

Chesapeake Bay Water Quality Monitoring Program

Long-term Benthic Monitoring and Assessment Component Level 1 Comprehensive Report

July 1984 – December 2018
(Volume 2)

Prepared for

**Maryland Department of Natural Resources
Resource Assessment Service
Tidewater Ecosystem Assessments
Annapolis, Maryland**

Prepared by

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December 2019

**CHESAPEAKE BAY WATER QUALITY
MONITORING PROGRAM**

**LONG-TERM BENTHIC MONITORING
AND ASSESSMENT COMPONENT
LEVEL I COMPREHENSIVE REPORT**

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DATA SUMMARY A

**BENTHIC ENVIRONMENT AND COMMUNITY
COMPOSITION AT FIXED SITES:
SUMMER 2018**

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 001		Rep: 01	
Watershed: Mainstem	Habitat: High Mesohaline Sand	Date: 09/06/2018	
Gear: Modified Box Corer	Sampled Area: 0.025 sq.m	Time: 9:45:00	
BOTTOM ENVIRONMENT			
Depth (m): 2.1	Salinity (ppt): 8.20	Temperature (C): 29.54	
Dissolved Oxygen (mg/l): 5.1	Sediment Silt-Clay (%): 2.49	Total Carbon (%): 0.04	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.00	Condition: Meets Goal	# Attributes Scored: 6	
	Value	Score	
Shannon-Wiener Index	2.27	1	Pollution Indicative Species Abundance (%) 8.33 5
Abundance (#/m2)	1920	5	Pollution Indicative Species Biomass (%) 14.16
Biomass (g/m2)	1.89	3	Pollution Sensitive Species Abundance (%) 0.00 1
Carnivore-Omnivore Abundance (%)	22.92	3	Pollution Sensitive Species Biomass (%) 0.00
Deep Deposit Feeder Abundance (%)	6.25		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	280	0.02800	
Eteone heteropoda	40	0.00400	
Gemma gemma	80	0.00200	
Heteromastus filiformis	120	0.03600	
Lepidactylus dytiscus	40	0.01200	
Macoma mitchelli	1040	0.85200	
Micrura leidyi	40	0.68400	
Mulinia lateralis	80	0.25600	
Neanthes succinea	80	0.00200	
Paraonis fulgens	80	0.00800	
Streblospio benedicti	40	0.00800	
Total Abundance w/ Epi.	1920		
Total Abundance w/o Epi.	1920		
Number of Taxa w/ Epi.	11		
Number of Taxa w/o Epi.	11		
Total Biomass w/ Epi.		1.89200	
Total Biomass w/o Epi.		1.89200	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 001		Rep: 02	
Watershed: Mainstem	Habitat: High Mesohaline Sand	Date: 09/06/2018	
Gear: Modified Box Corer	Sampled Area: 0.025 sq.m	Time: 9:45:00	
BOTTOM ENVIRONMENT			
Depth (m): 2.1	Salinity (ppt): 8.20	Temperature (C): 29.54	
Dissolved Oxygen (mg/l): 5.1	Sediment Silt-Clay (%): 2.49	Total Carbon (%): 0.04	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.67	Condition: Marginal	# Attributes Scored: 6	
	Value	Score	
Shannon-Wiener Index	2.17	1	Pollution Indicative Species Abundance (%) 3.39 5
Abundance (#/m2)	2360	5	Pollution Indicative Species Biomass (%) 0.20
Biomass (g/m2)	1.97	3	Pollution Sensitive Species Abundance (%) 5.08 1
Carnivore-Omnivore Abundance (%)	13.56	1	Pollution Sensitive Species Biomass (%) 16.06
Deep Deposit Feeder Abundance (%)	11.86		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	200	0.03200	
Gemma gemma	160	0.00200	
Heteromastus filiformis	280	0.13600	
Lepidactylus dytiscus	120	0.01600	
Macoma mitchelli	1280	0.97200	
Marenzelleria viridis	120	0.31600	
Micrura leidyi	80	0.48800	
Neanthes succinea	40	0.00200	
Streblospio benedicti	80	0.00400	
Total Abundance w/ Epi.	2360		
Total Abundance w/o Epi.	2360		
Number of Taxa w/ Epi.	9		
Number of Taxa w/o Epi.	9		
Total Biomass w/ Epi.		1.96800	
Total Biomass w/o Epi.		1.96800	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 001		Rep: 03	
Watershed: Mainstem		Date: 09/06/2018	
Gear: Modified Box Corer		Time: 9:45:00	
Habitat: High Mesohaline Sand		Sampled Area: 0.025 sq.m	
BOTTOM ENVIRONMENT			
Depth (m): 2.1	Salinity (ppt): 8.20	Temperature (C): 29.54	
Dissolved Oxygen (mg/l): 5.1	Sediment Silt-Clay (%): 2.49	Total Carbon (%): 0.04	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.33	Condition: Meets Goal		# Attributes Scored: 6
	Value	Score	Value
Shannon-Wiener Index	2.67	3	Pollution Indicative Species Abundance (%) 5.26
Abundance (#/m2)	2280	5	Pollution Indicative Species Biomass (%) 3.59
Biomass (g/m2)	1.95	3	Pollution Sensitive Species Abundance (%) 5.26
Carnivore-Omnivore Abundance (%)	26.32	3	Pollution Sensitive Species Biomass (%) 26.87
Deep Deposit Feeder Abundance (%)	19.30		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Carinoma tremaphoros	240		0.06800
Gemma gemma	40		0.00200
Glycinde solitaria	40		0.01600
Haminoea solitaria	40		0.00200
Heteromastus filiformis	400		0.21200
Leitoscoloplos spp.	40		0.00400
Macoma balthica	40		0.23200
Macoma mitchelli	960		0.52000
Marenzelleria viridis	40		0.27600
Micrura leidyi	40		0.41200
Mulinia lateralis	40		0.06400
Neanthes succinea	240		0.13600
Paraonis fulgens	80		0.00400
Streblospio benedicti	40		0.00200
Total Abundance w/ Epi.	2280		
Total Abundance w/o Epi.	2280		
Number of Taxa w/ Epi.	14		
Number of Taxa w/o Epi.	14		
Total Biomass w/ Epi.			1.95000
Total Biomass w/o Epi.			1.95000

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 006		Rep: 01	
Watershed: Calvert Cliffs Discharge		Date: 09/06/2018	
Gear: Modified Box Corer		Time: 10:53:00	
Habitat: High Mesohaline Sand		Sampled Area: 0.025 sq.m	
BOTTOM ENVIRONMENT			
Depth (m): 2.1	Salinity (ppt): 8.43	Temperature (C): 30.11	
Dissolved Oxygen (mg/l): 4.5	Sediment Silt-Clay (%): 1.52	Total Carbon (%): 0	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.00	Condition: Meets Goal		# Attributes Scored: 6
	Value	Score	Value
Shannon-Wiener Index	2.75	3	Pollution Indicative Species Abundance (%) 14.29
Abundance (#/m2)	1680	5	Pollution Indicative Species Biomass (%) 6.62
Biomass (g/m2)	2.21	3	Pollution Sensitive Species Abundance (%) 0.00
Carnivore-Omnivore Abundance (%)	33.33	3	Pollution Sensitive Species Biomass (%) 0.00
Deep Deposit Feeder Abundance (%)	4.76		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Carinoma tremaphoros	240		0.02400
Chironomus spp.	40		0.00200
Gemma gemma	160		0.00800
Heteromastus filiformis	80		0.15200
Laeonereis culveri	120		1.01200
Lepidactylus dytiscus	40		0.00800
Macoma mitchelli	640		0.09200
Micrura leidyi	40		0.69600
Mulinia lateralis	40		0.14000
Neanthes succinea	120		0.06800
Streblospio benedicti	160		0.00400
Total Abundance w/ Epi.	1680		
Total Abundance w/o Epi.	1680		
Number of Taxa w/ Epi.	11		
Number of Taxa w/o Epi.	11		
Total Biomass w/ Epi.			2.20600
Total Biomass w/o Epi.			2.20600

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 006		Rep: 02	
Watershed: Calvert Cliffs Discharge		Date: 09/06/2018	
Gear: Modified Box Corer		Time: 10:53:00	
Habitat: High Mesohaline Sand		Sampled Area: 0.025 sq.m	
BOTTOM ENVIRONMENT			
Depth (m): 2.1	Salinity (ppt): 8.43	Temperature (C): 30.11	
Dissolved Oxygen (mg/l): 4.5	Sediment Silt-Clay (%): 1.52	Total Carbon (%): 0	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.00	Condition: Meets Goal		# Attributes Scored: 6
	Value	Score	Value
Shannon-Wiener Index	2.45	1	Pollution Indicative Species Abundance (%) 6.45
Abundance (#/m2)	1240	3	Pollution Indicative Species Biomass (%) 9.62
Biomass (g/m2)	1.75	3	Pollution Sensitive Species Abundance (%) 6.45
Carnivore-Omnivore Abundance (%)	38.71	5	Pollution Sensitive Species Biomass (%) 2.29
Deep Deposit Feeder Abundance (%)	6.45		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Carinoma tremaphoros	80		0.00200
Cyathura polita	80		0.04000
Heteromastus filiformis	80		0.24400
Laeonereis culveri	80		0.77200
Lepidactylus dytiscus	40		0.01200
Macoma mitchelli	560		0.08400
Micrura leidyi	120		0.33200
Mulinia lateralis	80		0.16800
Neanthes succinea	120		0.09200
Total Abundance w/ Epi.	1240		
Total Abundance w/o Epi.	1240		
Number of Taxa w/ Epi.	9		
Number of Taxa w/o Epi.	9		
Total Biomass w/ Epi.			1.74600
Total Biomass w/o Epi.			1.74600

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 006		Rep: 03	
Watershed: Calvert Cliffs Discharge		Date: 09/06/2018	
Gear: Modified Box Corer		Time: 10:53:00	
Habitat: High Mesohaline Sand		Sampled Area: 0.025 sq.m	
BOTTOM ENVIRONMENT			
Depth (m): 2.1	Salinity (ppt): 8.43	Temperature (C): 30.11	
Dissolved Oxygen (mg/l): 4.5	Sediment Silt-Clay (%): 1.52	Total Carbon (%): 0	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.00	Condition: Meets Goal		# Attributes Scored: 6
	Value	Score	Value
Shannon-Wiener Index	2.56	3	11.54
Abundance (#/m2)	1040	3	1.85
Biomass (g/m2)	1.30	3	3.85
Carnivore-Omnivore Abundance (%)	69.23	5	7.41
Deep Deposit Feeder Abundance (%)	7.69		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Carinoma tremaphoros	200		0.02000
Chironomus spp.	80		0.00800
Heteromastus filiformis	80		0.01600
Laeonereis culveri	40		0.00400
Macoma mitchelli	160		0.02000
Marenzelleria viridis	40		0.09600
Micrura leidyi	120		0.70800
Mulinia lateralis	40		0.01600
Neanthes succinea	280		0.40800
Total Abundance w/ Epi.	1040		
Total Abundance w/o Epi.	1040		
Number of Taxa w/ Epi.	9		
Number of Taxa w/o Epi.	9		
Total Biomass w/ Epi.			1.29600
Total Biomass w/o Epi.			1.29600

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 015		Rep: 01	
Watershed: Mainstem	Habitat: High Mesohaline Sand	Date: 09/06/2018	
Gear: Modified Box Corer	Sampled Area: 0.025 sq.m	Time: 12:35:00	
BOTTOM ENVIRONMENT			
Depth (m): 2.5	Salinity (ppt): 5.99	Temperature (C): 30.12	
Dissolved Oxygen (mg/l): 7.7	Sediment Silt-Clay (%): 3.79	Total Carbon (%): 0.07	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.33	Condition: Degraded		# Attributes Scored: 6
	Value	Score	Value
Shannon-Wiener Index	2.51	3	Pollution Indicative Species Abundance (%) 13.60
Abundance (#/m2)	5000	1	Pollution Indicative Species Biomass (%) 0.26
Biomass (g/m2)	12.54	5	Pollution Sensitive Species Abundance (%) 9.60
Carnivore-Omnivore Abundance (%)	11.20	1	Pollution Sensitive Species Biomass (%) 53.33
Deep Deposit Feeder Abundance (%)	51.20		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Carinoma tremaphoros	240		0.13600
Cyathura polita	40		0.00200
Eteone heteropoda	120		0.01200
Gemma gemma	400		0.06000
Heteromastus filiformis	2520		2.82800
Leptocheirus plumulosus	280		0.02800
Macoma balthica	120		4.56000
Macoma mitchelli	200		2.32800
Marenzelleria viridis	320		2.12400
Micrura leidyi	120		0.42400
Neanthes succinea	40		0.01200
Streblospio benedicti	560		0.02000
Tubificoides spp.	40		0.00200
Total Abundance w/ Epi.	5000		
Total Abundance w/o Epi.	5000		
Number of Taxa w/ Epi.	13		
Number of Taxa w/o Epi.	13		
Total Biomass w/ Epi.			12.53600
Total Biomass w/o Epi.			12.53600

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

=====					
		Station: 015		Rep: 02	
Watershed: Mainstem		Habitat: High Mesohaline Sand		Date: 09/06/2018	
Gear: Modified Box Corer		Sampled Area: 0.025 sq.m		Time: 12:35:00	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 2.5		Salinity (ppt): 5.99		Temperature (C): 30.12	
Dissolved Oxygen (mg/l): 7.7		Sediment Silt-Clay (%): 3.79		Total Carbon (%): 0.07	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 2.67		Condition: Marginal		# Attributes Scored: 6	
		Value	Score	Value	Score
Shannon-Wiener Index		2.00	1	Pollution Indicative Species Abundance (%)	0.00
Abundance (#/m2)		4040	3	Pollution Indicative Species Biomass (%)	0.00
Biomass (g/m2)		5.45	5	Pollution Sensitive Species Abundance (%)	7.92
Carnivore-Omnivore Abundance (%)		9.90	1	Pollution Sensitive Species Biomass (%)	27.31
Deep Deposit Feeder Abundance (%)		58.42			
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	

Carinoma tremaphoros		280		0.06400	
Gemma gemma		200		0.03600	
Heteromastus filiformis		2360		1.88400	
Leptocheirus plumulosus		400		0.06800	
Macoma mitchelli		360		1.51600	
Marenzelleria viridis		320		1.48800	
Micrura leidyi		40		0.12000	
Neanthes succinea		80		0.27200	

Total Abundance w/ Epi.		4040			
Total Abundance w/o Epi.		4040			
Number of Taxa w/ Epi.		8			
Number of Taxa w/o Epi.		8			
Total Biomass w/ Epi.				5.44800	
Total Biomass w/o Epi.				5.44800	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 015		Rep: 03	
Watershed: Mainstem	Habitat: High Mesohaline Sand	Date: 09/06/2018	
Gear: Modified Box Corer	Sampled Area: 0.025 sq.m	Time: 12:35:00	
BOTTOM ENVIRONMENT			
Depth (m): 2.5	Salinity (ppt): 5.99	Temperature (C): 30.12	
Dissolved Oxygen (mg/l): 7.7	Sediment Silt-Clay (%): 3.79	Total Carbon (%): 0.07	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.00	Condition: Meets Goal	# Attributes Scored: 6	
	Value	Score	
Shannon-Wiener Index	2.39	1	Pollution Indicative Species Abundance (%) 3.53 5
Abundance (#/m2)	3400	3	Pollution Indicative Species Biomass (%) 0.43
Biomass (g/m2)	8.40	5	Pollution Sensitive Species Abundance (%) 11.76 3
Carnivore-Omnivore Abundance (%)	8.24	1	Pollution Sensitive Species Biomass (%) 51.17
Deep Deposit Feeder Abundance (%)	45.88		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	160	0.10000	
Eteone heteropoda	40	0.00800	
Gemma gemma	120	0.01600	
Heteromastus filiformis	1520	1.05200	
Leitoscoloplos spp.	40	0.02000	
Leptocheirus plumulosus	760	0.10800	
Macoma balthica	80	2.51200	
Macoma mitchelli	240	1.86800	
Marenzelleria viridis	320	1.78800	
Micrura leidyi	80	0.92400	
Streblospio benedicti	40	0.00800	
Total Abundance w/ Epi.	3400		
Total Abundance w/o Epi.	3400		
Number of Taxa w/ Epi.	11		
Number of Taxa w/o Epi.	11		
Total Biomass w/ Epi.		8.40400	
Total Biomass w/o Epi.		8.40400	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 022		Rep: 01	
Watershed: Patapsco & Back Rivers		Date: 08/28/2018	
Gear: Willco Box Corer		Time: 7:36:00	
Habitat: Low Mesohaline		Sampled Area: 0.022 sq.m	
BOTTOM ENVIRONMENT			
Depth (m): 5.3	Salinity (ppt): 4.51	Temperature (C): 26.33	
Dissolved Oxygen (mg/l): 3.7	Sediment Silt-Clay (%): 87.83	Total Carbon (%): 3.09	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.40	Condition: Meets Goal		# Attributes Scored: 5
	Value	Score	Value
Shannon-Wiener Index	1.51	1	Pollution Indicative Species Abundance (%) 3.13
Abundance (#/m2)	1454	3	Pollution Indicative Species Biomass (%) 0.10
Biomass (g/m2)	4.51	3	Pollution Sensitive Species Abundance (%) 68.75
Carnivore-Omnivore Abundance (%)	18.75		Pollution Sensitive Species Biomass (%) 92.39
Deep Deposit Feeder Abundance (%)	6.25		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Carinoma tremaphoros	227		0.03181
Macoma balthica	1000		4.16322
Macoma mitchelli	45		0.20453
Neanthes succinea	45		0.09999
Streblospio benedicti	45		0.00455
Tubificoides spp.	91		0.00227
Total Abundance w/ Epi.	1454		
Total Abundance w/o Epi.	1454		
Number of Taxa w/ Epi.	6		
Number of Taxa w/o Epi.	6		
Total Biomass w/ Epi.			4.50637
Total Biomass w/o Epi.			4.50637

