PR	2.0	
<i>Boyeria</i>	09020301004	0.33	2.00	2	PR	0.2	1.2
<i>Boyeria grafiana</i>	09020301004011	1.67			--	1.0	
<i>Baetis</i>	09020401001	1.33	7.33	4	CG	0.8	4.3
<i>Baetis flavistriga</i>	09020401001004	3.33			--	2.0	
<i>Baetis pluto</i>	09020401001009	2.33			--	1.4	
<i>Baetis tricaudatus</i>	09020401001012	0.33			--	0.2	
<i>Acerpenna</i>	09020401007	0.33	0.33	5	CG	0.2	0.2
<i>Dipheter</i>	09020401013		5.33		--		3.2
<i>Dipheter hageni</i>	09020401013001	5.33			--	3.2	
Heptageniidae	09020402	0.33			--	0.2	
<i>Epeorus</i>	09020402009	0.33	0.34	0	SC	0.2	0.2
<i>Heptagenia</i>	09020402010	0.33	0.34	2	SC	0.2	0.2
<i>Leucrocuta</i>	09020402011	0.33	0.34	1	SC	0.2	0.2
<i>Maccaffertium</i>	09020402015	7.33	10.30	4	SC	4.3	6.1
<i>Maccaffertium luteum</i>	09020402015049	2.33			--	1.4	
<i>Maccaffertium modestum</i>	09020402015051	0.33			--	0.2	
<i>Isonychia</i>	09020404018	0.67	0.67	2	CF	0.4	0.4
Leptophlebiidae	09020406	7.00	7.00		--	4.1	4.1
Ephemerellidae	09020410	0.33			--	0.2	
<i>Ephemerella</i>	09020410035	17.00	17.60	1	CG	10.1	10.4
<i>Ephemerella invaria</i>	09020410035107	0.33			--	0.2	
<i>Eurylophella</i>	09020410036	4.00	4.06	3	CG	2.4	2.4



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		Actual	Adjusted			Actual	Adjusted
<i>Caenis</i>	09020412040	0.33	0.33	7	CG	0.2	0.2
<i>Dolophilodes</i>	09020601001	3.33	3.33	0	CF	2.0	2.0
<i>Neureclipsis</i>	09020603008	4.00	4.00	7	CF	2.4	2.4
<i>Hydropsyche</i>	09020604016	7.33	30.67	4	CF	4.3	18.1
<i>Hydropsyche slossonae</i>	09020604016031	1.67			--	1.0	
<i>Hydropsyche sparna</i>	09020604016032	21.67			--	12.8	
<i>Rhyacophila</i>	09020605019	1.00	2.00	2	PR	0.6	1.2
<i>Rhyacophila fuscula</i>	09020605019060	1.00			PR	0.6	
<i>Lepidostoma</i>	09020611064	2.67	2.67	1	SH	1.6	1.6
<i>Psilotreta</i>	09020614068	0.33	0.33	0	SC	0.2	0.2
<i>Oecetis</i>	09020618078		0.33	8	PR		0.2
<i>Oecetis persimilis</i>	09020618078157	0.33			--	0.2	
<i>Dicranota</i>	09021001005	0.67	0.67	3	PR	0.4	0.4
<i>Hexatoma</i>	09021001008	0.33	0.33	2	PR	0.2	0.2
<i>Bezzia/palpomyia</i>	09021010043	0.33	0.33	6	PR	0.2	0.2
Chironomidae	09021011	1.00			--	0.6	
<i>Trissopelopia</i>	09021011021		1.04		PR		0.6
<i>Trissopelopia ogemawi</i>	09021011021042	1.00			--	0.6	
<i>Brillia</i>	09021011033		0.35	5	SH		0.2
<i>Brillia parva</i>	09021011033050	0.33			--	0.2	
<i>Cricotopus</i>	09021011037		0.35	7	SH		0.2
<i>Cricotopus vierriensis</i>	09021011037071	0.33			--	0.2	
<i>Parametriocnemus</i>	09021011053	3.33	3.46	5	CG	2.0	2.1
<i>Rheocricotopus</i>	09021011057		0.35	6	CG		0.2
<i>Rheocricotopus robacki</i>	09021011057105	0.33			--	0.2	
<i>Tvetenia</i>	09021011065		9.01	5	CG		5.3
<i>Tvetenia paucunca</i>	09021011065114	8.67			--	5.1	
<i>Micropsectra</i>	09021011070	1.33	1.39	7	CG	0.8	0.8
<i>Rheotanytarsus</i>	09021011072	1.00	1.04	6	CF	0.6	0.6
<i>Tanytarsus</i>	09021011076	1.33	1.39	6	CF	0.8	0.8
<i>Microtendipes</i>	09021011094		1.04	6	CF		0.6
<i>Microtendipes pedellus group</i>	09021011094166	0.33			--	0.2	
<i>Microtendipes rydalensis group</i>	09021011094168	0.67			--	0.4	
<i>Polypedilum</i>	09021011102		6.93	6	SH		4.1
<i>Polypedilum aviceps</i>	09021011102181	6.33			--	3.7	
<i>Polypedilum illinoense group</i>	09021011102185	0.33			--	0.2	
<i>Simulium</i>	09021012047		6.33	4	CF		3.7
<i>Simulium tuberosum</i>	09021012047067	6.33			--	3.7	



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<i>Atherix</i>	09021015055	1.00	1.00	2	PR	0.6	0.6
<i>Roederiodes</i>	09021016058	0.33	0.33	3	PR	0.2	0.2
<i>Ectopria</i>	09021109059	0.67	0.67	5	SC	0.4	0.4
<i>Optioservus</i>	09021113067		0.67	3	SC		0.4
<i>Optioservus ovalis</i>	09021113067046	0.67			--	0.4	
<i>Oulimnius</i>	09021113068		0.67		--		0.4
<i>Oulimnius latiusculus</i>	09021113068049	0.67			--	0.4	
<i>Promoresia</i>	09021113069		3.33		--		2.0
<i>Promoresia tardella</i>	09021113069052	3.33			--	2.0	
<i>Stenelmis</i>	09021113070		1.00	5	SC		0.6
<i>Stenelmis crenata</i>	09021113070055	1.00			--	0.6	