



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

Station Information

Station Number: W-028	Trip ID: 2010-028	River Basin: Saco
Waterbody: LONG CREEK (BELOW GANNETT DR)		HUC8 Name: Presumpscot
Town: South Portland		Latitude: 43 38 29.95 N
Mitigation Monitoring Site: No		Longitude: 70 21 18.81 W

Sample Information

Sample ID: DN-2010-028	Type of Sample: DIPNET	Sampling Organization: MEDEP
Date Sampled: 6/10/2010	Replicates: 3	Taxonomist: LOTIC INC.
Subsample Factor: X1		

Classification Attainment

Statutory Class: C	Final Determination: C	Date: 2/7/2013
Model Result with $P \geq 0.6$: C	Reason for Determination: Model	
Date Last Calculated: 12/20/2018	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A: 0.06	Class C: 0.43	Class A, B, or C	1.00
Class B: 0.51	NA: 0.00	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	0.57	Class A	0.06
Class C or Non-Attainment	0.43	Class B or C or Non-Attainment	0.94

Model Variables

		<u>Reference Range</u> (10th or 90th percentile value)
Abundance of Taxa in the Order Ephemeroptera	0.000	≥ 0.000
Relative Richness of Taxa in the Orders Ephemeroptera, Odonata and Tricoptera	0.233	≥ 0.140
Shannon-Wiener Diversity Index	3.932	≥ 2.497
Relative Abundance of Collector-Gatherer Taxa	0.422	≥ 0.131
Abundance of Sensitive Taxa	54.565	≥ 3.424
Richness of Sensitive Taxa	8.000	≥ 3.000
Maine Tolerance Index Score For Wetland Macroinvertebrates	37.171	≤ 29.776
Ratio of MTI Sensitive to Eurytopic Taxa Abundance	0.385	≥ 0.334

Other Variables

Total Mean Abundance	381
Generic Richness:	43
Hilsenhoff Biotic Index:	8.08

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Hyalella</i>	28.23
2	<i>Caecidotea</i>	12.59
3	<i>Acricotopus</i>	7.60
4	<i>Libellulidae</i>	6.64
5	<i>Psectrocladius</i>	5.59



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Surface Water Chemistry

Sample Date: 6/10/2010 9:45:00 AM

Collection Method	Parameter	Value	Units	Qualifier
Grab Sample	Chloride	140	mg/l	
Grab Sample	Chlorophyll A	0.0032	mg/l	
Grab Sample	Chlorophyll A		mg/l	U
Grab Sample	Chlorophyll A - Phaeophytin	0.0036	mg/l	
Grab Sample	Dissolved Organic Carbon	6.3	mg/l	
Grab Sample	Nitrate + Nitrite As Nitrogen	0.08	mg/l	
Grab Sample	Orthophosphate As Phosphorus	4	ug/l	
Grab Sample	pH	7.5		
Grab Sample	Silica	6.8	mg/l	
Grab Sample	Silicon	3.2	mg/l	
Grab Sample	Specific Conductance	598	umhos/cm	
Grab Sample	Total Alkalinity	91	mg/l	
Grab Sample	Total Kjeldahl Nitrogen (organic And Nh3) As Nitrogen	0.4	mg/l	
Grab Sample	Total Phosphorus	0.029	mg/l	
Grab Sample	True Color	32	unit	*
In-situ	Dissolved Oxygen	5.9	mg/l	
In-situ	pH	7.2		
In-situ	Specific Conductance	598	us/cm	
In-situ	Temperature	14.4	deg c	

Landcover Summary - 2004 Data

Total Area (ac)	480	High Int. Dev. %	13.6	Water %	0.0	Non-vegetated %	0.0
		Med Int. Dev. %	1.8	Wetland %	12.3	Tilled Agriculture %	0.0
		Low Int. Dev. %	6.8	Upland Woody %	25.4	Grassland %	3.9
		Development %	22.3	Natural %	37.7	Human Altered %	62.3
						Impervious %	20.0
Total Land (ac)	480	High Int. Dev. %	13.6	Water %	N/A	Non-vegetated %	N/A
		Med Int. Dev. %	1.8	Wetland %	12.3	Tilled Agriculture %	0.0
		Low Int. Dev. %	6.8	Upland Woody %	25.4	Grassland %	3.9
		Development %	22.3	Natural %	37.7	Human Altered %	62.3
						Impervious %	20.0



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Summary of Habitat Characteristics