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 022		Rep: 02	
Watershed: Patapsco & Back Rivers	Habitat: Low Mesohaline	Date: 08/28/2018	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 7:36:00	
BOTTOM ENVIRONMENT			
Depth (m): 5.3	Salinity (ppt): 4.51	Temperature (C): 26.33	
Dissolved Oxygen (mg/l): 3.7	Sediment Silt-Clay (%): 87.83	Total Carbon (%): 3.09	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.00	Condition: Meets Goal	# Attributes Scored: 5	
	Value	Score	Value
Shannon-Wiener Index	2.33	3	Pollution Indicative Species Abundance (%) 11.11
Abundance (#/m2)	1227	3	Pollution Indicative Species Biomass (%) 0.45
Biomass (g/m2)	2.52	3	Pollution Sensitive Species Abundance (%) 40.74
Carnivore-Omnivore Abundance (%)	22.22		Pollution Sensitive Species Biomass (%) 79.06
Deep Deposit Feeder Abundance (%)	29.63		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	182	0.03636	
Chironomus spp.	45	0.00909	
Heteromastus filiformis	91	0.42723	
Macoma balthica	500	1.99071	
Neanthes succinea	45	0.04999	
Streblospio benedicti	91	0.00227	
Tubificoides spp.	273	0.00227	
Total Abundance w/ Epi.	1227		
Total Abundance w/o Epi.	1227		
Number of Taxa w/ Epi.	7		
Number of Taxa w/o Epi.	7		
Total Biomass w/ Epi.		2.51793	
Total Biomass w/o Epi.		2.51793	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Watershed: Patapsco & Back Rivers		Station: 022		Rep: 03	
Gear: Willco Box Corer		Habitat: Low Mesohaline		Date: 08/28/2018	
		Sampled Area: 0.022 sq.m		Time: 7:36:00	
BOTTOM ENVIRONMENT					
Depth (m):	5.3	Salinity (ppt):	4.51	Temperature (C):	26.33
Dissolved Oxygen (mg/l):	3.7	Sediment Silt-Clay (%):	87.83	Total Carbon (%):	3.09
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score:	3.00	Condition:	Meets Goal	# Attributes Scored:	5
		Value	Score	Value	Score
Shannon-Wiener Index	1.63	1		Pollution Indicative Species Abundance (%)	21.05
Abundance (#/m2)	1727	5		Pollution Indicative Species Biomass (%)	0.11
Biomass (g/m2)	3.98	3		Pollution Sensitive Species Abundance (%)	60.53
Carnivore-Omnivore Abundance (%)	7.89			Pollution Sensitive Species Biomass (%)	89.09
Deep Deposit Feeder Abundance (%)	7.89				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Macoma balthica		1045		3.54510	
Macoma mitchelli		45		0.07727	
Neanthes succinea		136		0.34997	
Streblospio benedicti		364		0.00455	
Tubificoides spp.		136		0.00227	
Total Abundance w/ Epi.		1727			
Total Abundance w/o Epi.		1727			
Number of Taxa w/ Epi.		5			
Number of Taxa w/o Epi.		5			
Total Biomass w/ Epi.				3.97915	
Total Biomass w/o Epi.				3.97915	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 023		Rep: 01	
Watershed: Patapsco & Back Rivers		Habitat: Low Mesohaline	
Gear: Willco Box Corer		Date: 08/28/2018	
		Sampled Area: 0.022 sq.m	
		Time: 10:00:00	
BOTTOM ENVIRONMENT			
Depth (m): 6.3		Salinity (ppt): 5.23	
Dissolved Oxygen (mg/l): 4.3		Sediment Silt-Clay (%): 78.89	
		Temperature (C): 26.35	
		Total Carbon (%): 3.35	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.80		Condition: Meets Goal	
		# Attributes Scored: 5	
Value	Score	Value	Score
Shannon-Wiener Index	2.66	Pollution Indicative Species Abundance (%)	9.84
Abundance (#/m2)	2772	Pollution Indicative Species Biomass (%)	0.10
Biomass (g/m2)	4.50	Pollution Sensitive Species Abundance (%)	18.03
Carnivore-Omnivore Abundance (%)	22.95	Pollution Sensitive Species Biomass (%)	63.74
Deep Deposit Feeder Abundance (%)	13.11		3
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Americamysis almyra (Epi)	45	0.00455	
Carinoma tremaphoros	136	0.03181	
Heteromastus filiformis	45	0.00455	
Leptocheirus plumulosus	909	0.23180	
Macoma balthica	455	2.83608	
Macoma mitchelli	91	0.83628	
Marenzelleria viridis	45	0.03181	
Melita nitida (Epi)	45	0.00227	
Neanthes succinea	500	0.51813	
Streblospio benedicti	273	0.00454	
Tubificoides spp.	318	0.00454	
Total Abundance w/ Epi.	2863		
Total Abundance w/o Epi.	2772		
Number of Taxa w/ Epi.	11		
Number of Taxa w/o Epi.	9		
Total Biomass w/ Epi.		4.50637	
Total Biomass w/o Epi.		4.49955	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 023		Rep: 02	
Watershed: Patapsco & Back Rivers	Habitat: Low Mesohaline	Date: 08/28/2018	
Gear: Willco Box Corer	Sampled Area: 0.022 sq.m	Time: 10:00:00	
BOTTOM ENVIRONMENT			
Depth (m): 6.3	Salinity (ppt): 5.23	Temperature (C): 26.35	
Dissolved Oxygen (mg/l): 4.3	Sediment Silt-Clay (%): 78.89	Total Carbon (%): 3.35	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 4.20	Condition: Meets Goal	# Attributes Scored: 5	
	Value	Score	
Shannon-Wiener Index	2.58	5	Pollution Indicative Species Abundance (%) 7.58 5
Abundance (#/m2)	3000	3	Pollution Indicative Species Biomass (%) 0.04
Biomass (g/m2)	6.23	5	Pollution Sensitive Species Abundance (%) 18.18
Carnivore-Omnivore Abundance (%)	15.15		Pollution Sensitive Species Biomass (%) 73.93 3
Deep Deposit Feeder Abundance (%)	15.15		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	273	0.06818	
Heteromastus filiformis	45	0.00455	
Leptocheirus plumulosus	1182	0.25906	
Macoma balthica	500	4.56773	
Macoma mitchelli	136	0.89082	
Melita nitida (Epi)	182	0.01818	
Neanthes succinea	182	0.39087	
Rangia cuneata	45	0.04091	
Streblospio benedicti	227	0.00227	
Tubificoides spp.	409	0.00909	
Total Abundance w/ Epi.	3182		
Total Abundance w/o Epi.	3000		
Number of Taxa w/ Epi.	10		
Number of Taxa w/o Epi.	9		
Total Biomass w/ Epi.		6.25165	
Total Biomass w/o Epi.		6.23347	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 023		Rep: 03	
Watershed: Patapsco & Back Rivers	Habitat: Low Mesohaline	Date: 08/28/2018	
Gear: Willco Box Corer	Sampled Area: 0.022 sq.m	Time: 10:00:00	
BOTTOM ENVIRONMENT			
Depth (m): 6.3	Salinity (ppt): 5.23	Temperature (C): 26.35	
Dissolved Oxygen (mg/l): 4.3	Sediment Silt-Clay (%): 78.89	Total Carbon (%): 3.35	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.80	Condition: Meets Goal	# Attributes Scored: 5	
	Value	Score	
Shannon-Wiener Index	2.33	3	Pollution Indicative Species Abundance (%) 6.35 5
Abundance (#/m2)	2863	3	Pollution Indicative Species Biomass (%) 0.34
Biomass (g/m2)	4.74	3	Pollution Sensitive Species Abundance (%) 14.29
Carnivore-Omnivore Abundance (%)	22.22		Pollution Sensitive Species Biomass (%) 82.17 5
Deep Deposit Feeder Abundance (%)	17.46		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	182	0.08181	
Coelotanypus spp.	45	0.01364	
Leptocheirus plumulosus	1182	0.27725	
Macoma balthica	409	3.89507	
Melita nitida (Epi)	45	0.00227	
Neanthes succinea	409	0.46813	
Streblospio benedicti	136	0.00227	
Tubificoides spp.	500	0.00227	
Total Abundance w/ Epi.	2909		
Total Abundance w/o Epi.	2863		
Number of Taxa w/ Epi.	8		
Number of Taxa w/o Epi.	7		
Total Biomass w/ Epi.		4.74271	
Total Biomass w/o Epi.		4.74044	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 024		Rep: 01	
Watershed: Mainstem		Date: 08/23/2018	
Gear: Willco Box Corer		Time: 7:40:00	
Habitat: High Mesohaline Mud		Sampled Area: 0.022 sq.m	
BOTTOM ENVIRONMENT			
Depth (m): 6.0	Salinity (ppt): 2.40	Temperature (C): 25.74	
Dissolved Oxygen (mg/l): 3.7	Sediment Silt-Clay (%): 91.70	Total Carbon (%): 3.02	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.67	Condition: Meets Goal		# Attributes Scored: 6
	Value	Score	Value
Shannon-Wiener Index	1.96	1	Pollution Indicative Species Abundance (%) 2.50
Abundance (#/m2)	1818	5	Pollution Indicative Species Biomass (%) 0.02
Biomass (g/m2)	11.93	3	Pollution Sensitive Species Abundance (%) 22.50
Carnivore-Omnivore Abundance (%)	10.00	3	Pollution Sensitive Species Biomass (%) 94.00
Deep Deposit Feeder Abundance (%)	2.50		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Carinoma tremaphoros	45		0.00455
Leptocheirus plumulosus	1091		0.11817
Macoma balthica	318		11.17616
Macoma mitchelli	45		0.25906
Marenzelleria viridis	45		0.00909
Neanthes succinea	136		0.32724
Rangia cuneata	45		0.03182
Streblospio benedicti	45		0.00227
Tubificoides spp.	45		0.00455
Total Abundance w/ Epi.	1818		
Total Abundance w/o Epi.	1818		
Number of Taxa w/ Epi.	9		
Number of Taxa w/o Epi.	9		
Total Biomass w/ Epi.			11.93290
Total Biomass w/o Epi.			11.93290

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 024		Rep: 02	
Watershed: Mainstem	Habitat: High Mesohaline Mud	Date: 08/23/2018	
Gear: Willco Box Corer	Sampled Area: 0.022 sq.m	Time: 7:40:00	
BOTTOM ENVIRONMENT			
Depth (m): 6.0	Salinity (ppt): 2.40	Temperature (C): 25.74	
Dissolved Oxygen (mg/l): 3.7	Sediment Silt-Clay (%): 91.70	Total Carbon (%): 3.02	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.67	Condition: Meets Goal	# Attributes Scored: 6	
	Value	Score	
Shannon-Wiener Index	1.94	1	Pollution Indicative Species Abundance (%) 0.00
Abundance (#/m2)	2363	5	Pollution Indicative Species Biomass (%) 0.00 5
Biomass (g/m2)	20.29	3	Pollution Sensitive Species Abundance (%) 17.31
Carnivore-Omnivore Abundance (%)	11.54	3	Pollution Sensitive Species Biomass (%) 95.33 5
Deep Deposit Feeder Abundance (%)	15.38		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	91	0.00909	
Heteromastus filiformis	182	0.02273	
Leptocheirus plumulosus	1318	0.17271	
Macoma balthica	409	19.34352	
Neanthes succinea	182	0.74083	
Tubificoides spp.	182	0.00227	
Total Abundance w/ Epi.	2363		
Total Abundance w/o Epi.	2363		
Number of Taxa w/ Epi.	6		
Number of Taxa w/o Epi.	6		
Total Biomass w/ Epi.		20.29115	
Total Biomass w/o Epi.		20.29115	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 024		Rep: 03	
Watershed: Mainstem		Date: 08/23/2018	
Gear: Willco Box Corer		Time: 7:40:00	
Habitat: High Mesohaline Mud		Sampled Area: 0.022 sq.m	
BOTTOM ENVIRONMENT			
Depth (m): 6.0	Salinity (ppt): 2.40	Temperature (C): 25.74	
Dissolved Oxygen (mg/l): 3.7	Sediment Silt-Clay (%): 91.70	Total Carbon (%): 3.02	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.67	Condition: Meets Goal		# Attributes Scored: 6
	Value	Score	Value
Shannon-Wiener Index	2.14	3	Pollution Indicative Species Abundance (%) 5.08
Abundance (#/m2)	2682	3	Pollution Indicative Species Biomass (%) 0.02
Biomass (g/m2)	14.78	3	Pollution Sensitive Species Abundance (%) 16.95
Carnivore-Omnivore Abundance (%)	22.03	3	Pollution Sensitive Species Biomass (%) 89.47
Deep Deposit Feeder Abundance (%)	8.47		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Carinoma tremaphoros	45		0.00455
Leptocheirus plumulosus	1227		0.15908
Macoma balthica	455		13.22595
Macoma mitchelli	45		0.00227
Neanthes succinea	545		1.38623
Streblospio benedicti	136		0.00227
Tubificoides spp.	227		0.00227
Total Abundance w/ Epi.	2682		
Total Abundance w/o Epi.	2682		
Number of Taxa w/ Epi.	7		
Number of Taxa w/o Epi.	7		
Total Biomass w/ Epi.			14.78261
Total Biomass w/o Epi.			14.78261

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 026		Rep: 01	
Watershed: Upper Western Shore	Habitat: Low Mesohaline	Date: 09/28/2018	
Gear: Willco Box Corer	Sampled Area: 0.022 sq.m	Time: 13:45:00	
BOTTOM ENVIRONMENT			
Depth (m): 3.6	Salinity (ppt): 0.35	Temperature (C): 20.22	
Dissolved Oxygen (mg/l): 8.9	Sediment Silt-Clay (%): 89.72	Total Carbon (%): 3.37	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.00	Condition: Meets Goal	# Attributes Scored: 5	
	Value	Score	
Shannon-Wiener Index	2.22	3	Pollution Indicative Species Abundance (%) 16.67 3
Abundance (#/m2)	1091	3	Pollution Indicative Species Biomass (%) 0.03
Biomass (g/m2)	72.01	1	Pollution Sensitive Species Abundance (%) 75.00
Carnivore-Omnivore Abundance (%)	41.67		Pollution Sensitive Species Biomass (%) 99.91 5
Deep Deposit Feeder Abundance (%)	8.33		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Ameroculodes species complex	45	0.00909	
Carinoma tremaphoros	45	0.02727	
Coelotanypus spp.	91	0.02273	
Cyathura polita	318	0.85446	
Marenzelleria viridis	45	0.09544	
Mytilopsis leucophaeata (Epi)	45	0.38178	
Rangia cuneata	455	71.00199	
Tubificidae imm w/o cap chaetae	91	0.00227	
Total Abundance w/ Epi.	1136		
Total Abundance w/o Epi.	1091		
Number of Taxa w/ Epi.	8		
Number of Taxa w/o Epi.	7		
Total Biomass w/ Epi.		72.39503	
Total Biomass w/o Epi.		72.01325	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 026		Rep: 02	
Watershed: Upper Western Shore	Habitat: Low Mesohaline	Date: 09/28/2018	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 13:45:00	
BOTTOM ENVIRONMENT			
Depth (m): 3.6	Salinity (ppt): 0.35	Temperature (C): 20.22	
Dissolved Oxygen (mg/l): 8.9	Sediment Silt-Clay (%): 89.72	Total Carbon (%): 3.37	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.00	Condition: Meets Goal	# Attributes Scored: 5	
	Value	Score	Value
Shannon-Wiener Index	2.26	3	Pollution Indicative Species Abundance (%) 17.65
Abundance (#/m2)	773	3	Pollution Indicative Species Biomass (%) 0.04
Biomass (g/m2)	50.54	1	Pollution Sensitive Species Abundance (%) 76.47
Carnivore-Omnivore Abundance (%)	41.18		Pollution Sensitive Species Biomass (%) 99.95
Deep Deposit Feeder Abundance (%)	0.00		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Ameroculodes species complex	45	0.00455	
Coelotanypus spp.	91	0.01818	
Cyathura polita	227	0.02727	
Marenzelleria viridis	91	0.12726	
Mytilopsis leucophaeata (Epi)	45	0.46814	
Rangia cuneata	273	50.35860	
Streblospio benedicti	45	0.00227	
Total Abundance w/ Epi.	818		
Total Abundance w/o Epi.	773		
Number of Taxa w/ Epi.	7		
Number of Taxa w/o Epi.	6		
Total Biomass w/ Epi.		51.00626	
Total Biomass w/o Epi.		50.53813	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 026		Rep: 03	
Watershed: Upper Western Shore		Habitat: Low Mesohaline	
Gear: Willco Box Corer		Date: 09/28/2018	
		Sampled Area: 0.022 sq.m	
		Time: 13:45:00	
BOTTOM ENVIRONMENT			
Depth (m): 3.6		Salinity (ppt): 0.35	
Dissolved Oxygen (mg/l): 8.9		Sediment Silt-Clay (%): 89.72	
		Temperature (C): 20.22	
		Total Carbon (%): 3.37	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.60		Condition: Degraded	
		# Attributes Scored: 5	
Value	Score	Value	Score
Shannon-Wiener Index	1.75	Pollution Indicative Species Abundance (%)	11.11
Abundance (#/m2)	409	Pollution Indicative Species Biomass (%)	0.04
Biomass (g/m2)	12.96	Pollution Sensitive Species Abundance (%)	88.89
Carnivore-Omnivore Abundance (%)	55.56	Pollution Sensitive Species Biomass (%)	99.96
Deep Deposit Feeder Abundance (%)	0.00		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Coelotanypus spp.	45	0.00455	
Cyathura polita	182	0.00909	
Gammarus spp. (Epi)	91	0.01364	
Marenzelleria viridis	45	0.01364	
Rangia cuneata	136	12.93053	
Total Abundance w/ Epi.	500		
Total Abundance w/o Epi.	409		
Number of Taxa w/ Epi.	5		
Number of Taxa w/o Epi.	4		
Total Biomass w/ Epi.		12.97143	
Total Biomass w/o Epi.		12.95780	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Watershed: Upper Eastern Shore		Station: 029	Rep: 01
Gear: Willco Box Corer		Habitat: Oligohaline	Date: 09/19/2018
		Sampled Area: 0.022 sq.m	Time: 14:25:00
BOTTOM ENVIRONMENT			
Depth (m): 4.4		Salinity (ppt): 0.45	Temperature (C): 22.37
Dissolved Oxygen (mg/l): 8.0		Sediment Silt-Clay (%): 65.92	Total Carbon (%): 1.67
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.00	Condition: Meets Goal		# Attributes Scored: 6
	Value	Score	Value Score
Shannon-Wiener Index	2.38		Oligohaline Pollution Indicative Spp. Abund. 44.44 3
Abundance (#/m2)	1636	5	Tolerance Score 7.14 3
Deep Deposit Feeder Abundance (%)	22.22		Oligohaline Pollution Sensitive Spp. Abund. 11.11 3
Carnivore-Omnivore Abundance (%)	33.33	3	Tanypodinae/Chironomidae Abundance Ratio 100.00 1
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Coelotanypus spp.	364		0.00909
Crangon septemspinosa (Epi)	45		0.21361
Cyathura polita	182		0.00909
Gammarus spp. (Epi)	91		0.00227
Limnodrilus hoffmeisteri	91		
Marenzelleria viridis	182		0.27270
Oecetis inconspicua (Epi)	45		0.00227
Oligochaeta			0.00227
Rangia cuneata	545		106.19847
Tubificidae imm w/o cap chaetae *	273		
Total Abundance w/ Epi.	1818		
Total Abundance w/o Epi.	1636		
Number of Taxa w/ Epi.	8		
Number of Taxa w/o Epi.	5		
Total Biomass w/ Epi.			106.70978
Total Biomass w/o Epi.			106.49162

*Indicates taxa is skipped in taxon counts

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Watershed: Upper Eastern Shore		Station: 029		Rep: 02	
Gear: Willco Box Corer		Habitat: Oligohaline		Date: 09/19/2018	
		Sampled Area: 0.022 sq.m		Time: 14:25:00	
BOTTOM ENVIRONMENT					
Depth (m): 4.4		Salinity (ppt): 0.45		Temperature (C): 22.37	
Dissolved Oxygen (mg/l): 8.0		Sediment Silt-Clay (%): 65.92		Total Carbon (%): 1.67	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.00		Condition: Meets Goal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.62		Oligohaline Pollution Indicative Spp. Abund.	27.45	3
Abundance (#/m2)	2318	5	Tolerance Score	6.65	3
Deep Deposit Feeder Abundance (%)	11.76		Oligohaline Pollution Sensitive Spp. Abund.	19.61	3
Carnivore-Omnivore Abundance (%)	27.45	3	Tanypodinae/Chironomidae Abundance Ratio	100.00	1
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Ameroculodes species complex	45		0.00227		
Carinoma tremaphoros	45		0.00909		
Coelotanypus spp.	318		0.00909		
Corbicula fluminea	45		2.09070		
Cyathura polita	273		0.03181		
Gammarus spp. (Epi)	182		0.00909		
Limnodrilus hoffmeisteri	91				
Marenzelleria viridis	455		0.59540		
Oecetis inconspicua (Epi)	45		0.00909		
Oligochaeta			0.00682		
Rangia cuneata	864		160.34760		
Tubificidae imm w/o cap chaetae *	136				
Tubificoides spp.	45		0.00227		
Total Abundance w/ Epi.	2545				
Total Abundance w/o Epi.	2318				
Number of Taxa w/ Epi.	11				
Number of Taxa w/o Epi.	9				
Total Biomass w/ Epi.			163.11323		
Total Biomass w/o Epi.			163.09505		

*Indicates taxa is skipped in taxon counts

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Watershed: Upper Eastern Shore		Station: 029	Rep: 03
Gear: Willco Box Corer		Habitat: Oligohaline	Date: 09/19/2018
		Sampled Area: 0.022 sq.m	Time: 14:25:00
BOTTOM ENVIRONMENT			
Depth (m): 4.4	Salinity (ppt): 0.45	Temperature (C): 22.37	
Dissolved Oxygen (mg/l): 8.0	Sediment Silt-Clay (%): 65.92	Total Carbon (%): 1.67	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.00	Condition: Meets Goal		# Attributes Scored: 6
	Value	Score	Value
Shannon-Wiener Index	2.38		3
Abundance (#/m2)	2772	5	3
Deep Deposit Feeder Abundance (%)	29.51		3
Carnivore-Omnivore Abundance (%)	27.87	3	1
		Oligohaline Pollution Indicative Spp. Abund.	55.74
		Tolerance Score	7.03
		Oligohaline Pollution Sensitive Spp. Abund.	6.56
		Tanypodinae/Chironomidae Abundance Ratio	100.00
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Coelotanypus spp.	727	0.03181	
Cyathura polita	45	0.01818	
Gammarus spp. (Epi)	136	0.01818	
Limnodrilus hoffmeisteri	318		
Littoridinops tenuipes (Epi)	45	0.00227	
Marenzelleria viridis	182	0.34997	
Oecetis inconspicua (Epi)	45	0.00227	
Oligochaeta		0.01136	
Rangia cuneata	1000	224.63208	
Tubificidae imm w/o cap chaetae *	273		
Tubificoides spp.	227	0.00909	
Total Abundance w/ Epi.	3000		
Total Abundance w/o Epi.	2772		
Number of Taxa w/ Epi.	9		
Number of Taxa w/o Epi.	6		
Total Biomass w/ Epi.		225.07522	
Total Biomass w/o Epi.		225.05249	

