

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

**Station Information**

<b>Station Number:</b> S760	DEP Drainage: Saco
<b>Waterbody:</b> Royal River	HUC Code: 01060001
<b>Town:</b> GRAY	HUC Name: Presumpscot
<b>Directions:</b> upstream of RR bridge off Depot Road	Latitude: Deg Min Sec
	Longitude: Deg Min Sec
	Stream Order:

**Sample Information**

<b>Log Number:</b> 1415	Type of Sample: Riffle Bags	Date Deployed: 03-SEP-04
Subsample Factor: X1	Replicates: 3	Date Retrieved: 30-SEP-04

**Classification Attainment**

Statutory Class:	A	<b>Final Determination:</b>	A
Model Result with P > .6	A	Reason for Determination:	Model
Date Last Calculated:			

**Model Probabilities**

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.60	Class A, B, or C	1.00
Class B	0.37	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	1.00	Class A	0.78
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.22

**Model Variables**

01 Total Abundance of Individuals	213.67	18 Relative Abundance - Ephemeroptera	0.08
02 Generic Richness	64.00	19 EPT Generic Richness	20.00
03 Plecoptera Abundance	1.67	21 Sum of Abundances: <i>Dicrotendipes</i> ,	1.73
04 Ephemeroptera Abundance	17.67	<i>Micropsectra, Parachironomus, Helobdella</i>	
05 Shannon - Wiener Diversity	4.19	23 Relative Generic Richness- Plecoptera	0.02
06 Hilsenhoff Biotic Index	5.39	25 Sum of Abundances: <i>Cheumatopsyche</i> ,	48.17
07 Relative Abundance - Chironomidae	0.26	<i>Cricotopus, Tanytarsus, Ablabesmyia</i>	
08 Relative Generic Richness - Diptera	0.31	26 Sum of Abundances: <i>Acroneuria, Stenonema</i>	14.63
09 <i>Hydropsyche</i> Abundance	6.93	28 EP Generic Richness/14	0.50
11 <i>Cheumatopsyche</i> Abundance	45.06	30 Presence of Class A Indicator Taxa/7	0.29
12 EPT Generic Richness/ Generic Richness	1.00		

**Five Most Dominant Taxa**

		Taxa Rank	Taxa Name	Percent
	0.00	1	Cheumatopsyche	21.09
13 Relative Abundance - Oligochaeta	0.00	2	Microtendipes	13.91
15 Perlidae Abundance (Family Functional Group)	0.00	3	Hydroptila	10.30
16 Tanypodinae Abundance (Family Functional Group)	0.35	4	Rheotanytarsus	7.12
17 Chironomini Abundance (Family Functional Group)	33.88	5	Stenonema	6.85

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**Sample Collection and Processing Information**

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Sampling Organization:  
Taxonomist: Michael Winnell

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**Waterbody Information**

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Water Temperature: 17.4 °C	Specific Conductance 127.9 uS/cm	Channel Width: 8.0 m
Velocity:	Dissolved Oxygen: 7.8 ppm	Channel Depth: 100.0 cm

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**Summary of Habitat Characteristics**

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<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Stressor</u>	<u>Location</u>
Upland Hardwood	Partly Open		Above Point Source

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**Substrate**

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Sand	Silt
50%	50%

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**Comments about the Station or Sample**

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9/30/2004 Data:  
Depth: 100cm; Temp: 12.4C; SPC: 140.5uS/cm; DO: 9.55

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**Comments about the Final Determination**

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Replicates: 3

Calculated:

