



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

Station Information

**Station Number:** S-857  
**Waterbody:** Unnamed Stream (lewiston) - Station 857  
**Town:** Lewiston  
**Directions:** DOWNSTREAM OF LEWISTON MUNICIPAL LANDFILL  
**DEP Drainage:** Androscoggin  
**HUC8 Name:** Lower Androscoggin  
**Latitude:** 44 2 45.29 N  
**Longitude:** 70 11 4.93 W  
**Stream Order:** 1

Sample Information

**Log Number:** 2188  
**Subsample Factor:** X1  
**Type of Sample:** ROCK BAG  
**Replicates:** 3  
**Date Deployed:** 7/9/2013  
**Date Retrieved:** 8/6/2013

Classification Attainment

**Statutory Class:** B  
**Model Result with P>.6:** NA  
**Date Last Calculated:** 1/28/2014  
**Final Determination:** NA  
**Reason for Determination:** Model  
**Date:** 1/30/2014  
**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	0.01	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	348.33	18 Relative Abundance Ephemeroptera	0.00
02 Generic Richness	61.00	19 EPT Generic Richness	7.00
03 Plecoptera Mean Abundance	0.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	9.11
04 Ephemeroptera Mean Abundance	0.67	23 Relative Generic Richness- Plecoptera	0.00
05 Shannon-Wiener Generic Diversity	4.12	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	35.93
06 Hilsenhoff Biotic Index	6.26	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	0.00
07 Relative Abundance - Chironomidae	0.59	28 EP Generic Richness/14	0.14
08 Relative Generic Richness Diptera	0.61	30 Presence of Class A Indicator Taxa/7	0.00
09 <i>Hydropsyche</i> Abundance	1.81		
11 <i>Cheumatopsyche</i> Abundance	4.52		
12 EPT Generic Richness/ Diptera	0.19		
Generic Richness			
13 Relative Abundance - Oligochaeta	0.16		
15 Perlidae Mean Abundance (Family	0.00		
Functional Group)			
16 Tanypodinae Mean Abundance	1.35		
(Family Functional Group)			
17 Chironomini Abundance (Family	116.52		
Functional Group)			

Five Most Dominant Taxa		
Rank	Taxon Name	Percent
1	<i>Polypedilum</i>	20.36
2	<i>Caecidotea</i>	14.07
3	<i>Limnodrilus</i>	13.44
4	<i>Tanytarsus</i>	9.02
5	<i>Paratendipes</i>	5.62



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**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

**Waterbody Information - Deployment**

Temperature:	18.9 deg C
Dissolved Oxygen:	8.3 mg/l
Specific Conductance:	232 uS/cm
Velocity:	34.8 cm/s
pH:	7.36
Wetted Width:	2.8 m
Bankfull Width:	5.4 m
Depth:	30 cm

**Waterbody Information - Retrieval**

Temperature:	14.3 deg C
Dissolved Oxygen:	7.1 mg/l
Specific Conductance:	387 uS/cm
Velocity:	19.2 cm/s
pH:	7.5
Wetted Width:	1.9 m
Bankfull Width:	5.4 m
Depth:	12 cm

**Water Chemistry - 8/6/2013**

Ammonia As Nitrogen	0.39 mg/l	Soluble Reactive Phosphorus	5 ug/l
Nitrate+nitrite As N	0.94 mg/l	Total Phosphorus	0.015 mg/l
Total Kjeldahl Nitrogen	0.7 mg/l	Total Suspended Solids	3 mg/l
Dissolved Organic Carbon	3.3 mg/l	Total Dissolved Solids	320 mg/l

**Summary of Habitat Characteristics**

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Swamp Hardwood	Partly Open	Rolling
Upland Hardwood		
Urban		

<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
Urban Runoff	Below Road Crossing	Boulder 10 %
		Gravel 30 %
		Muck 5 %
		Rubble/Cobble 40 %
		Sand 15 %