*Indicates taxa is skipped in taxon counts

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 036		Rep: 01	
Watershed: Potomac River	Habitat: Tidal Freshwater	Date: 09/04/2018	
Gear: Willco Box Corer	Sampled Area: 0.022 sq.m	Time: 15:32:00	
BOTTOM ENVIRONMENT			
Depth (m): 1.5	Salinity (ppt): 0.15	Temperature (C): 28.88	
Dissolved Oxygen (mg/l): 6.6	Sediment Silt-Clay (%): 72.15	Total Carbon (%): 3.51	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.00	Condition: Severely Degr.	# Attributes Scored: 3	
	Value	Score	
Shannon-Wiener Index	2.13	T.F. Pollution Indicative Spp. Abund. (%)	72.18 3
Abundance (#/m2)	6045	Tolerance Score	9.37 1
Deep Deposit Feeder Abundance (%)	81.95	Limnodrilus Abundance (%)	72.18
Carnivore-Omnivore Abundance (%)	11.28		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Branchiura sowerbyi	273	0.34542	
Chironomidae		0.00227	
Chironomus spp.	182	0.02727	
Coelotanypus spp.	273	0.01818	
Corbicula fluminea	136	0.01818	
Cryptochironomus spp.	136		
Ilyodrilus templetoni	318		
Limnodrilus hoffmeisteri	636		
Oligochaeta		0.57753	
Pisidium spp.	182	0.03181	
Polypedilum halterale group	91		
Sphaeriidae *	91	0.00227	
Tubificidae imm w/o cap chaetae *	3727		
Total Abundance w/ Epi.	6045		
Total Abundance w/o Epi.	6045		
Number of Taxa w/ Epi.	9		
Number of Taxa w/o Epi.	9		
Total Biomass w/ Epi.		1.02294	
Total Biomass w/o Epi.		1.02294	

*Indicates taxa is skipped in taxon counts

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 036		Rep: 02	
Watershed: Potomac River		Date: 09/04/2018	
Gear: Willco Box Corer		Time: 15:32:00	
BOTTOM ENVIRONMENT			
Depth (m): 1.5	Salinity (ppt): 0.15	Temperature (C): 28.88	
Dissolved Oxygen (mg/l): 6.6	Sediment Silt-Clay (%): 72.15	Total Carbon (%): 3.51	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.00	Condition: Severely Degr.		# Attributes Scored: 3
	Value	Score	Value
Shannon-Wiener Index	2.04		3
Abundance (#/m2)	10817	1	1
Deep Deposit Feeder Abundance (%)	86.97	3	
Carnivore-Omnivore Abundance (%)	10.92		66.81
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Branchiura sowerbyi	273	0.19089	
Chironomidae		0.00227	
Chironomus spp.	318	0.03181	
Coelotanypus spp.	500	0.06818	
Corbicula fluminea	227	0.34088	
Cryptochironomus spp.	45		
Dero spp.	500		
Harnischia spp.	136		
Limnodrilus hoffmeisteri	500		
Oligochaeta		0.82573	
Polypedilum halterale group	182		
Tubificidae imm w cap chaetae	1409		
Tubificidae imm w/o cap chaetae *	6727		
Total Abundance w/ Epi.	10817		
Total Abundance w/o Epi.	10817		
Number of Taxa w/ Epi.	10		
Number of Taxa w/o Epi.	10		
Total Biomass w/ Epi.		1.45975	
Total Biomass w/o Epi.		1.45975	

*Indicates taxa is skipped in taxon counts

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 036		Rep: 03	
Watershed: Potomac River		Date: 09/04/2018	
Gear: Willco Box Corer		Time: 15:32:00	
BOTTOM ENVIRONMENT			
Depth (m): 1.5	Salinity (ppt): 0.15	Temperature (C): 28.88	
Dissolved Oxygen (mg/l): 6.6	Sediment Silt-Clay (%): 72.15	Total Carbon (%): 3.51	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.50	Condition: Degraded	# Attributes Scored: 3	
	Value	Value	Score
Shannon-Wiener Index	2.49	T.F. Pollution Indicative Spp. Abund. (%)	62.67
Abundance (#/m2)	10226	Tolerance Score	9.29
Deep Deposit Feeder Abundance (%)	83.56	Limnodrilus Abundance (%)	62.67
Carnivore-Omnivore Abundance (%)	13.33		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Aulodrilus pigueti	364		
Branchiura sowerbyi	273	0.36814	
Chironomidae		0.00227	
Chironomus spp.	591	0.04545	
Coelotanypus spp.	591	0.08635	
Corbicula fluminea	91	0.00227	
Cryptochironomus spp.	45		
Dero digitata	773		
Ilyodrilus templetoni	364		
Limnodrilus hoffmeisteri	773		
Oligochaeta		0.83095	
Pisidium spp.	136	0.01364	
Polypedilum halterale group	136		
Sphaeriidae *	91	0.00227	
Tubificidae imm w cap chaetae	364		
Tubificidae imm w/o cap chaetae *	5636		
Total Abundance w/ Epi.	10226		
Total Abundance w/o Epi.	10226		
Number of Taxa w/ Epi.	12		
Number of Taxa w/o Epi.	12		
Total Biomass w/ Epi.		1.35135	
Total Biomass w/o Epi.		1.35135	

*Indicates taxa is skipped in taxon counts

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

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|                               Station: 040                               Rep: 01                               |
| Watershed: Potomac River        Habitat: Oligohaline                    Date: 09/04/2018                       |
| Gear: Wildco Box Corer         Sampled Area: 0.022 sq.m                Time: 10:05:00                         |
=====
|                               BOTTOM ENVIRONMENT                               |
=====
| Depth (m): 7.0                  Salinity (ppt): 0.13                    Temperature (C): 28.87                 |
| Dissolved Oxygen (mg/l): 7.3    Sediment Silt-Clay (%): 92.39          Total Carbon (%): 2.64                 |
=====
|                               BENTHIC INDEX OF BIOTIC INTEGRITY                               |
=====
| B-IBI Score: 3.33              Condition: Meets Goal                    # Attributes Scored: 6                 |
|                               Value      Score                               Value      Score                       |
| Shannon-Wiener Index          1.16                                     Oligohaline Pollution Indicative Spp. Abund. 70.59 3 |
| Abundance (#/m2)              773    5                               Tolerance Score                               6.20 3 |
| Deep Deposit Feeder Abundance (%) 0.00                                     Oligohaline Pollution Sensitive Spp. Abund. 11.76 3 |
| Carnivore-Omnivore Abundance (%) 88.24  5                               Tanypodinae/Chironomidae Abundance Ratio 100.00 1 |
=====
|                               BENTHIC ABUNDANCE (per sq. meter)                               |
=====
|                               TAXA                               Abundance (#/m2)                               Biomass (g/m2)                               |
|-----|-----|-----|-----|
| Coelotanypus spp.              |                               545                               |                               0.07727                               |
| Cyathura polita                 |                               136                               |                               0.07272                               |
| Gammarus spp. (Epi)            |                               91                               |                               0.00909                               |
| Marenzelleria viridis          |                               91                               |                               0.07727                               | |
|---|---|---|---|
| Total Abundance w/ Epi.         |                               864                               |                               |
| Total Abundance w/o Epi.        |                               773                               |                               |
| Number of Taxa w/ Epi.          |                               4                               |                               |
| Number of Taxa w/o Epi.         |                               3                               |                               |
| Total Biomass w/ Epi.           |                               |                               |                               0.23634                               |
| Total Biomass w/o Epi.         |                               |                               |                               0.22725                               |
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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 040		Rep: 02	
Watershed: Potomac River		Date: 09/04/2018	
Gear: Willco Box Corer		Time: 10:05:00	
Habitat: Oligohaline		Sampled Area: 0.022 sq.m	
BOTTOM ENVIRONMENT			
Depth (m): 7.0	Salinity (ppt): 0.13	Temperature (C): 28.87	
Dissolved Oxygen (mg/l): 7.3	Sediment Silt-Clay (%): 92.39	Total Carbon (%): 2.64	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.67		Condition: Meets Goal	
		# Attributes Scored: 6	
	Value	Score	Value
Shannon-Wiener Index	2.06	Oligohaline Pollution Indicative Spp. Abund.	33.33
Abundance (#/m2)	1227	Tolerance Score	6.18
Deep Deposit Feeder Abundance (%)	7.41	Oligohaline Pollution Sensitive Spp. Abund.	44.44
Carnivore-Omnivore Abundance (%)	44.44	Tanypodinae/Chironomidae Abundance Ratio	100.00
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Carinoma tremaphoros	45		0.15453
Coelotanyus spp.	318		0.05000
Cyathura polita	182		0.01818
Gammarus spp. (Epi)	45		0.00227
Heteromastus filiformis	91		0.00455
Marenzelleria viridis	545		0.45450
Rangia cuneata	45		7.78559
Total Abundance w/ Epi.	1273		
Total Abundance w/o Epi.	1227		
Number of Taxa w/ Epi.	7		
Number of Taxa w/o Epi.	6		
Total Biomass w/ Epi.			8.46961
Total Biomass w/o Epi.			8.46734

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 040		Rep: 03	
Watershed: Potomac River	Habitat: Oligohaline	Date: 09/04/2018	
Gear: Willco Box Corer	Sampled Area: 0.022 sq.m	Time: 10:05:00	
BOTTOM ENVIRONMENT			
Depth (m): 7.0	Salinity (ppt): 0.13	Temperature (C): 28.87	
Dissolved Oxygen (mg/l): 7.3	Sediment Silt-Clay (%): 92.39	Total Carbon (%): 2.64	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.33	Condition: Meets Goal	# Attributes Scored: 6	
	Value	Score	Value
Shannon-Wiener Index	1.80		
Abundance (#/m2)	727	5	Oligohaline Pollution Indicative Spp. Abund. 75.00 3
Deep Deposit Feeder Abundance (%)	6.25		Tolerance Score 6.19 3
Carnivore-Omnivore Abundance (%)	75.00	5	Oligohaline Pollution Sensitive Spp. Abund. 6.25 3
			Tanypodinae/Chironomidae Abundance Ratio 100.00 1
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Coelotanypus spp.	455		0.09090
Corbicula fluminea	45		0.00909
Cyathura polita	91		0.13635
Gammarus spp. (Epi)	136		0.01818
Heteromastus filiformis	45		0.00227
Littoridinops tenuipes (Epi)	227		0.03181
Marenzelleria viridis	45		0.05909
Rangia cuneata	45		45.88632
Total Abundance w/ Epi.	1091		
Total Abundance w/o Epi.	727		
Number of Taxa w/ Epi.	8		
Number of Taxa w/o Epi.	6		
Total Biomass w/ Epi.			46.23401
Total Biomass w/o Epi.			46.18402

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Watershed: Potomac River		Station: 043		Rep: 01	
Gear: Modified Box Corer		Habitat: Low Mesohaline		Date: 09/20/2018	
		Sampled Area: 0.025 sq.m		Time: 13:15:00	
BOTTOM ENVIRONMENT					
Depth (m): 2.6		Salinity (ppt): 0.25		Temperature (C): 24.98	
Dissolved Oxygen (mg/l): 6.9		Sediment Silt-Clay (%): 6.02		Total Carbon (%): 0.09	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.00		Condition: Meets Goal		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	2.48	3	Pollution Indicative Species Abundance (%)	10.81	3
Abundance (#/m2)	1480	3	Pollution Indicative Species Biomass (%)	0.85	
Biomass (g/m2)	0.47	1	Pollution Sensitive Species Abundance (%)	70.27	
Carnivore-Omnivore Abundance (%)	21.62		Pollution Sensitive Species Biomass (%)	93.22	5
Deep Deposit Feeder Abundance (%)	8.11				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Carinoma tremaphoros	40		0.00400		
Cyathura polita	280		0.08800		
Heteromastus filiformis	40		0.00400		
Leptocheirus plumulosus	120		0.01600		
Littoridinops tenuipes (Epi)	40		0.00400		
Marenzelleria viridis	600		0.31600		
Rangia cuneata	160		0.03600		
Streblospio benedicti	160		0.00400		
Tubificoides spp.	80		0.00400		
Total Abundance w/ Epi.	1520				
Total Abundance w/o Epi.	1480				
Number of Taxa w/ Epi.	9				
Number of Taxa w/o Epi.	8				
Total Biomass w/ Epi.			0.47600		
Total Biomass w/o Epi.			0.47200		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Watershed: Potomac River		Station: 043		Rep: 02	
Gear: Modified Box Corer		Habitat: Low Mesohaline		Date: 09/20/2018	
		Sampled Area: 0.025 sq.m		Time: 13:15:00	
BOTTOM ENVIRONMENT					
Depth (m):	2.6	Salinity (ppt):	0.25	Temperature (C):	24.98
Dissolved Oxygen (mg/l):	6.9	Sediment Silt-Clay (%):	6.02	Total Carbon (%):	0.09
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score:	3.00	Condition:	Meets Goal	# Attributes Scored:	5
		Value	Score	Value	Score
Shannon-Wiener Index		2.39	3	Pollution Indicative Species Abundance (%)	11.76 3
Abundance (#/m2)		2040	5	Pollution Indicative Species Biomass (%)	0.37
Biomass (g/m2)		0.55	1	Pollution Sensitive Species Abundance (%)	70.59
Carnivore-Omnivore Abundance (%)		11.76		Pollution Sensitive Species Biomass (%)	77.66 3
Deep Deposit Feeder Abundance (%)		1.96			
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Apocorophium lacustre (Epi)		80		0.07200	
Chaoborus punctipennis		160		0.00400	
Cyathura polita		40		0.00200	
Leptocheirus plumulosus		120		0.10800	
Macoma mitchelli		160		0.03600	
Marenzelleria viridis		40		0.00200	
Mytilopsis leucophaeata (Epi)		920		0.25200	
Rangia cuneata		80		0.09200	
Streblospio benedicti		400		0.06400	
Tubificoides spp.		240		0.00200	
		40		0.00800	
Total Abundance w/ Epi.		2280			
Total Abundance w/o Epi.		2040			
Number of Taxa w/ Epi.		11			
Number of Taxa w/o Epi.		9			
Total Biomass w/ Epi.				0.64200	
Total Biomass w/o Epi.				0.54600	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 043		Rep: 03	
Watershed: Potomac River	Habitat: Low Mesohaline	Date: 09/20/2018	
Gear: Modified Box Corer	Sampled Area: 0.025 sq.m	Time: 13:15:00	
BOTTOM ENVIRONMENT			
Depth (m): 2.6	Salinity (ppt): 0.25	Temperature (C): 24.98	
Dissolved Oxygen (mg/l): 6.9	Sediment Silt-Clay (%): 6.02	Total Carbon (%): 0.09	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.00	Condition: Meets Goal	# Attributes Scored: 5	
	Value	Score	
Shannon-Wiener Index	2.18	3	Pollution Indicative Species Abundance (%) 10.81 3
Abundance (#/m2)	1480	3	Pollution Indicative Species Biomass (%) 0.47
Biomass (g/m2)	0.42	1	Pollution Sensitive Species Abundance (%) 72.97
Carnivore-Omnivore Abundance (%)	16.22		Pollution Sensitive Species Biomass (%) 91.94 5
Deep Deposit Feeder Abundance (%)	0.00		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	40	0.00200	
Chaoborus punctipennis	40	0.00400	
Cyathura polita	120	0.01200	
Leptocheirus plumulosus	120	0.02400	
Marenzelleria viridis	800	0.22800	
Polypedilum halterale group	40	0.00200	
Rangia cuneata	160	0.14800	
Streblospio benedicti	160	0.00200	
Total Abundance w/ Epi.	1480		
Total Abundance w/o Epi.	1480		
Number of Taxa w/ Epi.	8		
Number of Taxa w/o Epi.	8		
Total Biomass w/ Epi.		0.42200	
Total Biomass w/o Epi.		0.42200	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 044		Rep: 01	
Watershed: Potomac River		Date: 09/20/2018	
Gear: Willco Box Corer		Time: 15:14:00	
Habitat: Low Mesohaline			
Sampled Area: 0.022 sq.m			
BOTTOM ENVIRONMENT			
Depth (m): 13.1		Salinity (ppt): 0.55	
Dissolved Oxygen (mg/l): 6.0		Temperature (C): 24.30	
		Sediment Silt-Clay (%): 93.57	
		Total Carbon (%): 2.23	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 4.60		Condition: Meets Goal	
		# Attributes Scored: 5	
	Value	Score	
Shannon-Wiener Index	2.59	5	Pollution Indicative Species Abundance (%)
Abundance (#/m2)	2818	3	Pollution Indicative Species Biomass (%)
Biomass (g/m2)	5.04	5	Pollution Sensitive Species Abundance (%)
Carnivore-Omnivore Abundance (%)	24.19		Pollution Sensitive Species Biomass (%)
Deep Deposit Feeder Abundance (%)	38.71		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Carinoma tremaphoros	273		0.08181
Chaoborus punctipennis	409		0.02727
Heteromastus filiformis	636		0.03636
Leptocheirus plumulosus	682		0.12726
Macoma balthica	318		4.76316
Melita nitida (Epi)	91		0.00454
Streblospio benedicti	45		0.00227
Tubificoides spp.	455		0.00454
Total Abundance w/ Epi.	2909		
Total Abundance w/o Epi.	2818		
Number of Taxa w/ Epi.	8		
Number of Taxa w/o Epi.	7		
Total Biomass w/ Epi.			5.04722
Total Biomass w/o Epi.			5.04268