**BioME Aquatic Life Taxonomic Inventory Report**

Taxa	Code	Count (Average of Baskets)		Biotic Index Value	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Dugesia</i>	03010101002	0.00	1.33		--	0.0	0.6
<i>Dugesia tigrina</i>	03010101002003	1.33	0.00		--	0.6	0.0
<i>Prostoma</i>	04010101001	0.67	0.67		--	0.3	0.3
<i>Nematoda</i>	05	0.33	0.33		--	0.2	0.2
<i>Nais</i>	08020202009	0.00	0.67		CG	0.0	0.3
<i>Nais behningi</i>	08020202009003	0.33	0.00		--	0.2	0.0
<i>Nais communis</i>	08020202009005	0.33	0.00		--	0.2	0.0
<i>Aeolosoma</i>	08020301001	0.33	0.33		--	0.2	0.2
<i>Desserobdella</i>	08030101003	0.00	0.33		--	0.0	0.2
<i>Desserobdella phalera</i>	08030101003001	0.33	0.00		--	0.2	0.0
<i>Crangonyx</i>	09010202004	0.00	0.33	8	--	0.0	0.2
<i>Crangonyx gracilis-grp</i>	09010202004009	0.33	0.00		--	0.2	0.0
<i>Orconectes</i>	09010301008	0.00	1.00		CG	0.0	0.5
<i>Orconectes limosus</i>	09010301008013	1.00	0.00		--	0.5	0.0
<i>Taeniopteryx</i>	09020202014	1.67	1.67	2	SC	0.8	0.8
<i>Hagenius</i>	09020302008	0.00	0.67	1	PR	0.0	0.3
<i>Hagenius brevistylus</i>	09020302008015	0.67	0.00		--	0.3	0.0
<i>Gomphus</i>	09020302012	0.33	0.33	5	PR	0.2	0.2
<i>Calopterygidae</i>	09020307	2.33	2.33		--	1.1	1.1
<i>Calopteryx</i>	09020307043	0.67	0.67	5	PR	0.3	0.3
<i>Coenagrionidae</i>	09020309	0.67	0.67		--	0.3	0.3
<i>Argia</i>	09020309048	1.00	1.00	7	PR	0.5	0.5
<i>Baetidae</i>	09020401	0.67	0.00		--	0.3	0.0
<i>Pseudocloeon</i>	09020401006	0.00	1.00	4	SC	0.0	0.5
<i>Pseudocloeon propinquum</i>	09020401006028	0.67	0.00		--	0.3	0.0
<i>Procloeon</i>	09020401010	0.67	1.00		CG	0.3	0.5
<i>Heptageniidae</i>	09020402	1.33	0.00		--	0.6	0.0
<i>Stenacron</i>	09020402014	0.00	0.37	7	SC	0.0	0.2
<i>Stenacron interpunctatum</i>	09020402014045	0.33	0.00		--	0.2	0.0
<i>Stenonema</i>	09020402015	5.67	14.63	4	SC	2.7	6.8
<i>Stenonema modestum</i>	09020402015051	7.67	0.00		--	3.6	0.0
<i>Ephemerella</i>	09020410035	0.33	0.33	1	CG	0.2	0.2
<i>Eurylophella</i>	09020410036	0.33	0.33	3	CG	0.2	0.2
<i>Belostoma</i>	09020502009	0.00	0.67		PR	0.0	0.3
<i>Belostoma flumineum</i>	09020502009002	0.67	0.00		--	0.3	0.0
<i>Chimarra</i>	09020601003	0.33	0.33	2	CF	0.2	0.2
<i>Polycentropodidae</i>	09020603	0.33	0.00		--	0.2	0.0

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Taxa	Code	Count (Average of Baskets)		Biotic Index Value	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
		<i>Cernotina</i>	09020603006			12.00	12.19
<i>Neureclipsis</i>	09020603008	1.33	1.35	7	CF	0.6	0.6
<i>Nyctiophylax</i>	09020603009	0.00	0.34	5	PR	0.0	0.2
<i>Nyctiophylax moestus</i>	09020603009013	0.33	0.00		--	0.2	0.0
<i>Polycentropus</i>	09020603010	7.33	7.45	6	PR	3.4	3.5
<i>Hydropsychidae</i>	09020604	2.00	0.00		--	0.9	0.0
<i>Diplectrona</i>	09020604014	0.00	0.35	0	CF	0.0	0.2
<i>Diplectrona modesta</i>	09020604014025	0.33	0.00		--	0.2	0.0
<i>Cheumatopsyche</i>	09020604015	43.33	45.06	5	CF	20.3	21.1
<i>Hydropsyche</i>	09020604016	5.33	6.93	4	CF	2.5	3.2
<i>Hydropsyche morosa</i>	09020604016030	0.33	0.00		--	0.2	0.0
<i>Hydropsyche depravata-complex</i>	09020604016041	0.67	0.00		CF	0.3	0.0
<i>Hydropsyche scalaris-group</i>	09020604016048	0.33	0.00		--	0.2	0.0
<i>Hydroptila</i>	09020607026	22.00	22.00	6	P	10.3	10.3
<i>Oxyethira</i>	09020607028	1.00	1.00	3	P	0.5	0.5
<i>Brachycentrus</i>	09020609043	0.00	0.67	0	CF	0.0	0.3
<i>Brachycentrus numerosus</i>	09020609043098	0.67	0.00		--	0.3	0.0
<i>Limnephilidae</i>	09020610	0.33	0.33		--	0.2	0.2
<i>Oecetis</i>	09020618078	1.00	1.00	8	PR	0.5	0.5
<i>Sialis</i>	09020702004	0.33	0.33	4	PR	0.2	0.2
<i>Lepidoptera</i>	090209	0.33	0.33		--	0.2	0.2
<i>Paraponyx</i>	09020901002	0.33	0.33	5	SH	0.2	0.2
<i>Anopheles</i>	09021008028	0.33	0.33		CF	0.2	0.2
<i>Chironomidae</i>	09021011	2.00	0.00		--	0.9	0.0
<i>Ablabesmyia</i>	09021011001	0.00	0.35	8	PR	0.0	0.2
<i>Ablabesmyia mallochi</i>	09021011001004	0.33	0.00		--	0.2	0.0
<i>Brillia</i>	09021011033	0.33	0.35	5	SH	0.2	0.2
<i>Cricotopus</i>	09021011037	1.00	2.07	7	SH	0.5	1.0
<i>Cricotopus bicinctus</i>	09021011037057	1.00	0.00		--	0.5	0.0
<i>Nanocladius</i>	09021011049	0.67	0.69	3	CG	0.3	0.3
<i>Orthocladius</i>	09021011050	0.00	0.69	6	CG	0.0	0.3
<i>Orthocladius annectens</i>	09021011050092	0.33	0.00		--	0.2	0.0
<i>Orthocladius carlatus</i>	09021011050093	0.33	0.00		--	0.2	0.0
<i>Parakiefferiella</i>	09021011052	0.33	0.35		CG	0.2	0.2
<i>Parametriocnemus</i>	09021011053	0.33	0.35	5	CG	0.2	0.2
<i>Micropsectra</i>	09021011070	0.33	0.35	7	CG	0.2	0.2