**Landcover Summary - 2004 Data**

Total Area (ac)	544	High Int. Dev. %	3.8	Water %	0.0	Non-vegetated %	0.0
		Med Int. Dev. %	7.7	Wetland %	1.3	Tilled Agriculture %	3.3
		Low Int. Dev. %	8.3	Upland Woody %	58.9	Grassland %	10.0
		Development %	19.7	Natural %	60.5	Human Altered %	39.4
						Impervious %	6.3

**Sample Comments**

8/6/2013 - VERY LOW WATER LEVELS, HYDROLOGY IN POOR CONDITION, VERY BLOWN OUT



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Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
Enchytraeidae	08020201	0.33	0.33		--	0.1	0.1
Naididae	08020202	45.33			--	13.0	
<i>Pristina</i>	08020202004	0.33	2.60		--	0.1	0.7
<i>Aulodrilus</i>	08020202018		2.60		--		0.7
<i>Aulodrilus limnobius</i>	08020202018002	0.33			--	0.1	
<i>Limnodrilus</i>	08020202022		46.80		CG		13.4
<i>Limnodrilus hoffmeisteri</i>	08020202022003	6.00			--	1.7	
Lumbricidae	08020205	2.00	2.00		--	0.6	0.6
<i>Glossiphonia</i>	08030101004		0.33		--		0.1
<i>Glossiphonia complanata</i>	08030101004001	0.33			--	0.1	
<i>Helobdella</i>	08030101005	0.33	0.33		--	0.1	0.1
<i>Caecidotea</i>	09010101001	29.00	49.00	8	SH	8.3	14.1
<i>Caecidotea racovitzai racovitzai</i>	09010101001002	20.00			--	5.7	
<i>Synurella</i>	09010202006		8.67		--		2.5
<i>Synurella chamberlaini</i>	09010202006001	8.67			--	2.5	
Isotomidae	09020102	0.33	0.33		--	0.1	0.1
<i>Boyeria</i>	09020301004		4.67	2	PR		1.3
<i>Boyeria vinosa</i>	09020301004012	4.67			--	1.3	
<i>Cordulegaster</i>	09020303019	0.67	0.67	3	PR	0.2	0.2
Baetidae	09020401	0.33	0.33		--	0.1	0.1
<i>Baetis</i>	09020401001	0.33	0.33	4	CG	0.1	0.1
<i>Microvelia</i>	09020510025	0.33	0.33		PR	0.1	0.1
Hydropsychidae	09020604	4.00			--	1.1	
<i>Cheumatopsyche</i>	09020604015	1.67	4.52	5	CF	0.5	1.3
<i>Hydropsyche</i>	09020604016	0.67	1.81	4	CF	0.2	0.5
<i>Rhyacophila</i>	09020605019	0.67	0.67	2	PR	0.2	0.2
<i>Oligostomis</i>	09020608039	0.33	0.33	2	PR	0.1	0.1
<i>Lepidostoma</i>	09020611064	0.33	0.33	1	SH	0.1	0.1
<i>Sialis</i>	09020702004	1.33	1.33	4	PR	0.4	0.4
Diptera	090210				--		
<i>Tipula</i>	09021001002	0.33	0.33	4	SH	0.1	0.1
<i>Antocha</i>	09021001004	0.33	0.33	3	CG	0.1	0.1
<i>Dicranota</i>	09021001005	3.00	3.00	3	PR	0.9	0.9
<i>Limnophila</i>	09021001009	1.33	1.33	3	PR	0.4	0.4
<i>Bezzia/palpomyia</i>	09021010043	0.67	0.67	6	PR	0.2	0.2
<i>Mallochohelea</i>	09021010047	0.33	0.33		PR	0.1	0.1
Chironomidae	09021011	2.67			--	0.8	
<i>Conchapelopia</i>	09021011004	0.67	0.68	6	PR	0.2	0.2