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 044		Rep: 02	
Watershed: Potomac River	Habitat: Low Mesohaline	Date: 09/20/2018	
Gear: Willco Box Corer	Sampled Area: 0.022 sq.m	Time: 15:14:00	
BOTTOM ENVIRONMENT			
Depth (m): 13.1	Salinity (ppt): 0.55	Temperature (C): 24.30	
Dissolved Oxygen (mg/l): 6.0	Sediment Silt-Clay (%): 93.57	Total Carbon (%): 2.23	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 5.00	Condition: Meets Goal	# Attributes Scored: 5	
	Value	Score	
Shannon-Wiener Index	2.82	5	Pollution Indicative Species Abundance (%) 0.00 5
Abundance (#/m2)	2318	5	Pollution Indicative Species Biomass (%) 0.00
Biomass (g/m2)	8.03	5	Pollution Sensitive Species Abundance (%) 25.49
Carnivore-Omnivore Abundance (%)	19.61		Pollution Sensitive Species Biomass (%) 91.49 5
Deep Deposit Feeder Abundance (%)	41.18		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
	45	0.00909	
Carinoma tremaphoros	136	0.04545	
Chaoborus punctipennis	227	0.02273	
Heteromastus filiformis	773	0.04545	
Leptocheirus plumulosus	318	0.07272	
Macoma balthica	364	6.66297	
Marenzelleria viridis	182	0.49541	
Melita nitida (Epi)	45	0.00227	
Neanthes succinea	45	0.48632	
Rangia cuneata	45	0.19089	
Tubificoides spp.	182	0.00227	
Total Abundance w/ Epi.	2363		
Total Abundance w/o Epi.	2318		
Number of Taxa w/ Epi.	11		
Number of Taxa w/o Epi.	10		
Total Biomass w/ Epi.		8.03556	
Total Biomass w/o Epi.		8.03329	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 044		Rep: 03	
Watershed: Potomac River	Habitat: Low Mesohaline	Date: 09/20/2018	
Gear: Willco Box Corer	Sampled Area: 0.022 sq.m	Time: 15:14:00	
BOTTOM ENVIRONMENT			
Depth (m): 13.1	Salinity (ppt): 0.55	Temperature (C): 24.30	
Dissolved Oxygen (mg/l): 6.0	Sediment Silt-Clay (%): 93.57	Total Carbon (%): 2.23	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 5.00	Condition: Meets Goal	# Attributes Scored: 5	
	Value	Score	
Shannon-Wiener Index	2.55	5	Pollution Indicative Species Abundance (%) 2.38 5
Abundance (#/m2)	1909	5	Pollution Indicative Species Biomass (%) 0.03
Biomass (g/m2)	6.90	5	Pollution Sensitive Species Abundance (%) 26.19
Carnivore-Omnivore Abundance (%)	11.90		Pollution Sensitive Species Biomass (%) 98.42 5
Deep Deposit Feeder Abundance (%)	40.48		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	91	0.02273	
Chaoborus punctipennis	136	0.00909	
Gammarus spp. (Epi)	91	0.02273	
Heteromastus filiformis	636	0.01363	
Hydrobiidae (Epi)	45	0.00909	
Leptocheirus plumulosus	364	0.05908	
Macoma balthica	409	6.59934	
Marenzelleria viridis	91	0.19089	
Melita nitida (Epi)	91	0.00227	
Odostomia engonia (Epi)	45	0.00227	
Streblospio benedicti	45	0.00227	
Tubificoides spp.	136	0.00227	
Total Abundance w/ Epi.	2182		
Total Abundance w/o Epi.	1909		
Number of Taxa w/ Epi.	12		
Number of Taxa w/o Epi.	8		
Total Biomass w/ Epi.		6.93567	
Total Biomass w/o Epi.		6.89931	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 047		Rep: 01	
Watershed: Morgantown Discharge		Date: 09/20/2018	
Gear: Modified Box Corer		Time: 12:10:00	
Habitat: Low Mesohaline		Sampled Area: 0.025 sq.m	
BOTTOM ENVIRONMENT			
Depth (m): 1.8	Salinity (ppt): 0.28	Temperature (C): 25.52	
Dissolved Oxygen (mg/l): 6.8	Sediment Silt-Clay (%): 5.54	Total Carbon (%): 0.21	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.80	Condition: Meets Goal		# Attributes Scored: 5
	Value	Score	Value
Shannon-Wiener Index	2.76	5	Pollution Indicative Species Abundance (%) 19.40
Abundance (#/m2)	2680	3	Pollution Indicative Species Biomass (%) 0.31
Biomass (g/m2)	3.83	3	Pollution Sensitive Species Abundance (%) 34.33
Carnivore-Omnivore Abundance (%)	11.94		Pollution Sensitive Species Biomass (%) 95.46
Deep Deposit Feeder Abundance (%)	14.93		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Apocorophium lacustre (Epi)	80		0.01200
Carinoma tremaphoros	40		0.00200
Cyathura polita	40		0.00200
Edotea triloba (Epi)	160		0.08800
Heteromastus filiformis	160		0.00200
Leptocheirus plumulosus	280		0.08000
Macoma balthica	640		0.06000
Marenzelleria viridis	40		2.83600
Mytilopsis leucophaeata (Epi)	720		0.73200
Polydora cornuta	40		0.00800
Polypedilum halterale group	40		0.00400
Streblospio benedicti	40		0.00200
Tubificoides spp.	520		0.01200
	120		0.00200
Total Abundance w/ Epi.	2920		
Total Abundance w/o Epi.	2680		
Number of Taxa w/ Epi.	14		
Number of Taxa w/o Epi.	11		
Total Biomass w/ Epi.			3.84200
Total Biomass w/o Epi.			3.83000

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 047		Rep: 02	
Watershed: Morgantown Discharge	Habitat: Low Mesohaline	Date: 09/20/2018	
Gear: Modified Box Corer	Sampled Area: 0.025 sq.m	Time: 12:10:00	
BOTTOM ENVIRONMENT			
Depth (m): 1.8	Salinity (ppt): 0.28	Temperature (C): 25.52	
Dissolved Oxygen (mg/l): 6.8	Sediment Silt-Clay (%): 5.54	Total Carbon (%): 0.21	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.80	Condition: Meets Goal	# Attributes Scored: 5	
	Value	Score	
Shannon-Wiener Index	2.81	5	Pollution Indicative Species Abundance (%) 13.51 3
Abundance (#/m2)	2960	3	Pollution Indicative Species Biomass (%) 0.68
Biomass (g/m2)	1.18	3	Pollution Sensitive Species Abundance (%) 47.30
Carnivore-Omnivore Abundance (%)	9.46		Pollution Sensitive Species Biomass (%) 91.86 5
Deep Deposit Feeder Abundance (%)	22.97		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Apocorophium lacustre (Epi)	120	0.01600	
Cyathura polita	560	0.00800	
Heteromastus filiformis	120	0.10800	
Leptocheirus plumulosus	280	0.01200	
Marenzelleria viridis	520	0.05600	
Mediomastus ambiseta	1000	0.65200	
Polypedilum halterale group	200	0.00800	
Rangia cuneata	40	0.00200	
Streblospio benedicti	80	0.31600	
Tubificoides spp.	400	0.00800	
	200	0.00200	
Total Abundance w/ Epi.	3520		
Total Abundance w/o Epi.	2960		
Number of Taxa w/ Epi.	11		
Number of Taxa w/o Epi.	10		
Total Biomass w/ Epi.		1.18800	
Total Biomass w/o Epi.		1.18000	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 047		Rep: 03	
Watershed: Morgantown Discharge	Habitat: Low Mesohaline	Date: 09/20/2018	
Gear: Modified Box Corer	Sampled Area: 0.025 sq.m	Time: 12:10:00	
BOTTOM ENVIRONMENT			
Depth (m): 1.8	Salinity (ppt): 0.28	Temperature (C): 25.52	
Dissolved Oxygen (mg/l): 6.8	Sediment Silt-Clay (%): 5.54	Total Carbon (%): 0.21	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.80	Condition: Meets Goal	# Attributes Scored: 5	
	Value	Score	
Shannon-Wiener Index	2.52	5	Pollution Indicative Species Abundance (%) 17.71 3
Abundance (#/m2)	3840	3	Pollution Indicative Species Biomass (%) 1.18
Biomass (g/m2)	1.02	3	Pollution Sensitive Species Abundance (%) 46.88
Carnivore-Omnivore Abundance (%)	8.33		Pollution Sensitive Species Biomass (%) 87.45 5
Deep Deposit Feeder Abundance (%)	19.79		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Apocorophium lacustre (Epi)	120	0.01200	
Cyathura polita	80	0.00400	
Heteromastus filiformis	200	0.15200	
Hydrobiidae (Epi)	400	0.02000	
Leptocheirus plumulosus	40	0.01200	
Marenzelleria viridis	600	0.08000	
Mediomastus ambiseta	1480	0.73600	
Melita nitida (Epi)	120	0.00400	
Streblospio benedicti	40	0.00200	
Tubificoides spp.	680	0.01200	
	240	0.00400	
Total Abundance w/ Epi.	4000		
Total Abundance w/o Epi.	3840		
Number of Taxa w/ Epi.	11		
Number of Taxa w/o Epi.	8		
Total Biomass w/ Epi.		1.03800	
Total Biomass w/o Epi.		1.02000	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

=====					
		Station: 051		Rep: 01	
Watershed: Potomac River		Habitat: High Mesohaline Sand		Date: 09/20/2018	
Gear: Modified Box Corer		Sampled Area: 0.025 sq.m		Time: 9:50:00	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 2.5		Salinity (ppt): 4.90		Temperature (C): 25.81	
Dissolved Oxygen (mg/l): 6.2		Sediment Silt-Clay (%): 2.25		Total Carbon (%): 0	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 1.67		Condition: Severely Degr.		# Attributes Scored: 6	
		Value	Score	Value	Score
Shannon-Wiener Index		1.79	1	Pollution Indicative Species Abundance (%)	0.00 5
Abundance (#/m2)		440	1	Pollution Indicative Species Biomass (%)	0.00
Biomass (g/m2)		0.28	1	Pollution Sensitive Species Abundance (%)	0.00 1
Carnivore-Omnivore Abundance (%)		9.09	1	Pollution Sensitive Species Biomass (%)	0.00
Deep Deposit Feeder Abundance (%)		27.27			
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
----- ----- -----					
Heteromastus filiformis		120		0.05200	
Laeonereis culveri		40		0.02000	
Leptocheirus plumulosus		80		0.02000	
Macoma mitchelli		200		0.19200	
----- ----- -----					
Total Abundance w/ Epi.		440			
Total Abundance w/o Epi.		440			
Number of Taxa w/ Epi.		4			
Number of Taxa w/o Epi.		4			
Total Biomass w/ Epi.				0.28400	
Total Biomass w/o Epi.				0.28400	
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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Watershed: Potomac River		Station: 051		Rep: 02	
Gear: Modified Box Corer		Habitat: High Mesohaline Sand		Date: 09/20/2018	
		Sampled Area: 0.025 sq.m		Time: 9:50:00	
BOTTOM ENVIRONMENT					
Depth (m): 2.5		Salinity (ppt): 4.90		Temperature (C): 25.81	
Dissolved Oxygen (mg/l): 6.2		Sediment Silt-Clay (%): 2.25		Total Carbon (%): 0	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.00		Condition: Severely Degr.		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.44	1	Pollution Indicative Species Abundance (%)	5.56	5
Abundance (#/m2)	1440	3	Pollution Indicative Species Biomass (%)	1.15	
Biomass (g/m2)	0.87	1	Pollution Sensitive Species Abundance (%)	5.56	1
Carnivore-Omnivore Abundance (%)	11.11	1	Pollution Sensitive Species Biomass (%)	11.03	
Deep Deposit Feeder Abundance (%)	30.56				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Ameroculodes species complex	40		0.00400		
Eteone heteropoda	40		0.00800		
Heteromastus filiformis	440		0.32000		
Leptocheirus plumulosus	160		0.02400		
Macoma mitchelli	520		0.19600		
Marenzelleria viridis	80		0.09600		
Micrura leidyi	80		0.00400		
Neanthes succinea	40		0.21600		
Streblospio benedicti	40		0.00200		
Total Abundance w/ Epi.	1440				
Total Abundance w/o Epi.	1440				
Number of Taxa w/ Epi.	9				
Number of Taxa w/o Epi.	9				
Total Biomass w/ Epi.			0.87000		
Total Biomass w/o Epi.			0.87000		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Watershed: Potomac River		Station: 051		Rep: 03	
Gear: Modified Box Corer		Habitat: High Mesohaline Sand		Date: 09/20/2018	
		Sampled Area: 0.025 sq.m		Time: 9:50:00	
BOTTOM ENVIRONMENT					
Depth (m): 2.5		Salinity (ppt): 4.90		Temperature (C): 25.81	
Dissolved Oxygen (mg/l): 6.2		Sediment Silt-Clay (%): 2.25		Total Carbon (%): 0	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.33		Condition: Degraded		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	1.92	1	Pollution Indicative Species Abundance (%)	5.00	5
Abundance (#/m2)	800	1	Pollution Indicative Species Biomass (%)	0.31	
Biomass (g/m2)	1.29	3	Pollution Sensitive Species Abundance (%)	15.00	3
Carnivore-Omnivore Abundance (%)	5.00	1	Pollution Sensitive Species Biomass (%)	7.12	
Deep Deposit Feeder Abundance (%)	20.00				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Apocorophium lacustre	(Epi)	80		0.00400	
Eteone heteropoda		40		0.00400	
Heteromastus filiformis		160		0.09600	
Leptocheirus plumulosus		80		0.00800	
Macoma mitchelli		400		1.09200	
Marenzelleria viridis		120		0.09200	
Total Abundance w/ Epi.		880			
Total Abundance w/o Epi.		800			
Number of Taxa w/ Epi.		6			
Number of Taxa w/o Epi.		5			
Total Biomass w/ Epi.				1.29600	
Total Biomass w/o Epi.				1.29200	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Watershed: Potomac River		Station: 052		Rep: 01	
Gear: Wildco Box Corer		Habitat: High Mesohaline Mud		Date: 09/21/2018	
		Sampled Area: 0.022 sq.m		Time: 14:49:00	
BOTTOM ENVIRONMENT					
Depth (m): 11.9		Salinity (ppt): 10.48		Temperature (C): 26.08	
Dissolved Oxygen (mg/l): 4.1		Sediment Silt-Clay (%): 93.51		Total Carbon (%): 3.48	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 1.00		Condition: Severely Degr.		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	0.00	1	Pollution Indicative Species Abundance (%)	100.00	
Abundance (#/m2)	0	1	Pollution Indicative Species Biomass (%)	100.00	1
Biomass (g/m2)	0.00	1	Pollution Sensitive Species Abundance (%)	0.00	
Carnivore-Omnivore Abundance (%)	0.00	1	Pollution Sensitive Species Biomass (%)	0.00	1
Deep Deposit Feeder Abundance (%)	0.00				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
No Organisms Present				0.00000	
Total Abundance w/ Epi.					
Total Abundance w/o Epi.					
Number of Taxa w/ Epi.		0			
Number of Taxa w/o Epi.		0			
Total Biomass w/ Epi.				0.00000	
Total Biomass w/o Epi.				0.00000	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 052		Rep: 02	
Watershed: Potomac River		Date: 09/21/2018	
Gear: Wildco Box Corer		Time: 14:49:00	
Habitat: High Mesohaline Mud		Sampled Area: 0.022 sq.m	
BOTTOM ENVIRONMENT			
Depth (m): 11.9		Salinity (ppt): 10.48	
Dissolved Oxygen (mg/l): 4.1		Sediment Silt-Clay (%): 93.51	
		Temperature (C): 26.08	
		Total Carbon (%): 3.48	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 1.00		Condition: Severely Degr.	
		# Attributes Scored: 6	
	Value	Score	Value
Shannon-Wiener Index	0.00	1	Pollution Indicative Species Abundance (%)
Abundance (#/m2)	0	1	Pollution Indicative Species Biomass (%)
Biomass (g/m2)	0.00	1	Pollution Sensitive Species Abundance (%)
Carnivore-Omnivore Abundance (%)	0.00	1	Pollution Sensitive Species Biomass (%)
Deep Deposit Feeder Abundance (%)	0.00		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)		Biomass (g/m2)
No Organisms Present			0.00000
Total Abundance w/ Epi.			
Total Abundance w/o Epi.			
Number of Taxa w/ Epi.	0		
Number of Taxa w/o Epi.	0		
Total Biomass w/ Epi.			0.00000
Total Biomass w/o Epi.			0.00000

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 052		Rep: 03	
Watershed: Potomac River		Date: 09/21/2018	
Gear: Wildco Box Corer		Time: 14:49:00	
Habitat: High Mesohaline Mud			
Sampled Area: 0.022 sq.m			
BOTTOM ENVIRONMENT			
Depth (m): 11.9		Salinity (ppt): 10.48	
Dissolved Oxygen (mg/l): 4.1		Temperature (C): 26.08	
		Sediment Silt-Clay (%): 93.51	
		Total Carbon (%): 3.48	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 1.00		Condition: Severely Degr.	
		# Attributes Scored: 6	
	Value	Score	Value
Shannon-Wiener Index	0.00	1	Pollution Indicative Species Abundance (%) 100.00
Abundance (#/m2)	91	1	Pollution Indicative Species Biomass (%) 100.00
Biomass (g/m2)	0.00	1	Pollution Sensitive Species Abundance (%) 0.00
Carnivore-Omnivore Abundance (%)	0.00	1	Pollution Sensitive Species Biomass (%) 0.00
Deep Deposit Feeder Abundance (%)	0.00		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Streblospio benedicti	91		0.00455
Total Abundance w/ Epi.	91		
Total Abundance w/o Epi.	91		
Number of Taxa w/ Epi.	1		
Number of Taxa w/o Epi.	1		
Total Biomass w/ Epi.			0.00455
Total Biomass w/o Epi.			0.00455

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 062		Rep: 01	
Watershed: Lower Eastern Shore		Date: 09/26/2018	
Gear: Petite Ponar		Time: 8:01:00	
Habitat: Low Mesohaline		Sampled Area: 0.025 sq.m	
BOTTOM ENVIRONMENT			
Depth (m): 4.6	Salinity (ppt): 5.90	Temperature (C): 23.36	
Dissolved Oxygen (mg/l): 6.7	Sediment Silt-Clay (%): 88.10	Total Carbon (%): 3.66	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 1.80	Condition: Severely Degr.		# Attributes Scored: 5
	Value	Score	Value
Shannon-Wiener Index	1.40	1	Pollution Indicative Species Abundance (%) 14.81
Abundance (#/m2)	3240	3	Pollution Indicative Species Biomass (%) 15.00
Biomass (g/m2)	0.08	1	Pollution Sensitive Species Abundance (%) 1.23
Carnivore-Omnivore Abundance (%)	1.23		Pollution Sensitive Species Biomass (%) 5.00
Deep Deposit Feeder Abundance (%)	71.60		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Ameroculodes species complex	120		0.00400
Cyathura polita	40		0.00400
Edotea triloba (Epi)	80		0.00400
Gammarus spp. (Epi)	160		0.02400
Leptocheirus plumulosus	120		0.01600
Littoridinops tenuipes (Epi)	40		0.00200
Macoma mitchelli	160		0.01600
Neomysis americana (Epi)	80		0.02400
Streblospio benedicti	480		0.01200
Tubificoides spp.	2320		0.02800
Total Abundance w/ Epi.	3600		
Total Abundance w/o Epi.	3240		
Number of Taxa w/ Epi.	10		
Number of Taxa w/o Epi.	6		
Total Biomass w/ Epi.			0.13400
Total Biomass w/o Epi.			0.08000