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<i>Paratanytarsus</i>	09021011071	1.00	1.04	6	--	0.5	0.5
<i>Rheotanytarsus</i>	09021011072	14.67	15.21	6	CF	6.9	7.1
<i>Tanytarsus</i>	09021011076	0.33	0.69	6	CF	0.2	0.3
<i>Tanytarsus glabrescens</i>	09021011076134	0.33	0.00		--	0.2	0.0
<i>Dicrotendipes</i>	09021011085	1.33	1.38	8	CG	0.6	0.6
<i>Microtendipes</i>	09021011094	0.00	29.73	6	CF	0.0	13.9
<i>Microtendipes pedellus-grp.</i>	09021011094166	10.67	0.00		--	5.0	0.0
<i>Microtendipes rydalensis-grp.</i>	09021011094168	18.00	0.00		--	8.4	0.0
<i>Pagastiella</i>	09021011096	0.33	0.35		--	0.2	0.2
<i>Phaenopsectra</i>	09021011101	0.00	1.04	7	SC	0.0	0.5
<i>Phaenopsectra punctipes-grp.</i>	09021011101181	1.00	0.00		--	0.5	0.0
<i>Polypedilum</i>	09021011102	0.00	1.04	6	SH	0.0	0.5
<i>Polypedilum flavum</i>	09021011102182	0.67	0.00		--	0.3	0.0
<i>Polypedilum illinoense-grp.</i>	09021011102185	0.33	0.00		--	0.2	0.0
<i>Stenochironomus</i>	09021011105	0.33	0.35	5	CG	0.2	0.2
<i>Simulium</i>	09021012047	0.33	0.33	4	CF	0.2	0.2
<i>Chrysops</i>	09021014052	0.33	0.33	6	CG	0.2	0.2
<i>Dubiraphia</i>	09021113064	13.00	13.00	6	CG	6.1	6.1
<i>Optioservus</i>	09021113067	0.00	0.33	3	SC	0.0	0.2
<i>Optioservus ovalis</i>	09021113067046	0.33	0.00		--	0.2	0.0
<i>Campeloma</i>	10010102004	0.00	2.33		SC	0.0	1.1
<i>Campeloma decisum</i>	10010102004009	2.33	0.00		--	1.1	0.0
<i>Amnicola</i>	10010104013	0.00	8.00		SC	0.0	3.7
<i>Amnicola limosa</i>	10010104013018	8.00	0.00		--	3.7	0.0
<i>Ferrissia</i>	10010204035	0.00	0.33		SC	0.0	0.2
<i>Ferrissia rivularis</i>	10010204035066	0.33	0.00		--	0.2	0.0
<i>Unionidae</i>	10020102	0.33	0.33		CF	0.2	0.2
<i>Pisidium</i>	10020201002	0.67	1.67		CF	0.3	0.8
<i>Pisidium casertanum</i>	10020201002006	0.33	0.00		CF	0.2	0.0
<i>Pisidium compressum</i>	10020201002007	0.67	0.00		CF	0.3	0.0