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		Actual	Adjusted			Actual	Adjusted
<i>Meropelopia</i>	09021011010	0.33	0.34		--	0.1	0.1
<i>Trissopelopia</i>	09021011021		0.34		PR		0.1
<i>Trissopelopia ogemawi</i>	09021011021042	0.33			--	0.1	
<i>Pagastia</i>	09021011025		4.39	1	--		1.3
<i>Pagastia orthogonia</i>	09021011025001	4.33			--	1.2	
<i>Prodiamesa</i>	09021011031		1.01	3	CG		0.3
<i>Prodiamesa olivacea</i>	09021011031048	1.00			--	0.3	
<i>Corynoneura</i>	09021011036	0.67	0.68	7	CG	0.2	0.2
<i>Heterotrissocladius</i>	09021011044		1.01	0	CG		0.3
<i>Heterotrissocladius marcidus</i>	09021011044083	1.00			--	0.3	
<i>Orthocladius</i>	09021011050		0.34	6	CG		0.1
<i>Orthocladius lignicola</i>	09021011050100	0.33			--	0.1	
<i>Parakiefferiella</i>	09021011052	0.67	0.68		CG	0.2	0.2
<i>Parametriocnemus</i>	09021011053	1.67	1.69	5	CG	0.5	0.5
<i>Thienemanniella</i>	09021011062		3.04	6	CG		0.9
<i>Thienemanniella xena</i>	09021011062110	3.00			--	0.9	
<i>Tvetenia</i>	09021011065		3.72	5	CG		1.1
<i>Tvetenia paucunca</i>	09021011065114	3.67			--	1.1	
<i>Cladotanytarsus</i>	09021011068	8.00	8.11	7	CG	2.3	2.3
<i>Micropsectra</i>	09021011070	8.67	8.78	7	CG	2.5	2.5
<i>Rheotanytarsus</i>	09021011072	17.00	17.23	6	CF	4.9	4.9
<i>Stempellinella</i>	09021011074		3.72	2	--		1.1
<i>Stempellinella leptocelloides</i>	09021011074001	3.67			--	1.1	
<i>Tanytarsus</i>	09021011076	31.00	31.41	6	CF	8.9	9.0
<i>Chironomus</i>	09021011080	0.33	0.34	10	CG	0.1	0.1
<i>Cryptochironomus</i>	09021011082	4.00	4.05	8	PR	1.1	1.2
<i>Microtendipes</i>	09021011094		15.87	6	CF		4.6
<i>Microtendipes pedellus group</i>	09021011094166	15.67			--	4.5	
<i>Paracladopelma</i>	09021011098		0.34	7	--		0.1
<i>Paracladopelma undine</i>	09021011098177	0.33			--	0.1	
<i>Paratendipes</i>	09021011100		19.59	8	CG		5.6
<i>Paratendipes albimanus group</i>	09021011100176	19.33			--	5.6	
<i>Phaenopsectra</i>	09021011101		1.35	7	SC		0.4
<i>Phaenopsectra obediens</i>	09021011101182	1.33			SC	0.4	
<i>Polypedilum</i>	09021011102		70.93	6	SH		20.4
<i>Polypedilum aviceps</i>	09021011102181	1.33			--	0.4	
<i>Polypedilum illinoense group</i>	09021011102185	0.67			--	0.2	
<i>Polypedilum laetum</i>	09021011102186	25.67			--	7.4	



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<i>Polypedilum scalaenum group</i>	09021011102189	42.33			--	12.2	
<i>Stictochironomus</i>	09021011106	4.00	4.05	9	CG	1.1	1.2
<i>Rheosmittia</i>	09021011122		0.34		--		0.1
<i>Rheosmittia arcuata</i>	09021011122001	0.33			--	0.1	
<i>Simulium</i>	09021012047	0.33	0.67	4	CF	0.1	0.2
<i>Simulium vittatum</i>	09021012047064	0.33			--	0.1	
<i>Chrysops</i>	09021014052	1.00	1.00	6	CG	0.3	0.3
<i>Hemerodromia</i>	09021016057	0.33	0.33	3	PR	0.1	0.1
<i>Roederiodes</i>	09021016058	0.33	0.33	3	PR	0.1	0.1
<i>Neoplasta</i>	09021016064	0.67	0.67		PR	0.2	0.2
<i>Oulimnius</i>	09021113068	0.67	0.67		--	0.2	0.2
Sphaeriidae	10020201	1.67	1.67		CF	0.5	0.5
<i>Pisidium</i>	10020201002	4.67	4.67		CF	1.3	1.3