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 062		Rep: 02	
Watershed: Lower Eastern Shore		Habitat: Low Mesohaline	
Gear: Petite Ponar		Date: 09/26/2018	
		Sampled Area: 0.025 sq.m	
		Time: 8:01:00	
BOTTOM ENVIRONMENT			
Depth (m): 4.6	Salinity (ppt): 5.90	Temperature (C): 23.36	
Dissolved Oxygen (mg/l): 6.7	Sediment Silt-Clay (%): 88.10	Total Carbon (%): 3.66	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.60	Condition: Degraded	# Attributes Scored: 5	
	Value	Score	Value
Shannon-Wiener Index	1.90	3	Pollution Indicative Species Abundance (%) 25.77
Abundance (#/m2)	3880	3	Pollution Indicative Species Biomass (%) 2.88
Biomass (g/m2)	0.83	1	Pollution Sensitive Species Abundance (%) 3.09
Carnivore-Omnivore Abundance (%)	3.09		Pollution Sensitive Species Biomass (%) 84.13
Deep Deposit Feeder Abundance (%)	54.64		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Ameroculodes species complex	360	0.02400	
Carinoma tremaphoros	40	0.00400	
Chiridotea almyra	40	0.00800	
Cyathura polita	40	0.00800	
Gammarus daiberi (Epi)	160	0.03600	
Leptocheirus plumulosus	40	0.00400	
Macoma mitchelli	160	0.04000	
Marenzelleria viridis	40	0.09600	
Neomysis americana (Epi)	80	0.00200	
Rangia cuneata	40	0.59600	
Streblospio benedicti	1000	0.02400	
Tubificoides spp.	2120	0.02800	
Total Abundance w/ Epi.	4120		
Total Abundance w/o Epi.	3880		
Number of Taxa w/ Epi.	12		
Number of Taxa w/o Epi.	10		
Total Biomass w/ Epi.		0.87000	
Total Biomass w/o Epi.		0.83200	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 062		Rep: 03	
Watershed: Lower Eastern Shore	Habitat: Low Mesohaline	Date: 09/26/2018	
Gear: Petite Ponar	Sampled Area: 0.025 sq.m	Time: 8:01:00	
BOTTOM ENVIRONMENT			
Depth (m): 4.6	Salinity (ppt): 5.90	Temperature (C): 23.36	
Dissolved Oxygen (mg/l): 6.7	Sediment Silt-Clay (%): 88.10	Total Carbon (%): 3.66	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 1.40	Condition: Severely Degr.	# Attributes Scored: 5	
	Value	Score	
Shannon-Wiener Index	1.59	1	Pollution Indicative Species Abundance (%) 22.68 1
Abundance (#/m2)	7760	1	Pollution Indicative Species Biomass (%) 5.79
Biomass (g/m2)	0.52	1	Pollution Sensitive Species Abundance (%) 4.12
Carnivore-Omnivore Abundance (%)	4.12		Pollution Sensitive Species Biomass (%) 45.56 3
Deep Deposit Feeder Abundance (%)	68.56		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Americamysis almyra (Epi)	80	0.02400	
Ameroculodes species complex	160	0.01200	
Carinoma tremaphoros	40	0.00400	
Cyathura polita	280	0.14800	
Edotea triloba (Epi)	240	0.02000	
Gammarus daiberi (Epi)	320	0.06000	
Leptocheirus plumulosus	40	0.00400	
Littoridinops tenuipes (Epi)	920	0.01600	
Macoma mitchelli	320	0.16400	
Marenzelleria viridis	40	0.08800	
Streblospio benedicti	1560	0.02800	
Tubificidae imm w/o cap chaetae	200	0.00200	
Tubificoides spp.	5120	0.06800	
Total Abundance w/ Epi.	9320		
Total Abundance w/o Epi.	7760		
Number of Taxa w/ Epi.	13		
Number of Taxa w/o Epi.	9		
Total Biomass w/ Epi.		0.63800	
Total Biomass w/o Epi.		0.51800	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Watershed: Choptank River		Station: 064		Rep: 01	
Gear: Willco Box Corer		Habitat: High Mesohaline Mud		Date: 09/27/2018	
		Sampled Area: 0.022 sq.m		Time: 13:30:00	
BOTTOM ENVIRONMENT					
Depth (m): 8.5		Salinity (ppt): 8.12		Temperature (C): 23.73	
Dissolved Oxygen (mg/l): 6.2		Sediment Silt-Clay (%): 89.32		Total Carbon (%): 1.94	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.33		Condition: Meets Goal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	1.74	1	Pollution Indicative Species Abundance (%)	0.00	
Abundance (#/m2)	1364	3	Pollution Indicative Species Biomass (%)	0.00	5
Biomass (g/m2)	17.34	3	Pollution Sensitive Species Abundance (%)	76.67	
Carnivore-Omnivore Abundance (%)	20.00	3	Pollution Sensitive Species Biomass (%)	99.62	5
Deep Deposit Feeder Abundance (%)	10.00				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Cyathura polita	273		1.29078		
Heteromastus filiformis	91		0.04090		
Leptocheirus plumulosus	182		0.02273		
Macoma balthica	773		15.98022		
Tubificoides spp.	45		0.00227		
Total Abundance w/ Epi.	1364				
Total Abundance w/o Epi.	1364				
Number of Taxa w/ Epi.	5				
Number of Taxa w/o Epi.	5				
Total Biomass w/ Epi.			17.33690		
Total Biomass w/o Epi.			17.33690		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Watershed: Choptank River		Station: 064		Rep: 02	
Gear: Willco Box Corer		Habitat: High Mesohaline Mud		Date: 09/27/2018	
		Sampled Area: 0.022 sq.m		Time: 13:30:00	
BOTTOM ENVIRONMENT					
Depth (m): 8.5		Salinity (ppt): 8.12		Temperature (C): 23.73	
Dissolved Oxygen (mg/l): 6.2		Sediment Silt-Clay (%): 89.32		Total Carbon (%): 1.94	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 4.00		Condition: Meets Goal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.04	3	Pollution Indicative Species Abundance (%)	3.45	
Abundance (#/m2)	1318	3	Pollution Indicative Species Biomass (%)	0.08	5
Biomass (g/m2)	11.58	3	Pollution Sensitive Species Abundance (%)	72.41	
Carnivore-Omnivore Abundance (%)	31.03	5	Pollution Sensitive Species Biomass (%)	96.35	5
Deep Deposit Feeder Abundance (%)	3.45				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Cyathura polita	364		2.34068		
Eteone heteropoda	45		0.00909		
Leptocheirus plumulosus	136		0.02273		
Macoma balthica	591		8.81275		
Macoma mitchelli	136		0.38632		
Tubificoides spp.	45		0.00454		
Total Abundance w/ Epi.	1318				
Total Abundance w/o Epi.	1318				
Number of Taxa w/ Epi.	6				
Number of Taxa w/o Epi.	6				
Total Biomass w/ Epi.			11.57611		
Total Biomass w/o Epi.			11.57611		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 064		Rep: 03	
Watershed: Choptank River	Habitat: High Mesohaline Mud	Date: 09/27/2018	
Gear: Willco Box Corer	Sampled Area: 0.022 sq.m	Time: 13:30:00	
BOTTOM ENVIRONMENT			
Depth (m): 8.5	Salinity (ppt): 8.12	Temperature (C): 23.73	
Dissolved Oxygen (mg/l): 6.2	Sediment Silt-Clay (%): 89.32	Total Carbon (%): 1.94	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 4.00	Condition: Meets Goal	# Attributes Scored: 6	
	Value	Score	
Shannon-Wiener Index	2.11	3	Pollution Indicative Species Abundance (%) 0.00
Abundance (#/m2)	2227	5	Pollution Indicative Species Biomass (%) 0.00 5
Biomass (g/m2)	14.93	3	Pollution Sensitive Species Abundance (%) 59.18
Carnivore-Omnivore Abundance (%)	10.20	3	Pollution Sensitive Species Biomass (%) 96.01 5
Deep Deposit Feeder Abundance (%)	16.33		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	45	0.01363	
Cyathura polita	136	0.34542	
Heteromastus filiformis	136	0.08635	
Leptocheirus plumulosus	409	0.06818	
Macoma balthica	1182	13.98951	
Macoma mitchelli	45	0.00909	
Neanthes succinea	45	0.41360	
Tubificoides spp.	227	0.00454	
Total Abundance w/ Epi.	2227		
Total Abundance w/o Epi.	2227		
Number of Taxa w/ Epi.	8		
Number of Taxa w/o Epi.	8		
Total Biomass w/ Epi.		14.93033	
Total Biomass w/o Epi.		14.93033	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Watershed: Choptank River		Station: 066		Rep: 01	
Gear: Wildco Box Corer		Habitat: Oligohaline		Date: 09/27/2018	
		Sampled Area: 0.022 sq.m		Time: 15:30:00	
BOTTOM ENVIRONMENT					
Depth (m): 3.1		Salinity (ppt): 0.12		Temperature (C): 23.56	
Dissolved Oxygen (mg/l): 5.8		Sediment Silt-Clay (%): 91.06		Total Carbon (%): 6.37	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.00		Condition: Meets Goal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.25		Oligohaline Pollution Indicative Spp. Abund.	60.92	3
Abundance (#/m2)	3954	3	Tolerance Score	9.00	3
Deep Deposit Feeder Abundance (%)	50.57		Oligohaline Pollution Sensitive Spp. Abund.	1.15	3
Carnivore-Omnivore Abundance (%)	39.08	5	Tanypodinae/Chironomidae Abundance Ratio	100.00	1
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Ameroculodes species complex	318		0.02727		
Chaoborus punctipennis	1182		0.11817		
Coelotanypus spp.	364		0.13635		
Gammarus spp. (Epi)	91		0.00909		
Leptocheirus plumulosus	45		0.00227		
Limnodrilus hoffmeisteri	727				
Marenzelleria viridis	45		0.15907		
Oligochaeta			0.18332		
Tubificidae imm w/o cap chaetae *	1273				
Total Abundance w/ Epi.	4045				
Total Abundance w/o Epi.	3954				
Number of Taxa w/ Epi.	7				
Number of Taxa w/o Epi.	6				
Total Biomass w/ Epi.			0.63554		
Total Biomass w/o Epi.			0.62645		

*Indicates taxa is skipped in taxon counts

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Watershed: Choptank River		Station: 066	Rep: 02
Gear: Willco Box Corer		Habitat: Oligohaline	Date: 09/27/2018
		Sampled Area: 0.022 sq.m	Time: 15:30:00
BOTTOM ENVIRONMENT			
Depth (m): 3.1	Salinity (ppt): 0.12	Temperature (C): 23.56	
Dissolved Oxygen (mg/l): 5.8	Sediment Silt-Clay (%): 91.06	Total Carbon (%): 6.37	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.33	Condition: Degraded		# Attributes Scored: 6
	Value	Score	Value
Shannon-Wiener Index	1.79		
Abundance (#/m2)	5909	1	Oligohaline Pollution Indicative Spp. Abund. 63.08 3
Deep Deposit Feeder Abundance (%)	52.31		Tolerance Score 8.93 3
Carnivore-Omnivore Abundance (%)	46.92	5	Oligohaline Pollution Sensitive Spp. Abund. 0.00 1
			Tanypodinae/Chironomidae Abundance Ratio 100.00 1
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Chaoborus punctipennis	2182		0.22725
Coelotanytus spp.	591		0.09090
Corbicula fluminea	45		0.42723
Gammarus spp. (Epi)	227		0.01818
Limnodrilus hoffmeisteri	636		
Oligochaeta			0.40345
Tubificidae imm w/o cap chaetae *	2454		
Total Abundance w/ Epi.	6136		
Total Abundance w/o Epi.	5909		
Number of Taxa w/ Epi.	5		
Number of Taxa w/o Epi.	4		
Total Biomass w/ Epi.			1.16701
Total Biomass w/o Epi.			1.14883

*Indicates taxa is skipped in taxon counts

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Watershed: Choptank River		Station: 066		Rep: 03	
Gear: Willco Box Corer		Habitat: Oligohaline		Date: 09/27/2018	
		Sampled Area: 0.022 sq.m		Time: 15:30:00	
BOTTOM ENVIRONMENT					
Depth (m): 3.1		Salinity (ppt): 0.12		Temperature (C): 23.56	
Dissolved Oxygen (mg/l): 5.8		Sediment Silt-Clay (%): 91.06		Total Carbon (%): 6.37	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.33		Condition: Degraded		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	1.85		Oligohaline Pollution Indicative Spp. Abund.	64.00	3
Abundance (#/m2)	4545	1	Tolerance Score	9.05	3
Deep Deposit Feeder Abundance (%)	54.00		Oligohaline Pollution Sensitive Spp. Abund.	0.00	1
Carnivore-Omnivore Abundance (%)	39.00	5	Tanypodinae/Chironomidae Abundance Ratio	90.00	1
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Ameroculodes species complex	318		0.00909		
Chaoborus punctipennis	1318		0.13635		
Chironomus spp.	45		0.00227		
Coelotanypus spp.	409		0.03181		
Gammarus spp. (Epi)	318		0.00909		
Limnodrilus hoffmeisteri	182				
Littoridinops tenuipes (Epi)	227		0.00909		
Oligochaeta			0.42117		
Tubificidae imm w/o cap chaetae *	2273				
Total Abundance w/ Epi.	5090				
Total Abundance w/o Epi.	4545				
Number of Taxa w/ Epi.	7				
Number of Taxa w/o Epi.	5				
Total Biomass w/ Epi.			0.61888		
Total Biomass w/o Epi.			0.60070		

*Indicates taxa is skipped in taxon counts

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Watershed: Upper Eastern Shore		Station: 068	Rep: 01
Gear: Wildco Box Corer		Habitat: Low Mesohaline	Date: 09/25/2018
		Sampled Area: 0.022 sq.m	Time: 8:30:00
BOTTOM ENVIRONMENT			
Depth (m): 4.5	Salinity (ppt): 7.42	Temperature (C): 22.61	
Dissolved Oxygen (mg/l): 6.2	Sediment Silt-Clay (%): 83.80	Total Carbon (%): 3.57	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.40	Condition: Meets Goal		# Attributes Scored: 5
	Value	Score	Value Score
Shannon-Wiener Index	2.40	3	0.00 5
Abundance (#/m2)	1136	3	0.00 0.00
Biomass (g/m2)	31.32	1	80.00 80.00
Carnivore-Omnivore Abundance (%)	40.00		99.43 5
Deep Deposit Feeder Abundance (%)	0.00		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Carinoma tremaphoros	91		0.00909
Cyathura polita	364		0.43177
Gastropoda (Epi)	45		0.01364
Leptocheirus plumulosus	91		0.01364
Macoma balthica	364		12.14424
Macoma mitchelli	45		0.15453
Marenzelleria viridis	91		0.08181
Rangia cuneata	91		18.48588
Total Abundance w/ Epi.	1182		
Total Abundance w/o Epi.	1136		
Number of Taxa w/ Epi.	8		
Number of Taxa w/o Epi.	7		
Total Biomass w/ Epi.			31.33459
Total Biomass w/o Epi.			31.32096

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 068		Rep: 02	
Watershed: Upper Eastern Shore	Habitat: Low Mesohaline	Date: 09/25/2018	
Gear: Willco Box Corer	Sampled Area: 0.022 sq.m	Time: 8:30:00	
BOTTOM ENVIRONMENT			
Depth (m): 4.5	Salinity (ppt): 7.42	Temperature (C): 22.61	
Dissolved Oxygen (mg/l): 6.2	Sediment Silt-Clay (%): 83.80	Total Carbon (%): 3.57	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 4.60	Condition: Meets Goal	# Attributes Scored: 5	
	Value	Score	
Shannon-Wiener Index	3.10	5	Pollution Indicative Species Abundance (%) 9.76 5
Abundance (#/m2)	1863	5	Pollution Indicative Species Biomass (%) 0.07
Biomass (g/m2)	21.60	3	Pollution Sensitive Species Abundance (%) 43.90
Carnivore-Omnivore Abundance (%)	31.71		Pollution Sensitive Species Biomass (%) 98.93 5
Deep Deposit Feeder Abundance (%)	17.07		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	273	0.06818	
Chiridotea almyra	45	0.00909	
Coelotanypus spp.	45	0.00909	
Cyathura polita	182	0.23634	
Eteone heteropoda	45	0.00227	
Heteromastus filiformis	45	0.11363	
Leptocheirus plumulosus	227	0.02273	
Macoma balthica	500	20.67520	
Marenzelleria viridis	91	0.10908	
Rangia cuneata	45	0.34542	
Streblospio benedicti	91	0.00454	
Tubificoides spp.	273	0.00227	
Total Abundance w/ Epi.	1863		
Total Abundance w/o Epi.	1863		
Number of Taxa w/ Epi.	12		
Number of Taxa w/o Epi.	12		
Total Biomass w/ Epi.		21.59784	
Total Biomass w/o Epi.		21.59784	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