<u>Human Disturbance</u>	<u>Landscape-level Cowardin Classification</u>	<u>Hydrogeomorphic Setting</u>
Total Score: 20	System: PALUSTRINE	Landscape Position: LOTIC STREAM
Hydrologic Modifications: 3	Subsystem:	Lotic Gradient: LOW GRADIENT
Vegetative Modifications: 2	Class 1: EMERGENT	Flow Path: THROUGHFLOW
Chemical Contaminants 4	Subclass 1: PERSISTENT	Land Form: FRINGE
Impervious Surface: 7	Class 2:	Land Form Type: LOTIC STREAM FRINGE
Non-point Sources: 4	Subclass 2:	POND
	Class 3:	Waterbody Type: POND
	Subclass 3:	Waterbody Subtype:

Comments:

Dominant Plant Species: UNKNOWN SUBMERGED PLANT, CATTAILS, SURROUNDING AREA IS SHRUBBY W/
VARIED VEGETATION

Additional Plant Community Observations:

Habitat Classification:
AQUATIC MACROPHYTE BED
EMERGENT NON-PERSISTENT VEGETATION
EMERGENT PERSISTENT VEGETATION

Substrate Classification:
SILT/MUCK SUBSTRATE

Average Depth: 19 cm

Sample Comments:



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Additional Summary Variables

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	Abundance	Relative Abundance	Richness	Relative Richness
EOT Taxa:	42.33	0.111	10	0.23
EPT Taxa:	2.33	0.006	3	0.07
Insects:	205.67	0.539	35	0.81
Non-Insects:	175.67	0.461	8	0.19
Leeches:	0.00	0.000	0	0.00
Oligochaetes:	18.00	0.047	4	0.09
Snails:	1.33	0.003	1	0.02
Bivalves:	0.67	0.002	1	0.02
Isopods:	48.00	0.126	1	0.02
Amphipods:	107.67	0.282	1	0.02
Mites:	0.00	0.000	0	0.00
Stoneflies:	0.00	0.000	0	0.00
Mayflies:	0.00	0.000	0	0.00
Odonates:	40.00	0.105	7	0.16
Caddisflies:	2.33	0.006	3	0.07
Diptera:	114.67	0.301	16	0.37
Hemiptera:	11.67	0.031	1	0.02
Beetles:	37.00	0.097	8	0.19
Chironomids:	114.67	0.301	16	0.37
Tanypodinae Tribe:	9.33	0.024	4	0.09
Chironomiinae Tribe:	31.00	0.081	7	0.16
Orthocloidiinae Tribe:	74.33	0.195	5	0.12
Collector-Filterers:	8.33	0.022	2	0.05
Collector-Gatherers:	160.96	0.422	10	0.23
Predators:	49.35	0.129	13	0.30
Piercers:	28.33	0.074	3	0.07
Shredders:	70.25	0.184	4	0.09
Scrapers:	1.33	0.003	1	0.02
Maine Tolerance:				
Sensitive:	54.56	0.151	8	0.24
Intermediate:	164.67	0.456	14	0.42
Eurytopic:	141.61	0.392	11	0.33
Ratio of MTI Sensitive to Eurytopic	0.39	0.385	0.73	0.73



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Aquatic Life Taxonomic Inventory Report

Station Number: W-028 Waterbody: LONG CREEK (BELOW GANNETT DR) Town: South Portland
Log Number: DN-2010-028 Subsample Factor: X1 Replicates: 3 Calculated: 12/20/2018