=====						
		Station: 068		Rep: 03		
Watershed: Upper Eastern Shore		Habitat: Low Mesohaline		Date: 09/25/2018		
Gear: Willco Box Corer		Sampled Area: 0.022 sq.m		Time: 8:30:00		
=====						
BOTTOM ENVIRONMENT						
Depth (m): 4.5		Salinity (ppt): 7.42		Temperature (C): 22.61		
Dissolved Oxygen (mg/l): 6.2		Sediment Silt-Clay (%): 83.80		Total Carbon (%): 3.57		
BENTHIC INDEX OF BIOTIC INTEGRITY						
B-IBI Score: 5.00		Condition: Meets Goal		# Attributes Scored: 5		
		Value	Score		Value	Score
Shannon-Wiener Index		2.76	5	Pollution Indicative Species Abundance (%)	8.89	5
Abundance (#/m2)		2045	5	Pollution Indicative Species Biomass (%)	0.17	
Biomass (g/m2)		9.48	5	Pollution Sensitive Species Abundance (%)	35.56	
Carnivore-Omnivore Abundance (%)		28.89		Pollution Sensitive Species Biomass (%)	86.36	5
Deep Deposit Feeder Abundance (%)		37.78				
BENTHIC ABUNDANCE (per sq. meter)						
TAXA		Abundance (#/m2)		Biomass (g/m2)		
Carinoma tremaphoros		182		0.03636		
Coelotanypus spp.		45		0.01364		
Cyathura polita		318		0.66357		
Heteromastus filiformis		45		0.00909		
Macoma balthica		318		6.34027		
Macoma mitchelli		136		0.37724		
Melita nitida (Epi)		45		0.00454		
Neanthes succinea		45		0.84992		
Rangia cuneata		91		1.18625		
Streblospio benedicti		136		0.00227		
Tubificoides spp.		727		0.00454		
Total Abundance w/ Epi.		2091				
Total Abundance w/o Epi.		2045				
Number of Taxa w/ Epi.		11				
Number of Taxa w/o Epi.		10				
Total Biomass w/ Epi.				9.48769		
Total Biomass w/o Epi.				9.48314		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Watershed: Patuxent River		Station: 071		Rep: 01	
Gear: Wildco Box Corer		Habitat: High Mesohaline Mud		Date: 09/11/2018	
		Sampled Area: 0.022 sq.m		Time: 14:25:00	
BOTTOM ENVIRONMENT					
Depth (m): 13.1		Salinity (ppt): 8.80		Temperature (C): 26.99	
Dissolved Oxygen (mg/l): 3.0		Sediment Silt-Clay (%): 88.92		Total Carbon (%): 3.29	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 1.00		Condition: Severely Degr.		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	0.00	1	Pollution Indicative Species Abundance (%)	100.00	
Abundance (#/m2)	0	1	Pollution Indicative Species Biomass (%)	100.00	1
Biomass (g/m2)	0.00	1	Pollution Sensitive Species Abundance (%)	0.00	
Carnivore-Omnivore Abundance (%)	0.00	1	Pollution Sensitive Species Biomass (%)	0.00	1
Deep Deposit Feeder Abundance (%)	0.00				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
No Organisms Present				0.00000	
Total Abundance w/ Epi.					
Total Abundance w/o Epi.					
Number of Taxa w/ Epi.		0			
Number of Taxa w/o Epi.		0			
Total Biomass w/ Epi.				0.00000	
Total Biomass w/o Epi.				0.00000	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS					
Station: 071	Rep: 02				
Watershed: Patuxent River	Habitat: High Mesohaline Mud	Date: 09/11/2018			
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 14:25:00			
BOTTOM ENVIRONMENT					
Depth (m): 13.1	Salinity (ppt): 8.80	Temperature (C): 26.99			
Dissolved Oxygen (mg/l): 3.0	Sediment Silt-Clay (%): 88.92	Total Carbon (%): 3.29			
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 1.67	Condition: Severely Degr.		# Attributes Scored: 6		
	Value	Score	Value	Score	
Shannon-Wiener Index	0.00	1	Pollution Indicative Species Abundance (%)	0.00	
Abundance (#/m2)	45	1	Pollution Indicative Species Biomass (%)	0.00	5
Biomass (g/m2)	0.00	1	Pollution Sensitive Species Abundance (%)	0.00	
Carnivore-Omnivore Abundance (%)	0.00	1	Pollution Sensitive Species Biomass (%)	0.00	1
Deep Deposit Feeder Abundance (%)	0.00				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Macoma mitchelli	45		0.00454		
Total Abundance w/ Epi.	45				
Total Abundance w/o Epi.	45				
Number of Taxa w/ Epi.	1				
Number of Taxa w/o Epi.	1				
Total Biomass w/ Epi.			0.00454		
Total Biomass w/o Epi.			0.00454		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 071		Rep: 03	
Watershed: Patuxent River	Habitat: High Mesohaline Mud	Date: 09/11/2018	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 14:25:00	
BOTTOM ENVIRONMENT			
Depth (m): 13.1	Salinity (ppt): 8.80	Temperature (C): 26.99	
Dissolved Oxygen (mg/l): 3.0	Sediment Silt-Clay (%): 88.92	Total Carbon (%): 3.29	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 1.00	Condition: Severely Degr.	# Attributes Scored: 6	
	Value	Score	
Shannon-Wiener Index	0.00	1	Pollution Indicative Species Abundance (%) 100.00
Abundance (#/m2)	0	1	Pollution Indicative Species Biomass (%) 100.00 1
Biomass (g/m2)	0.00	1	Pollution Sensitive Species Abundance (%) 0.00
Carnivore-Omnivore Abundance (%)	0.00	1	Pollution Sensitive Species Biomass (%) 0.00 1
Deep Deposit Feeder Abundance (%)	0.00		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
No Organisms Present		0.00000	
Total Abundance w/ Epi.			
Total Abundance w/o Epi.			
Number of Taxa w/ Epi.	0		
Number of Taxa w/o Epi.	0		
Total Biomass w/ Epi.		0.00000	
Total Biomass w/o Epi.		0.00000	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 074		Rep: 01	
Watershed: Chalk Point Discharge	Habitat: Low Mesohaline	Date: 09/10/2018	
Gear: Willco Box Corer	Sampled Area: 0.022 sq.m	Time: 14:42:00	
BOTTOM ENVIRONMENT			
Depth (m): 2.2	Salinity (ppt): 5.18	Temperature (C): 24.94	
Dissolved Oxygen (mg/l): 5.6	Sediment Silt-Clay (%): 88.70	Total Carbon (%): 2.93	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 1.40	Condition: Severely Degr.	# Attributes Scored: 5	
	Value	Score	
Shannon-Wiener Index	1.57	1	Pollution Indicative Species Abundance (%) 21.29 1
Abundance (#/m2)	9181	1	Pollution Indicative Species Biomass (%) 3.02
Biomass (g/m2)	2.18	3	Pollution Sensitive Species Abundance (%) 3.47
Carnivore-Omnivore Abundance (%)	5.94		Pollution Sensitive Species Biomass (%) 30.66 1
Deep Deposit Feeder Abundance (%)	73.76		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	45	0.09090	
Coelotanypus spp.	227	0.03636	
Cyathura polita	273	0.44995	
Heteromastus filiformis	91	0.14999	
Leptocheirus plumulosus	273	0.02727	
Macoma mitchelli	91	1.11807	
Marenzelleria viridis	45	0.21816	
Streblospio benedicti	1454	0.02727	
Tubificidae imm w/o cap chaetae	273	0.00227	
Tubificoides spp.	6408	0.05908	
Total Abundance w/ Epi.	9181		
Total Abundance w/o Epi.	9181		
Number of Taxa w/ Epi.	10		
Number of Taxa w/o Epi.	10		
Total Biomass w/ Epi.		2.17933	
Total Biomass w/o Epi.		2.17933	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 074		Rep: 02	
Watershed: Chalk Point Discharge	Habitat: Low Mesohaline	Date: 09/10/2018	
Gear: Willco Box Corer	Sampled Area: 0.022 sq.m	Time: 14:42:00	
BOTTOM ENVIRONMENT			
Depth (m): 2.2	Salinity (ppt): 5.18	Temperature (C): 24.94	
Dissolved Oxygen (mg/l): 5.6	Sediment Silt-Clay (%): 88.70	Total Carbon (%): 2.93	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 1.80	Condition: Severely Degr.	# Attributes Scored: 5	
	Value	Score	
Shannon-Wiener Index	1.24	1	Pollution Indicative Species Abundance (%) 12.68 3
Abundance (#/m2)	12544	1	Pollution Indicative Species Biomass (%) 1.48
Biomass (g/m2)	4.31	3	Pollution Sensitive Species Abundance (%) 2.54
Carnivore-Omnivore Abundance (%)	4.71		Pollution Sensitive Species Biomass (%) 22.57 1
Deep Deposit Feeder Abundance (%)	85.51		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	182	0.03636	
Coelotanypus spp.	227	0.04545	
Cyathura polita	182	0.22271	
Leptocheirus plumulosus	182	0.06363	
Macoma mitchelli	182	3.08151	
Marenzelleria viridis	136	0.74993	
Oligochaeta		0.00227	
Streblospio benedicti	727	0.01363	
Tubificidae imm w/o cap chaetae	636	0.00227	
Tubificoides spp.	10090	0.09090	
Total Abundance w/ Epi.	12544		
Total Abundance w/o Epi.	12544		
Number of Taxa w/ Epi.	9		
Number of Taxa w/o Epi.	9		
Total Biomass w/ Epi.		4.30866	
Total Biomass w/o Epi.		4.30866	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 074		Rep: 03	
Watershed: Chalk Point Discharge	Habitat: Low Mesohaline	Date: 09/10/2018	
Gear: Willco Box Corer	Sampled Area: 0.022 sq.m	Time: 14:42:00	
BOTTOM ENVIRONMENT			
Depth (m): 2.2	Salinity (ppt): 5.18	Temperature (C): 24.94	
Dissolved Oxygen (mg/l): 5.6	Sediment Silt-Clay (%): 88.70	Total Carbon (%): 2.93	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 4.20	Condition: Meets Goal	# Attributes Scored: 5	
	Value	Score	
Shannon-Wiener Index	2.12	3	Pollution Indicative Species Abundance (%) 6.25 5
Abundance (#/m2)	2182	5	Pollution Indicative Species Biomass (%) 0.08
Biomass (g/m2)	20.54	3	Pollution Sensitive Species Abundance (%) 14.58
Carnivore-Omnivore Abundance (%)	8.33		Pollution Sensitive Species Biomass (%) 85.14 5
Deep Deposit Feeder Abundance (%)	58.33		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Americamysis almyra (Epi)	45	0.00909	
Coelotanypus spp.	91	0.01364	
Cyathura polita	45	0.05454	
Leptocheirus plumulosus	318	0.04091	
Macoma balthica	45	5.06313	
Macoma mitchelli	91	2.04070	
Marenzelleria viridis	182	1.39077	
Neanthes succinea	45	0.93627	
Rangia cuneata	45	10.97617	
Streblospio benedicti	45	0.00227	
Tubificoides spp.	1273	0.01818	
Total Abundance w/ Epi.	2227		
Total Abundance w/o Epi.	2182		
Number of Taxa w/ Epi.	11		
Number of Taxa w/o Epi.	10		
Total Biomass w/ Epi.		20.54567	
Total Biomass w/o Epi.		20.53658	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 077		Rep: 01	
Watershed: Patuxent River	Habitat: Low Mesohaline	Date: 09/10/2018	
Gear: Willco Box Corer	Sampled Area: 0.022 sq.m	Time: 14:01:00	
BOTTOM ENVIRONMENT			
Depth (m): 2.7	Salinity (ppt): 1.22	Temperature (C): 25.25	
Dissolved Oxygen (mg/l): 5.3	Sediment Silt-Clay (%): 94.65	Total Carbon (%): 3.06	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 1.80	Condition: Severely Degr.	# Attributes Scored: 5	
	Value	Score	
Shannon-Wiener Index	1.93	3	Pollution Indicative Species Abundance (%) 75.76 1
Abundance (#/m2)	1500	3	Pollution Indicative Species Biomass (%) 61.05
Biomass (g/m2)	0.22	1	Pollution Sensitive Species Abundance (%) 3.03
Carnivore-Omnivore Abundance (%)	63.64		Pollution Sensitive Species Biomass (%) 14.74 1
Deep Deposit Feeder Abundance (%)	3.03		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	45	0.00454	
Chaoborus punctipennis	45	0.00909	
Coelotanypus spp.	818	0.11817	
Cyathura polita	45	0.03181	
Leptocheirus plumulosus	182	0.03636	
Mytilopsis leucophaeata (Epi)	45	0.00227	
Streblospio benedicti	318	0.01364	
Tubificoides spp.	45	0.00227	
Total Abundance w/ Epi.	1545		
Total Abundance w/o Epi.	1500		
Number of Taxa w/ Epi.	8		
Number of Taxa w/o Epi.	7		
Total Biomass w/ Epi.		0.21816	
Total Biomass w/o Epi.		0.21589	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 077		Rep: 02	
Watershed: Patuxent River	Habitat: Low Mesohaline	Date: 09/10/2018	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 14:01:00	
BOTTOM ENVIRONMENT			
Depth (m): 2.7	Salinity (ppt): 1.22	Temperature (C): 25.25	
Dissolved Oxygen (mg/l): 5.3	Sediment Silt-Clay (%): 94.65	Total Carbon (%): 3.06	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.60	Condition: Degraded	# Attributes Scored: 5	
	Value	Score	
Shannon-Wiener Index	2.13	3	Pollution Indicative Species Abundance (%) 59.65 1
Abundance (#/m2)	2591	3	Pollution Indicative Species Biomass (%) 11.52
Biomass (g/m2)	0.75	1	Pollution Sensitive Species Abundance (%) 10.53
Carnivore-Omnivore Abundance (%)	24.56		Pollution Sensitive Species Biomass (%) 87.88 5
Deep Deposit Feeder Abundance (%)	28.07		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Coelotanypus spp.	545	0.06363	
Cyathura polita	91	0.00454	
Leptocheirus plumulosus	45	0.00227	
Littoridinops tenuipes (Epi)	136	0.00227	
Marenzelleria viridis	91	0.37269	
Rangia cuneata	91	0.28179	
Streblospio benedicti	1000	0.02273	
Tubificoides spp.	727	0.00227	
Total Abundance w/ Epi.	2727		
Total Abundance w/o Epi.	2591		
Number of Taxa w/ Epi.	8		
Number of Taxa w/o Epi.	7		
Total Biomass w/ Epi.		0.75220	
Total Biomass w/o Epi.		0.74992	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 077		Rep: 03	
Watershed: Patuxent River	Habitat: Low Mesohaline	Date: 09/10/2018	
Gear: Willco Box Corer	Sampled Area: 0.022 sq.m	Time: 14:01:00	
BOTTOM ENVIRONMENT			
Depth (m): 2.7	Salinity (ppt): 1.22	Temperature (C): 25.25	
Dissolved Oxygen (mg/l): 5.3	Sediment Silt-Clay (%): 94.65	Total Carbon (%): 3.06	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 1.80	Condition: Severely Degr.	# Attributes Scored: 5	
	Value	Score	
Shannon-Wiener Index	2.12	3	
Abundance (#/m2)	3909	3	Pollution Indicative Species Abundance (%) 68.60 1
Biomass (g/m2)	0.40	1	Pollution Indicative Species Biomass (%) 47.73
Carnivore-Omnivore Abundance (%)	38.37		Pollution Sensitive Species Abundance (%) 3.49
Deep Deposit Feeder Abundance (%)	17.44		Pollution Sensitive Species Biomass (%) 39.77 1
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Chaoborus punctipennis	91	0.00909	
Coelotanyus spp.	1318	0.14544	
Cyathura polita	91	0.02273	
Leptocheirus plumulosus	318	0.03182	
Littoridinops tenuipes (Epi)	45	0.00455	
Marenzelleria viridis	45	0.13635	
Streblospio benedicti	1364	0.04545	
Tubificoides spp.	682	0.00909	
Total Abundance w/ Epi.	3954		
Total Abundance w/o Epi.	3909		
Number of Taxa w/ Epi.	8		
Number of Taxa w/o Epi.	7		
Total Biomass w/ Epi.		0.40451	
Total Biomass w/o Epi.		0.39996	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Watershed: Patuxent River		Station: 079		Rep: 01	
Gear: Willco Box Corer		Habitat: Tidal Freshwater		Date: 09/12/2018	
		Sampled Area: 0.022 sq.m		Time: 15:30:00	
BOTTOM ENVIRONMENT					
Depth (m): 0.3		Salinity (ppt): 0.10		Temperature (C): 22.97	
Dissolved Oxygen (mg/l): 4.6		Sediment Silt-Clay (%): 85.69		Total Carbon (%): 4.16	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.50		Condition: Meets Goal		# Attributes Scored: 3	
	Value	Score		Value	Score
Shannon-Wiener Index	2.57		T.F. Pollution Indicative Spp. Abund. (%)	34.59	5
Abundance (#/m2)	7227	1	Tolerance Score	7.45	5
Deep Deposit Feeder Abundance (%)	86.79	3	Limnodrilus Abundance (%)	34.59	
Carnivore-Omnivore Abundance (%)	13.21				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Aulodrilus limnobius	954				
Aulodrilus pigueti	1863				
Chironomidae			0.00227		
Chironomus spp.	91		0.01364		
Coelotanypus spp.	682		0.05000		
Cyathura polita	45		0.00909		
Limnodrilus hoffmeisteri	318				
Microchironomus spp.	45				
Oligochaeta			0.39214		
Procladius spp.	91				
Tubificidae imm w cap chaetae	954				
Tubificidae imm w/o cap chaetae *	2182				
Total Abundance w/ Epi.	7227				
Total Abundance w/o Epi.	7227				
Number of Taxa w/ Epi.	9				
Number of Taxa w/o Epi.	9				
Total Biomass w/ Epi.			0.46713		
Total Biomass w/o Epi.			0.46713		

*Indicates taxa is skipped in taxon counts

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Watershed: Patuxent River		Station: 079		Rep: 02	
Gear: Willco Box Corer		Habitat: Tidal Freshwater		Date: 09/12/2018	
		Sampled Area: 0.022 sq.m		Time: 15:30:00	
BOTTOM ENVIRONMENT					
Depth (m): 0.3		Salinity (ppt): 0.10		Temperature (C): 22.97	
Dissolved Oxygen (mg/l): 4.6		Sediment Silt-Clay (%): 85.69		Total Carbon (%): 4.16	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.50		Condition: Meets Goal		# Attributes Scored: 3	
	Value	Score		Value	Score
Shannon-Wiener Index	2.34		T.F. Pollution Indicative Spp. Abund. (%)	51.39	3
Abundance (#/m2)	3272	5	Tolerance Score	8.27	3
Deep Deposit Feeder Abundance (%)	70.83	3	Limnodrilus Abundance (%)	58.33	
Carnivore-Omnivore Abundance (%)	29.17				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Aulodrilus pigueti	409				
Chaoborus punctipennis	45		0.00455		
Chironomidae			0.00227		
Chironomus spp.	45		0.00227		
Coelotanypus spp.	727		0.08635		
Limnodrilus claparedianus	227				
Limnodrilus hoffmeisteri	227				
Microchironomus spp.	45				
Oligochaeta			0.29656		
Parachironomus monochromus/tenuicadatus	45				
Tanytarsus spp. G Epler	45				
Tubificidae imm w/o cap chaetae *	1454				
Total Abundance w/ Epi.	3272				
Total Abundance w/o Epi.	3272				
Number of Taxa w/ Epi.	9				
Number of Taxa w/o Epi.	9				
Total Biomass w/ Epi.			0.39201		
Total Biomass w/o Epi.			0.39201		

*Indicates taxa is skipped in taxon counts

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 079		Rep: 03	
Watershed: Patuxent River		Date: 09/12/2018	
Gear: Willco Box Corer		Time: 15:30:00	
Habitat: Tidal Freshwater		Sampled Area: 0.022 sq.m	
BOTTOM ENVIRONMENT			
Depth (m): 0.3	Salinity (ppt): 0.10	Temperature (C): 22.97	
Dissolved Oxygen (mg/l): 4.6	Sediment Silt-Clay (%): 85.69	Total Carbon (%): 4.16	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 4.00	Condition: Meets Goal		# Attributes Scored: 3
	Value	Score	Value
Shannon-Wiener Index	2.23		55.56
Abundance (#/m2)	2454	5	8.42
Deep Deposit Feeder Abundance (%)	68.52	5	55.56
Carnivore-Omnivore Abundance (%)	31.48		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Aulodrilus pigueti	136		
Branchiura sowerbyi	45		0.01818
Chironomus spp.	45		0.00909
Coelotanypus spp.	636		0.09090
Gammarus spp. (Epi)	45		0.00227
Ilyodrilus templetoni	136		
Limnodrilus hoffmeisteri	273		
Oligochaeta			0.15860
Tanytarsus spp. G Epler	91		0.00227
Tubificidae imm w/o cap chaetae *	1091		
Total Abundance w/ Epi.	2500		
Total Abundance w/o Epi.	2454		
Number of Taxa w/ Epi.	8		
Number of Taxa w/o Epi.	7		
Total Biomass w/ Epi.			0.28132
Total Biomass w/o Epi.			0.27904

*Indicates taxa is skipped in taxon counts

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 201		Rep: 01	
Watershed: Patapsco & Back Rivers	Habitat: Low Mesohaline	Date: 08/28/2018	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 11:00:00	
BOTTOM ENVIRONMENT			
Depth (m): 3.5	Salinity (ppt): 2.65	Temperature (C): 26.81	
Dissolved Oxygen (mg/l): 5.0	Sediment Silt-Clay (%): 89.59	Total Carbon (%): 4.84	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.20	Condition: Degraded	# Attributes Scored: 5	
	Value	Score	
Shannon-Wiener Index	1.97	3	
Abundance (#/m2)	500	1	Pollution Indicative Species Abundance (%) 27.27
Biomass (g/m2)	1.66	3	Pollution Indicative Species Biomass (%) 0.14
Carnivore-Omnivore Abundance (%)	9.09		Pollution Sensitive Species Abundance (%) 45.45
Deep Deposit Feeder Abundance (%)	0.00		Pollution Sensitive Species Biomass (%) 59.92
			3
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Leptocheirus plumulosus	45	0.00455	
Macoma balthica	227	0.99535	
Macoma mitchelli	45	0.64993	
Neanthes succinea	45	0.00909	
Streblospio benedicti	136	0.00227	
Total Abundance w/ Epi.	500		
Total Abundance w/o Epi.	500		
Number of Taxa w/ Epi.	5		
Number of Taxa w/o Epi.	5		
Total Biomass w/ Epi.		1.66120	
Total Biomass w/o Epi.		1.66120	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 201		Rep: 02	
Watershed: Patapsco & Back Rivers		Date: 08/28/2018	
Gear: Willco Box Corer		Time: 11:00:00	
Habitat: Low Mesohaline		Sampled Area: 0.022 sq.m	
BOTTOM ENVIRONMENT			
Depth (m): 3.5	Salinity (ppt): 2.65	Temperature (C): 26.81	
Dissolved Oxygen (mg/l): 5.0	Sediment Silt-Clay (%): 89.59	Total Carbon (%): 4.84	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.00	Condition: Meets Goal		# Attributes Scored: 5
	Value	Score	Value
Shannon-Wiener Index	2.04	3	Pollution Indicative Species Abundance (%) 40.00
Abundance (#/m2)	909	3	Pollution Indicative Species Biomass (%) 0.07
Biomass (g/m2)	21.47	3	Pollution Sensitive Species Abundance (%) 45.00
Carnivore-Omnivore Abundance (%)	5.00		Pollution Sensitive Species Biomass (%) 97.34
Deep Deposit Feeder Abundance (%)	10.00		5
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Coelotanypus spp.	45		0.00227
Macoma balthica	364		1.26806
Macoma mitchelli	45		0.54540
Rangia cuneata	45		19.62985
Streblospio benedicti	318		0.01364
Tubificoides spp.	91		0.00909
Total Abundance w/ Epi.	909		
Total Abundance w/o Epi.	909		
Number of Taxa w/ Epi.	6		
Number of Taxa w/o Epi.	6		
Total Biomass w/ Epi.			21.46831
Total Biomass w/o Epi.			21.46831

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS					
Watershed: Patapsco & Back Rivers		Station: 201		Rep: 03	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 08/28/2018	
		Sampled Area: 0.022 sq.m		Time: 11:00:00	
BOTTOM ENVIRONMENT					
Depth (m): 3.5		Salinity (ppt): 2.65		Temperature (C): 26.81	
Dissolved Oxygen (mg/l): 5.0		Sediment Silt-Clay (%): 89.59		Total Carbon (%): 4.84	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.00		Condition: Meets Goal		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	0.57	1	Pollution Indicative Species Abundance (%)	13.33	3
Abundance (#/m2)	682	3	Pollution Indicative Species Biomass (%)	0.25	
Biomass (g/m2)	1.79	3	Pollution Sensitive Species Abundance (%)	86.67	
Carnivore-Omnivore Abundance (%)	0.00		Pollution Sensitive Species Biomass (%)	99.75	5
Deep Deposit Feeder Abundance (%)	0.00				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA			Abundance (#/m2)	Biomass (g/m2)	
Littoridinops tenuipes (Epi)			45	0.00227	
Macoma balthica			591	1.78618	
Streblospio benedicti			91	0.00454	
Total Abundance w/ Epi.			727		
Total Abundance w/o Epi.			682		
Number of Taxa w/ Epi.			3		
Number of Taxa w/o Epi.			2		
Total Biomass w/ Epi.				1.79300	
Total Biomass w/o Epi.				1.79073	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 202		Rep: 01	
Watershed: Patapsco & Back Rivers		Date: 08/28/2018	
Gear: Wildco Box Corer		Time: 8:35:00	
Habitat: Low Mesohaline			
Sampled Area: 0.022 sq.m			
BOTTOM ENVIRONMENT			
Depth (m): 5.7	Salinity (ppt): 4.98	Temperature (C): 26.37	
Dissolved Oxygen (mg/l): 2.9	Sediment Silt-Clay (%): 80.04	Total Carbon (%): 4.79	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.00	Condition: Meets Goal		# Attributes Scored: 5
	Value	Score	Value
Shannon-Wiener Index	0.72	1	Pollution Indicative Species Abundance (%)
Abundance (#/m2)	682	3	Pollution Indicative Species Biomass (%)
Biomass (g/m2)	1.68	3	Pollution Sensitive Species Abundance (%)
Carnivore-Omnivore Abundance (%)	0.00		Pollution Sensitive Species Biomass (%)
Deep Deposit Feeder Abundance (%)	0.00		99.73
			5
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Macoma balthica	545		1.67711
Streblospio benedicti	136		0.00454
Total Abundance w/ Epi.	682		
Total Abundance w/o Epi.	682		
Number of Taxa w/ Epi.	2		
Number of Taxa w/o Epi.	2		
Total Biomass w/ Epi.			1.68165
Total Biomass w/o Epi.			1.68165

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 202		Rep: 02	
Watershed: Patapsco & Back Rivers		Date: 08/28/2018	
Gear: Willco Box Corer		Time: 8:35:00	
Habitat: Low Mesohaline			
Sampled Area: 0.022 sq.m			
BOTTOM ENVIRONMENT			
Depth (m): 5.7		Salinity (ppt): 4.98	
Dissolved Oxygen (mg/l): 2.9		Sediment Silt-Clay (%): 80.04	
		Temperature (C): 26.37	
		Total Carbon (%): 4.79	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 1.40		Condition: Severely Degr.	
		# Attributes Scored: 5	
	Value	Score	Value
Shannon-Wiener Index	1.35	1	Pollution Indicative Species Abundance (%)
Abundance (#/m2)	500	1	Pollution Indicative Species Biomass (%)
Biomass (g/m2)	0.47	1	Pollution Sensitive Species Abundance (%)
Carnivore-Omnivore Abundance (%)	9.09		Pollution Sensitive Species Biomass (%)
Deep Deposit Feeder Abundance (%)	0.00		97.58
			3
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Chironomus spp.	45	0.00909	
Macoma balthica	227	0.45905	
Streblospio benedicti	227	0.00227	
Total Abundance w/ Epi.	500		
Total Abundance w/o Epi.	500		
Number of Taxa w/ Epi.	3		
Number of Taxa w/o Epi.	3		
Total Biomass w/ Epi.		0.47041	
Total Biomass w/o Epi.		0.47041	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 202		Rep: 03	
Watershed: Patapsco & Back Rivers		Date: 08/28/2018	
Gear: Wildco Box Corer		Time: 8:35:00	
Habitat: Low Mesohaline		Sampled Area: 0.022 sq.m	
BOTTOM ENVIRONMENT			
Depth (m): 5.7	Salinity (ppt): 4.98	Temperature (C): 26.37	
Dissolved Oxygen (mg/l): 2.9	Sediment Silt-Clay (%): 80.04	Total Carbon (%): 4.79	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 1.40	Condition: Severely Degr.		# Attributes Scored: 5
	Value	Score	Value
Shannon-Wiener Index	1.00	1	Pollution Indicative Species Abundance (%) 50.00
Abundance (#/m2)	455	1	Pollution Indicative Species Biomass (%) 0.24
Biomass (g/m2)	0.94	1	Pollution Sensitive Species Abundance (%) 50.00
Carnivore-Omnivore Abundance (%)	0.00		Pollution Sensitive Species Biomass (%) 99.76
Deep Deposit Feeder Abundance (%)	0.00		3
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Macoma balthica	227		0.93627
Streblospio benedicti	227		0.00227
Total Abundance w/ Epi.	455		
Total Abundance w/o Epi.	455		
Number of Taxa w/ Epi.	2		
Number of Taxa w/o Epi.	2		
Total Biomass w/ Epi.			0.93854
Total Biomass w/o Epi.			0.93854

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Watershed: Patapsco & Back Rivers		Station: 203	Rep: 01
Gear: Young Grab		Habitat: Oligohaline	Date: 08/28/2018
		Sampled Area: 0.044 sq.m	Time: 14:24:00
BOTTOM ENVIRONMENT			
Depth (m): 1.0	Salinity (ppt): 0.30	Temperature (C): 28.00	
Dissolved Oxygen (mg/l): 7.4	Sediment Silt-Clay (%): 82.21	Total Carbon (%): 3.89	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.33	Condition: Meets Goal		# Attributes Scored: 6
	Value	Score	Value
Shannon-Wiener Index	1.69		Oligohaline Pollution Indicative Spp. Abund. 97.94
Abundance (#/m2)	2204	5	Tolerance Score 9.72
Deep Deposit Feeder Abundance (%)	60.82		Oligohaline Pollution Sensitive Spp. Abund. 1.03
Carnivore-Omnivore Abundance (%)	38.14	5	Tanypodinae/Chironomidae Abundance Ratio 2.78
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Carinoma tremaphoros	23		0.27037
Chironomus spp.	795		0.57936
Coelotanypus spp.	23		0.00682
Limnodrilus hoffmeisteri	68		
Marenzelleria viridis	23		0.02954
Oligochaeta			0.00114
Tubificidae imm w/o cap chaetae *	182		
Tubificoides spp.	1091		0.02726
Total Abundance w/ Epi.	2204		
Total Abundance w/o Epi.	2204		
Number of Taxa w/ Epi.	6		
Number of Taxa w/o Epi.	6		
Total Biomass w/ Epi.			0.91448
Total Biomass w/o Epi.			0.91448

*Indicates taxa is skipped in taxon counts

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Watershed: Patapsco & Back Rivers		Station: 203	Rep: 02
Gear: Young Grab		Habitat: Oligohaline	Date: 08/28/2018
		Sampled Area: 0.044 sq.m	Time: 14:24:00
BOTTOM ENVIRONMENT			
Depth (m): 1.0		Salinity (ppt): 0.30	Temperature (C): 28.00
Dissolved Oxygen (mg/l): 7.4		Sediment Silt-Clay (%): 82.21	Total Carbon (%): 3.89
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.00	Condition: Meets Goal		# Attributes Scored: 6
	Value	Score	Value
Shannon-Wiener Index	2.12		Oligohaline Pollution Indicative Spp. Abund. 97.37
Abundance (#/m2)	1727	5	Tolerance Score 9.40
Deep Deposit Feeder Abundance (%)	59.21		Oligohaline Pollution Sensitive Spp. Abund. 2.63
Carnivore-Omnivore Abundance (%)	38.16	5	Tanypodinae/Chironomidae Abundance Ratio 20.69
BENTHIC ABUNDANCE (per sq. meter)			
TAXA		Abundance (#/m2)	Biomass (g/m2)
Chironomus spp.		523	0.48166
Coelotanypus spp.		136	0.05680
Limnodrilus hoffmeisteri		45	
Marenzelleria viridis		45	0.01363
Oligochaeta			0.02045
Tubificidae imm w/o cap chaetae *		523	
Tubificoides spp.		454	0.00909
Total Abundance w/ Epi.		1727	
Total Abundance w/o Epi.		1727	
Number of Taxa w/ Epi.		5	
Number of Taxa w/o Epi.		5	
Total Biomass w/ Epi.			0.58163
Total Biomass w/o Epi.			0.58163

*Indicates taxa is skipped in taxon counts

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Watershed: Patapsco & Back Rivers		Station: 203	Rep: 03
Gear: Young Grab		Habitat: Oligohaline	Date: 08/28/2018
		Sampled Area: 0.044 sq.m	Time: 14:24:00
BOTTOM ENVIRONMENT			
Depth (m): 1.0	Salinity (ppt): 0.30	Temperature (C): 28.00	
Dissolved Oxygen (mg/l): 7.4	Sediment Silt-Clay (%): 82.21	Total Carbon (%): 3.89	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.00	Condition: Meets Goal		# Attributes Scored: 6
	Value	Score	Value
Shannon-Wiener Index	1.78		1
Abundance (#/m2)	1454	5	3
Deep Deposit Feeder Abundance (%)	31.25		1
Carnivore-Omnivore Abundance (%)	68.75	5	3
		Oligohaline Pollution Indicative Spp. Abund.	100.00
		Tolerance Score	8.97
		Oligohaline Pollution Sensitive Spp. Abund.	0.00
		Tanypodinae/Chironomidae Abundance Ratio	27.27
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Chironomus spp.	727		0.78384
Coelotanypus spp.	273		0.09770
Tubificidae imm w/o cap chaetae	182		0.00114
Tubificoides spp.	273		0.00454
Total Abundance w/ Epi.	1454		
Total Abundance w/o Epi.	1454		
Number of Taxa w/ Epi.	4		
Number of Taxa w/o Epi.	4		
Total Biomass w/ Epi.			0.88722
Total Biomass w/o Epi.			0.88722

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Watershed: Lower Western Shore		Station: 204		Rep: 01	
Gear: Young Grab		Habitat: High Mesohaline Mud		Date: 08/29/2018	
		Sampled Area: 0.044 sq.m		Time: 12:20:00	
BOTTOM ENVIRONMENT					
Depth (m): 6.5		Salinity (ppt): 4.78		Temperature (C): 26.76	
Dissolved Oxygen (mg/l): 5.0		Sediment Silt-Clay (%): 58.72		Total Carbon (%): 1.64	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.00		Condition: Severely Degr.		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.17	3	Pollution Indicative Species Abundance (%)	60.00	
Abundance (#/m2)	227	1	Pollution Indicative Species Biomass (%)	67.12	1
Biomass (g/m2)	0.08	1	Pollution Sensitive Species Abundance (%)	0.00	
Carnivore-Omnivore Abundance (%)	30.00	5	Pollution Sensitive Species Biomass (%)	0.00	1
Deep Deposit Feeder Abundance (%)	40.00				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Chironomus spp.	68		0.01590		
Heteromastus filiformis	23		0.02499		
Mulinia lateralis	23		0.03862		
Mytilopsis leucophaeata (Epi)	23		0.00114		
Streblospio benedicti	45		0.00114		
Tubificoides spp.	68		0.00227		
Total Abundance w/ Epi.	250				
Total Abundance w/o Epi.	227				
Number of Taxa w/ Epi.	6				
Number of Taxa w/o Epi.	5				
Total Biomass w/ Epi.			0.08406		
Total Biomass w/o Epi.			0.08293		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 204		Rep: 02	
Watershed: Lower Western Shore		Date: 08/29/2018	
Gear: Young Grab		Time: 12:20:00	
Habitat: High Mesohaline Mud		Sampled Area: 0.044 sq.m	
BOTTOM ENVIRONMENT			
Depth (m): 6.5	Salinity (ppt): 4.78	Temperature (C): 26.76	
Dissolved Oxygen (mg/l): 5.0	Sediment Silt-Clay (%): 58.72	Total Carbon (%): 1.64	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.00	Condition: Severely Degr.		# Attributes Scored: 6
	Value	Score	Value
Shannon-Wiener Index	2.07	3	Pollution Indicative Species Abundance (%) 54.55
Abundance (#/m2)	750	1	Pollution Indicative Species Biomass (%) 41.89
Biomass (g/m2)	0.08	1	Pollution Sensitive Species Abundance (%) 0.00
Carnivore-Omnivore Abundance (%)	36.36	5	Pollution Sensitive Species Biomass (%) 0.00
Deep Deposit Feeder Abundance (%)	42.42		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Chironomus spp.	273		0.03408
Heteromastus filiformis	182		0.04544
Leptocheirus plumulosus	23		0.00227
Mytilopsis leucophaeata (Epi)	182		0.01363
Streblospio benedicti	136		0.00114
Tubificoides spp.	136		0.00114
Total Abundance w/ Epi.	932		
Total Abundance w/o Epi.	750		
Number of Taxa w/ Epi.	6		
Number of Taxa w/o Epi.	5		
Total Biomass w/ Epi.			0.09770
Total Biomass w/o Epi.			0.08406

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) FIXED STATIONS

Station: 204		Rep: 03	
Watershed: Lower Western Shore		Habitat: High Mesohaline Mud	
Gear: Young Grab		Date: 08/29/2018	
		Sampled Area: 0.044 sq.m	
		Time: 12:20:00	
BOTTOM ENVIRONMENT			
Depth (m): 6.5		Salinity (ppt): 4.78	
Dissolved Oxygen (mg/l): 5.0		Sediment Silt-Clay (%): 58.72	
		Temperature (C): 26.76	
		Total Carbon (%): 1.64	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 1.33		Condition: Severely Degr.	
		# Attributes Scored: 6	
Value	Score	Value	Score
Shannon-Wiener Index	1.68	Pollution Indicative Species Abundance (%)	30.30
Abundance (#/m2)	750	Pollution Indicative Species Biomass (%)	46.43
Biomass (g/m2)	0.06	Pollution Sensitive Species Abundance (%)	0.00
Carnivore-Omnivore Abundance (%)	21.21	Pollution Sensitive Species Biomass (%)	0.00
Deep Deposit Feeder Abundance (%)	15.15		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Apocorophium lacustre (Epi)	318	0.02726	
Chironomus spp.	159	0.02726	
Heteromastus filiformis	114	0.02045	
Mytilopsis leucophaeata (Epi)	750	0.06816	
Polydora cornuta	409	0.01363	
Streblospio benedicti	68	0.00227	
Total Abundance w/ Epi.	1818		
Total Abundance w/o Epi.	750		
Number of Taxa w/ Epi.	6		
Number of Taxa w/o Epi.	4		
Total Biomass w/ Epi.		0.15904	
Total Biomass w/o Epi.		0.06362	

DATA SUMMARY B

**BENTHIC ENVIRONMENT AND COMMUNITY
COMPOSITION AT RANDOM SITES:
SUMMER 2018**

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

Site	25401	25402	25403	25404	25405	
Watershed	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs	
Habitat	High Meso Mud	High Meso Sand	High Meso Mud	Low Mesohaline	Low Mesohaline	
Date	09/26/18	09/26/18	09/26/18	09/26/18	09/26/18	
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab	
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044	
BOTTOM ENVIRONMENT						
Depth (m)	1.0	3.7	2.2	1.8	0.9	
Salinity (ppt)	14.64	15.55	14.39	10.71	9.41	
Temperature (C)	25.90	25.52	23.91	23.68	23.42	
Dissolved Oxygen (mg/L)	8.6	7.5	7.0	7.5	6.1	
Sediment Silt-Clay (%)	51.97	15.07	83.10	7.10	17.94	
Total Carbon (%)	3.09	0.30	1.53	0.32	0.51	
BENTHIC INDEX OF BIOTIC INTEGRITY						
B-IBI Score	3.33	3.67	2.33	2.20	3.40	
Condition	Meets Goal	Meets Goal	Degraded	Degraded	Meets Goal	
# Attributes Scored	6	6	6	5	5	
	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	3.23	5	2.89	3	2.18	3
Abundance (#/m2)	659	1	1204	3	364	1
Biomass (g/m2)	0.88	3	2.44	3	0.11	1
Pollution Indicative Spp Abund (%)	17.24		20.75	3	37.50	
Pollution Indicative Spp Biom (%)	5.69	3	5.03		22.68	3
Pollution Sensitive Spp Abund (%)	34.48		60.38	5	12.50	
Pollution Sensitive Spp Biom (%)	60.54	3	85.53		5.15	1
Carnivore-Omnivore Abund (%)	44.83	5	49.06	5	50.00	5
Deep Deposit Feeder Abund (%)	27.59		15.09		0.00	
TF Poll. Indicative Spp Abund (%)	0.00		0.00		0.00	
Limnodrilus Abundance (%)	0.00		0.00		0.00	
Oligo Poll. Indic. Spp Abund (%)	0.00		0.00		0.00	
Oligo Poll. Sens. Spp Abund (%)	0.00		0.00		0.00	
Tolerance Score	0.00		0.00		0.00	
Tany./Chir. Abundance Ratio	0.00		0.00		0.00	

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	25401	25402	25403	25404	25405
Acteocina canaliculata		500	23		
Amerocolodes species complex					23
Amphiporus bioculatus	23		23		
Clymenella torquata	23	114			
Cyathura polita					182
Cyclaspis varians					23
Edotea triloba (Epi.)					45
Edwardsia elegans					68
Eteone heteropoda					68
Gemma gemma				1204	
Glycera dibranchiata		45			
Glycera spp.				23	
Glycinde solitaria	68		23	23	
Haminoea solitaria	68				
Hermundura fauveli					477
Heteromastus filiformis	23			136	250
Laeonereis culveri					23
Leitoscoloplos spp.		23			
Leucon americanus	23				
Listriella clymenellae		45			
Macoma balthica					45
Macoma mitchelli	45	23	45	1227	704
Marenzelleria viridis					182
Mediomastus ambiseta	136	23			
Melinna maculata		23			
Mulinia lateralis	23	23		227	
Neanthes succinea	136	23	114		295
Nephtys picta		23			
Paraprionospio pinnata	68	204	136		
Parvilucina crenella		91			
Pectinaria gouldii		23			
Phoronis spp.		23			
Streblospio benedicti	23				613
Tubificoides spp.					1045
Total Abundance w/ Epifauna	659	1204	364	2840	4044
Total Abundance w/o Epifauna	659	1204	364	2840	3999
Number of Taxa w/ Epifauna	12	15	6	6	15
Number of Taxa w/o Epifauna	12	15	6	6	14
BENTHIC BIOMASS (Grams per sq. meter)					
Site	25401	25402	25403	25404	25405
Acteocina canaliculata		0.0364	0.0011		
Amerocolodes species complex					0.0023
Amphiporus bioculatus	0.0023		0.0023		
Clymenella torquata	0.5180	1.9108			
Cyathura polita					0.1772
Cyclaspis varians					0.0011
Edotea triloba (Epi.)					0.0023
Edwardsia elegans					0.0011
Eteone heteropoda					0.0114
Gemma gemma				0.0159	
Glycera dibranchiata		0.0954			
Glycera spp.				0.0011	
Glycinde solitaria	0.0091		0.0045	0.0182	
Haminoea solitaria	0.0023				
Hermundura fauveli					0.0364
Heteromastus filiformis	0.0386			0.0136	0.0454
Laeonereis culveri					0.0500
Leitoscoloplos spp.		0.0204			
Leucon americanus	0.0011				
Listriella clymenellae		0.0023			
Macoma balthica					0.0727
Macoma mitchelli	0.1295	0.0011	0.0477	0.0227	0.1363
Marenzelleria viridis					0.5044
Mediomastus ambiseta	0.0045	0.0023			
Melinna maculata		0.0068			
Mulinia lateralis	0.0068	0.0477		0.0409	
Neanthes succinea	0.1227	0.0250	0.0295		0.1159
Nephtys picta		0.1295			
Paraprionospio pinnata	0.0409	0.0545	0.0250		
Parvilucina crenella		0.1000			
Pectinaria gouldii		0.0023			
Phoronis spp.		0.0068			
Streblospio benedicti	0.0023				0.0068
Tubificoides spp.					0.0068
Total Biomass w/ Epifauna	0.8781	2.4413	0.1102	0.1125	1.1701
Total Biomass w/o Epifauna	0.8781	2.4413	0.1102	0.1125	1.1678