Taxon	Maine Taxonomic Code	Count (Mean of Samples)		Hilsen- hoff Biotic Index	Func- tional Feeding Group	Maine Toler- ance Index	Tribe	Taxa	Group
		Actual	Adjusted						
Lumbriculidae	08020101	0.33	0.33	--	--	--	--	Worm	
Naididae	08020202	1.33	0.00	--	--	--	--	Worm	
Nais	08020202009	1.67	1.80	--	CG	43-E	--	Worm	
Aulodrilus	08020202018	8.67	9.37	--	--	3.8-S	--	Tubificid Worm	
Limnodrilus	08020202022	1.33	6.49	--	CG	83.9-E	--	Tubificid Worm	
<i>Limnodrilus hoffmeisteri</i>	08020202022003	4.67	0.00	--	--	--	--	Tubificid Worm	
Caecidotea	09010101001	48.00	48.00	8	SH	51.9-E	--	Isopod	
Hyalella	09010203006	107.67	107.67	8	CG	24.5-I	--	Amphipod	
Aeshna	09020301001	0.67	0.67	5	PR	27.9-I	--	Dragonfly/damselfly	
Boyeria	09020301004	0.33	0.33	2	PR	8-S	--	Dragonfly/damselfly	
Libellulidae	09020306	25.33	0.00	--	--	--	--	Dragonfly/damselfly	
Leucorrhinia	09020306034	4.00	18.48	9	PR	24.7-I	--	Dragonfly/damselfly	
Libellula	09020306035	3.00	13.86	9	PR	15-S	--	Dragonfly/damselfly	
Lestes	09020308045	2.00	2.00	9	PR	32.6-I	--	Dragonfly/damselfly	
Coenagrionidae	09020309	2.67	2.67	--	--	--	--	Dragonfly/damselfly	
Ischnura	09020309052	2.00	2.00	9	PR	14.6-S	--	Dragonfly/damselfly	
Corixidae	09020501	11.67	11.67	--	--	--	--	True Bug	
Oligostomis	09020608039	0.67	0.67	2	PR	--	--	Caddisfly	
Limnephilidae	09020610	0.33	0.00	--	--	--	--	Caddisfly	
Limnephilus	09020610055	1.00	1.25	3	SH	24.6-I	--	Caddisfly	
Glyphopsyche	09020610059	0.33	0.42	1	--	--	--	Caddisfly	
Clinotanypus	09021011002	0.00	3.00	8	PR	30.3-I	T	Fly: Midge	
<i>Clinotanypus pinguis</i>	09021011002008	3.00	0.00	--	--	--	--	Fly: Midge	
Larsia	09021011009	3.00	3.00	6	PR	15.6-S	T	Fly: Midge	
Natarsia	09021011011	0.33	0.33	8	PR	43.6-E	T	Fly: Midge	
Procladius	09021011015	3.00	3.00	9	PR	25.1-I	T	Fly: Midge	
Acricotopus	09021011032	29.00	29.00	10	--	75-E	--	Fly: Midge	
Corynoneura	09021011036	0.33	0.33	7	CG	40.1-I	--	Fly: Midge	
Cricotopus	09021011037	3.00	19.33	7	SH	43-E	--	Fly: Midge	
<i>Cricotopus bicinctus</i>	09021011037057	1.33	0.00	--	--	--	--	Fly: Midge	
<i>Cricotopus lebetis</i>	09021011037080	15.00	0.00	--	--	--	--	Fly: Midge	
Orthocladius	09021011050	3.00	4.33	6	CG	22-S	--	Fly: Midge	
<i>Orthocladius annectens</i>	09021011050092	1.33	0.00	--	--	--	--	Fly: Midge	
Psectrocladius	09021011056	21.33	21.33	8	CG	22-S	--	Fly: Midge	
Paratanytarsus	09021011071	2.67	2.67	6	--	43-E	Y	Fly: Midge	



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		Actual	Adjusted					
Tanytarsus	09021011076	7.67	7.67	6	CF	25.7-I	Y	Fly: Midge
Chironomus	09021011080	1.33	1.33	10	CG	27.4-I	C	Fly: Midge
Cladopelma	09021011081	0.33	0.33	9	CG	27.9-I	C	Fly: Midge
Dicrotendipes	09021011085	7.67	15.67	8	CG	28.8-I	C	Fly: Midge
<i>Dicrotendipes modestus</i>	09021011085151	8.00	0.00	--	--	--	C	Fly: Midge
Polypedilum	09021011102	0.00	1.67	6	SH	24.2-I	C	Fly: Midge
<i>Polypedilum halterale group</i>	09021011102193	1.67	0.00	--	--	--	C	Fly: Midge
Stictochironomus	09021011106	1.67	1.67	9	CG	--	C	Fly: Midge
Haliphus	09021101001	7.33	7.33	--	P	67.1-E	--	Beetle
Peltodytes	09021101002	19.00	19.00	--	P	56.2-E	--	Beetle
Dytiscidae	09021103	1.33	0.00	--	--	--	--	Beetle
Laccophilus	09021103006	4.67	5.65	--	--	63.7-E	--	Beetle
Agabus	09021103016	1.33	1.61	--	PR	34.5-I	--	Beetle
Dytiscus	09021103027	0.33	0.40	--	PR	--	--	Beetle
Hydrophilidae	09021105	0.67	0.67	--	--	--	--	Beetle
Berosus	09021105040	2.00	2.00	--	P	87.9-E	--	Beetle
Dubiraphia	09021113064	0.33	0.33	6	--	10.4-S	--	Beetle
Physidae	10010202	1.33	1.33	--	SC	--	--	Snail
Sphaeriidae	10020201	0.67	0.67	--	CF	--	--	Clam