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

Site	25406	25407	25408	25409	25410	
Watershed	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs	
Habitat	Low Mesohaline	Low Mesohaline	Freshwater	Low Mesohaline	Low Mesohaline	
Date	09/26/18	09/26/18	09/25/18	09/26/18	09/26/18	
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab	
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044	
BOTTOM ENVIRONMENT						
Depth (m)	1.2	1.5	0.9	2.8	0.5	
Salinity (ppt)	8.25	8.25	0.22	7.62	7.23	
Temperature (C)	23.49	23.53	23.96	23.23	23.50	
Dissolved Oxygen (mg/L)	7.2	5.0	5.7	6.9	6.6	
Sediment Silt-Clay (%)	6.55	55.78	83.41	87.76	2.25	
Total Carbon (%)	0.13	2.96	7.30	2.93	0.06	
BENTHIC INDEX OF BIOTIC INTEGRITY						
B-IBI Score	3.00	3.40	1.50	4.20	2.60	
Condition	Meets Goal	Meets Goal	Severely Degr.	Meets Goal	Degraded	
# Attributes Scored	5	5	4	5	5	
	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	1.87	3	1.52	1	1.49	5
Abundance (#/m2)	2227	5	4635	3	295	1
Biomass (g/m2)	0.83	1	3.13	3	0.02	2.90
Pollution Indicative Spp Abund (%)	0.00	5	8.82	5	92.31	0.00
Pollution Indicative Spp Biom (%)	0.00		2.46		11.76	0.00
Pollution Sensitive Spp Abund (%)	14.29		6.37		0.00	47.06
Pollution Sensitive Spp Biom (%)	36.24	1	90.32	5	0.00	94.99
Carnivore-Omnivore Abund (%)	11.22		16.18		7.69	23.53
Deep Deposit Feeder Abund (%)	19.39		75.49		92.31	1
TF Poll. Indicative Spp Abund (%)	0.00		0.00		84.62	3
Limnodrilus Abundance (%)	0.00		0.00		0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00		0.00		0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00		0.00		0.00	0.00
Tolerance Score	0.00		6.20		9.49	1
Tany./Chir. Abundance Ratio	0.00		100.00		100.00	0.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	25406	25407	25408	25409	25410
Ameroculodes species complex	23	23			
Carinoma tremaphoros		182		45	
Cassinidea ovalis (Epi.)					23
Coelotanypus spp.		227	23		
Cyathura polita	250	227		227	45
Eteone heteropoda		23			
Hermundura fauveli		91			
Heteromastus filiformis	432			114	136
Lepidactylus dytiscus					204
Leptocheirus plumulosus	250			318	91
Limnodrilus hoffmeisteri			68		
Macoma balthica		23		114	
Macoma mitchelli	1204	136		23	364
Marenzelleria viridis	68	45		182	45
Mytilopsis leucophaeata (Epi.)					23
Rangia cuneata				23	
Streblospio benedicti		159			23
Tubificidae imm w cap chaetae			23		
Tubificidae imm w/o cap chaetae *			182		
Tubificoides spp.		3499		114	
Total Abundance w/ Epifauna	2227	4635	295	1159	954
Total Abundance w/o Epifauna	2227	4635	295	1159	909
Number of Taxa w/ Epifauna	6	11	3	9	9
Number of Taxa w/o Epifauna	6	11	3	9	7
BENTHIC BIOMASS (Grams per sq. meter)					
Site	25406	25407	25408	25409	25410
Ameroculodes species complex	0.0045	0.0011			
Carinoma tremaphoros		0.0273		0.0023	
Cassinidea ovalis (Epi.)					0.0045
Coelotanypus spp.		0.0727	0.0023		
Cyathura polita	0.2181	0.2272		0.4635	0.0136
Eteone heteropoda		0.0023			
Hermundura fauveli		0.0159			
Heteromastus filiformis	0.2386			0.0182	0.0432
Lepidactylus dytiscus					0.0886
Leptocheirus plumulosus	0.0500			0.0682	0.0159
Macoma balthica		2.5151		2.1289	
Macoma mitchelli	0.2386	0.1568		0.0545	0.0545
Marenzelleria viridis	0.0841	0.0886		0.1000	0.0227
Mytilopsis leucophaeata (Epi.)					0.0068
Oligochaeta			0.0170		
Rangia cuneata				0.0636	
Streblospio benedicti		0.0023			0.0023
Tubificoides spp.		0.0250		0.0023	
Total Biomass w/ Epifauna	0.8338	3.1342	0.0193	2.9013	0.2522
Total Biomass w/o Epifauna	0.8338	3.1342	0.0193	2.9013	0.2408

*Indicates taxa is skipped in taxon counts

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

Site	25411	25412	25413	25414	25415
Watershed	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs
Habitat	Low Mesohaline	Low Mesohaline	Low Mesohaline	Freshwater	Low Mesohaline
Date	09/27/18	09/27/18	09/27/18	09/27/18	08/23/18
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
BOTTOM ENVIRONMENT					
Depth (m)	2.5	1.9	1.0	3.9	5.1
Salinity (ppt)	7.80	9.46	4.01	0.06	4.40
Temperature (C)	23.64	23.54	23.54	22.07	26.21
Dissolved Oxygen (mg/L)	7.2	6.9	6.2	5.9	7.2
Sediment Silt-Clay (%)	5.87	12.74	37.72	10.76	7.21
Total Carbon (%)	0.08	0.23	1.45	0.86	0.14
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	3.80	2.60	2.60	3.50	3.00
Condition	Meets Goal	Degraded	Degraded	Meets Goal	Meets Goal
# Attributes Scored	5	5	5	4	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	2.50 5	2.22 3	2.64 5	1.86 5	2.27 3
Abundance (#/m2)	1954 5	2567 3	659 3	1136 5	4748 3
Biomass (g/m2)	1.04 3	1.31 3	0.46 1	19.44 1	3.73 3
Pollution Indicative Spp Abund (%)	9.30 5	10.62 3	44.83 1	72.00 3	9.57 5
Pollution Indicative Spp Biom (%)	40.31 5	0.69 3	6.13 5	0.34 3	7.24 3
Pollution Sensitive Spp Abund (%)	6.98 5	6.19 3	27.59 5	8.00 3	3.83 3
Pollution Sensitive Spp Biom (%)	28.10 1	20.80 1	68.14 3	73.69 3	31.95 1
Carnivore-Omnivore Abund (%)	6.98 5	9.73 3	41.38 5	10.00 3	10.53 3
Deep Deposit Feeder Abund (%)	40.70 5	60.18 3	13.79 5	72.00 3	48.80 3
TF Poll. Indicative Spp Abund (%)	0.00 5	0.00 3	0.00 5	72.00 3	0.00 3
Limnodrilus Abundance (%)	0.00 5	0.00 3	0.00 5	72.00 3	0.00 3
Oligo Poll. Indic. Spp Abund (%)	0.00 5	0.00 3	0.00 5	0.00 3	0.00 3
Oligo Poll. Sens. Spp Abund (%)	0.00 5	0.00 3	0.00 5	0.00 3	0.00 3
Tolerance Score	0.00 5	0.00 3	6.20 5	9.04 3	0.00 3
Tany./Chir. Abundance Ratio	0.00 5	0.00 3	100.00 5	0.00 3	0.00 3

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	25411	25412	25413	25414	25415
Carinoma tremaphoros					68
Coelotanypus spp.			227		
Corbicula fluminea				182	
Cyathura polita	45	68	45	68	23
Edotea triloba (Epi.)			23		23
Edwardsia elegans					68
Eteone heteropoda	68	45			227
Gammarus spp. (Epi.)				45	
Gemma gemma	68	91			
Heteromastus filiformis	750	1500	23		2317
Laeonereis culveri		23			
Leptocheirus plumulosus	159		45		1227
Limnodrilus hoffmeisteri				159	
Macoma balthica	45	91			114
Macoma mitchelli	591	341	45		318
Marenzelleria viridis	45		136		23
Micrura leidyi	23				
Mulinia lateralis		45			45
Mya arenaria					23
Neanthes succinea		114			114
Polydora cornuta		23			
Polypedilum scalaenum group				23	
Rangia cuneata				23	
Stictochironomus spp. group				23	
Streblospio benedicti	114	182	68		182
Tubificidae imm w/o cap chaetae *				659	
Tubificoides spp.	45	45	68		
Total Abundance w/ Epifauna	1954	2567	682	1181	4771
Total Abundance w/o Epifauna	1954	2567	659	1136	4748
Number of Taxa w/ Epifauna	11	12	9	7	14
Number of Taxa w/o Epifauna	11	12	8	6	13
BENTHIC BIOMASS (Grams per sq. meter)					
Site	25411	25412	25413	25414	25415
Carinoma tremaphoros					0.0295
Chironomidae				0.0011	
Coelotanypus spp.			0.0273		
Corbicula fluminea				5.0484	
Cyathura polita	0.0477	0.0409	0.0750	0.0500	0.0500
Edotea triloba (Epi.)			0.0045		0.0011
Edwardsia elegans					0.0068
Eteone heteropoda	0.0091	0.0045			0.0250
Gammarus spp. (Epi.)				0.0068	
Gemma gemma	0.0364	0.0591			
Heteromastus filiformis	0.1727	0.5544	0.0250		0.4612
Laeonereis culveri		0.0011			
Leptocheirus plumulosus	0.0091		0.0045		0.2363
Macoma balthica	0.1704	0.2317			0.7248
Macoma mitchelli	0.0091	0.3294	0.0886		1.4791
Marenzelleria viridis	0.0750		0.2408		0.0273
Micrura leidyi	0.1000				
Mulinia lateralis		0.0023			0.2431
Mya arenaria					0.3908
Neanthes succinea		0.0795			0.0568
Oligochaeta				0.0659	
Polydora cornuta		0.0045			
Rangia cuneata				14.2750	
Streblospio benedicti	0.4112	0.0023	0.0011		0.0023
Tubificoides spp.	0.0023	0.0011	0.0011		
Total Biomass w/ Epifauna	1.0428	1.3109	0.4680	19.4472	3.7340
Total Biomass w/o Epifauna	1.0428	1.3109	0.4635	19.4404	3.7329

*Indicates taxa is skipped in taxon counts

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

Site	25416	25417	25418	25419	25420
Watershed	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs
Habitat	Low Mesohaline	Low Mesohaline	Low Mesohaline	Low Mesohaline	Low Mesohaline
Date	08/23/18	09/25/18	09/25/18	09/25/18	09/25/18
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
BOTTOM ENVIRONMENT					
Depth (m)	7.8	5.5	4.5	4.4	1.5
Salinity (ppt)	3.90	7.77	7.90	7.87	7.54
Temperature (C)	25.59	22.37	22.55	22.49	22.22
Dissolved Oxygen (mg/L)	6.8	7.0	6.8	7.0	7.0
Sediment Silt-Clay (%)	56.46	88.61	85.00	60.87	3.03
Total Carbon (%)	1.65	2.84	2.53	1.77	0.06
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	3.80	2.60	3.00	3.00	3.00
Condition	Meets Goal	Degraded	Meets Goal	Meets Goal	Meets Goal
# Attributes Scored	5	5	5	5	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	2.52 5	2.22 3	2.21 3	2.52 5	2.37 3
Abundance (#/m2)	1340 3	500 1	727 3	1704 5	1613 5
Biomass (g/m2)	4.83 3	1.04 3	0.41 1	0.69 1	0.51 1
Pollution Indicative Spp Abund (%)	3.39 5	18.18 3	9.38 5	29.33 1	2.82 5
Pollution Indicative Spp Biom (%)	2.37	0.11	0.28	3.61	0.44
Pollution Sensitive Spp Abund (%)	33.90	31.82	15.63	18.67	15.49
Pollution Sensitive Spp Biom (%)	63.20 3	70.52 3	68.33 3	69.51 3	22.57 1
Carnivore-Omnivore Abund (%)	45.76	9.09	12.50	14.67	4.23
Deep Deposit Feeder Abund (%)	6.78	36.36	31.25	25.33	23.94
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	0.00	0.00	0.00	0.00	0.00
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	0.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	25416	25417	25418	25419	25420
Apocorophium lacustre (Epi.)					23
Carinoma tremaphoros	273				23
Cyathura polita			91	204	23
Eteone heteropoda				45	
Heteromastus filiformis	91	159	204	409	386
Laeonereis culveri					23
Lepidactylus dytiscus					318
Leptocheirus plumulosus	23		295	386	23
Macoma balthica	409	159	23		
Macoma mitchelli	114	23	23	68	545
Marenzelleria viridis				114	227
Melita nitida (Epi.)			45	91	
Mulinia lateralis	23				
Mya arenaria	45				
Mytilopsis leucophaeata (Epi.)					545
Neanthes succinea	341	45			
Streblospio benedicti	23	91	68	454	45
Tubificoides spp.		23	23	23	
Total Abundance w/ Epifauna	1340	500	772	1795	2181
Total Abundance w/o Epifauna	1340	500	727	1704	1613
Number of Taxa w/ Epifauna	9	6	8	9	11
Number of Taxa w/o Epifauna	9	6	7	8	9
BENTHIC BIOMASS (Grams per sq. meter)					
Site	25416	25417	25418	25419	25420
Apocorophium lacustre (Epi.)					0.0011
Carinoma tremaphoros	0.0364				0.0091
Cyathura polita			0.2340	0.3113	0.0023
Eteone heteropoda				0.0091	
Heteromastus filiformis	0.0432	0.0454	0.0523	0.1068	0.1568
Laeonereis culveri					0.0068
Lepidactylus dytiscus					0.0704
Leptocheirus plumulosus	0.0011		0.0682	0.0704	0.0114
Macoma balthica	2.0357	0.7339	0.0454		
Macoma mitchelli	0.2317	0.0795	0.0068	0.0068	0.1409
Marenzelleria viridis				0.1704	0.1136
Melita nitida (Epi.)			0.0023	0.0068	
Mulinia lateralis	0.1136				
Mya arenaria	1.0201				
Mytilopsis leucophaeata (Epi.)					0.0341
Neanthes succinea	1.3518	0.1795			
Streblospio benedicti	0.0011	0.0011	0.0011	0.0159	0.0023
Tubificoides spp.		0.0011	0.0011	0.0023	
Total Biomass w/ Epifauna	4.8348	1.0406	0.4112	0.6998	0.5487
Total Biomass w/o Epifauna	4.8348	1.0406	0.4090	0.6930	0.5135

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

Site	25421	25422	25423	25424	25425	
Watershed	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs	
Habitat	Low Mesohaline	Oligohaline	Oligohaline	Oligohaline	Oligohaline	
Date	09/25/18	09/19/18	09/19/18	09/19/18	09/19/18	
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab	
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044	
BOTTOM ENVIRONMENT						
Depth (m)	3.2	1.4	3.8	1.4	0.5	
Salinity (ppt)	5.95	0.22	0.21	0.71	0.44	
Temperature (C)	22.08	24.64	22.39	23.99	25.35	
Dissolved Oxygen (mg/L)	5.7	7.6	8.6	8.4	9.0	
Sediment Silt-Clay (%)	94.88	20.86	79.49	84.87	84.10	
Total Carbon (%)	1.92	3.93	3.50	3.10	3.22	
BENTHIC INDEX OF BIOTIC INTEGRITY						
B-IBI Score	3.40	3.00	3.00	1.80	2.67	
Condition	Meets Goal	Meets Goal	Meets Goal	Severely Degr.	Marginal	
# Attributes Scored	5	6	6	5	6	
	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	2.05	3	2.57		2.31	1.45
Abundance (#/m2)	636	3	2090	5	1000	5
Biomass (g/m2)	2.30	3	0.21		88.63	22.78
Pollution Indicative Spp Abund (%)	17.86	3	79.35		29.55	42.86
Pollution Indicative Spp Biom (%)	0.99		60.99		0.02	0.00
Pollution Sensitive Spp Abund (%)	17.86		7.61		63.64	42.86
Pollution Sensitive Spp Biom (%)	96.00	5	16.48		98.93	99.62
Carnivore-Omnivore Abund (%)	14.29		34.78	3	13.64	1
Deep Deposit Feeder Abund (%)	25.00		64.13		22.73	42.86
TF Poll. Indicative Spp Abund (%)	0.00		0.00		0.00	0.00
Limnodrilus Abundance (%)	0.00		64.13		22.73	42.86
Oligo Poll. Indic. Spp Abund (%)	0.00		81.52	3	36.36	3
Oligo Poll. Sens. Spp Abund (%)	0.00		0.00	1	29.55	5
Tolerance Score	9.80		8.85	3	7.41	3
Tany./Chir. Abundance Ratio	0.00		47.83	3	100.00	1

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	25421	25422	25423	25424	25425
Carinoma tremaphoros				23	
Chironomus spp.	91	45			
Cladotanytarsus spp. E Epler		23			
Cladotanytarsus viridiventris		23			
Coelotanypus spp.		227	68		159
Corbicula fluminea		23	68		68
Cryptochironomus spp.		23			23
Culicidae		23			
Cyathura polita		159	68		
Gammarus spp. (Epi.)			23		
Leptocheirus plumulosus	250				
Limnodrilus hoffmeisteri		795			136
Macoma balthica	114				
Marenzelleria viridis			295		
Melita nitida (Epi.)	23				
Polypedilum illinoense group					23
Procladius spp.		23			
Rangia cuneata			273	68	45
Streblospio benedicti	23				
Tanytarsus spp. *		23			
Tanytarsus spp. G Epler		159			
Tubificidae imm w/o cap chaetae			227	68	
Tubificidae imm w/o cap chaetae *		545			568
Tubificoides spp.	159				
Turbellaria (Epi.)		23			
Total Abundance w/ Epifauna	659	2113	1022	159	1022
Total Abundance w/o Epifauna	636	2090	1000	159	1022
Number of Taxa w/ Epifauna	6	12	7	3	6
Number of Taxa w/o Epifauna	5	11	6	3	6

BENTHIC BIOMASS (Grams per sq. meter)					
Site	25421	25422	25423	25424	25425
Carinoma tremaphoros				0.0863	
Chironomidae		0.0011			
Chironomus spp.	0.0182	0.0068			
Coelotanypus spp.		0.0159	0.0045		0.0454
Corbicula fluminea		0.0386	0.9338		0.0591
Culicidae		0.0068			
Cyathura polita		0.0341	0.0250		
Gammarus spp. (Epi.)			0.0091		
Leptocheirus plumulosus	0.0682				
Macoma balthica	2.2061				
Marenzelleria viridis			0.2931		
Melita nitida (Epi.)	0.0045				
Oligochaeta		0.1034	0.0091		0.0657
Rangia cuneata			87.3675	22.6905	60.7715
Streblospio benedicti	0.0045				
Tubificidae imm w/o cap chaetae			0.0011	0.0011	
Tubificoides spp.	0.0011				
Turbellaria (Epi.)		0.0011			
Total Biomass w/ Epifauna	2.3027	0.2079	88.6432	22.7779	60.9417
Total Biomass w/o Epifauna	2.2981	0.2068	88.6341	22.7779	60.9417

*Indicates taxa is skipped in taxon counts

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

Site	25501	25502	25503	25504	25505
Watershed	Mainstem	Mainstem	Mainstem	Mainstem	Mainstem
Habitat	High Meso Mud	High Meso Mud	High Meso Mud	High Meso Sand	High Meso Sand
Date	09/26/18	09/26/18	08/21/18	09/26/18	09/26/18
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
BOTTOM ENVIRONMENT					
Depth (m)	2.5	1.9	12.0	3.8	6.5
Salinity (ppt)	14.95	14.53	16.58	15.78	13.77
Temperature (C)	24.55	24.48	27.17	24.86	23.60
Dissolved Oxygen (mg/L)	8.7	9.4	0.6	7.5	7.6
Sediment Silt-Clay (%)	88.66	77.49	71.19	4.08	8.68
Total Carbon (%)	1.36	0.88	2.61	0.06	0.20
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	1.67	3.33	1.67	3.33	3.00
Condition	Severely Degr.	Meets Goal	Severely Degr.	Meets Goal	Meets Goal
# Attributes Scored	6	6	6	6	6
	Value	Score	Value	Score	Value
Shannon-Wiener Index	2.01	3	3.30	5	2.65
Abundance (#/m2)	341	1	818	1	3317
Biomass (g/m2)	0.22	1	0.96	3	1.57
Pollution Indicative Spp Abund (%)	60.00		22.22		15.07
Pollution Indicative Spp Biom (%)	32.99	1	5.68	3	27.50
Pollution Sensitive Spp Abund (%)	6.67		30.56		3.42
Pollution Sensitive Spp Biom (%)	2.06	1	42.96	3	1.45
Carnivore-Omnivore Abund (%)	13.33	3	36.11	5	48.63
Deep Deposit Feeder Abund (%)	0.00		5.56		15.75
TF Poll. Indicative Spp Abund (%)	0.00		0.00		0.00
Limnodrilus Abundance (%)	0.00		0.00		0.00
Oligo Poll. Indic. Spp Abund (%)	0.00		0.00		0.00
Oligo Poll. Sens. Spp Abund (%)	0.00		0.00		0.00
Tolerance Score	0.00		0.00		0.00
Tany./Chir. Abundance Ratio	0.00		0.00		0.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	25501	25502	25503	25504	25505
Acteocina canaliculata		23	23	114	
Ampelisca verrilli				23	
Arcuatula papyria (Epi.)					45
Callinectes sapidus (Epi.)					23
Clymenella torquata		23			
Doridella obscura (Epi.)					273
Edwardsia elegans				23	
Erichsonella attenuata (Epi.)					68
Gemma gemma					23
Glycera dibranchiata		23		114	45
Glycinde solitaria		136			68
Heteromastus filiformis					23
Leitoscoloplos robustus				45	
Leitoscoloplos spp.			45		
Leptosynapta tenuis				23	
Leucon americanus		45			
Lyonsia hyalina					23
Macoma mitchelli	68	182			454
Mediomastus ambiseta				91	
Molgula manhattensis (Epi.)					45
Mucrogammarus mucronatus (Epi.)					227
Mulinia lateralis	45	23		23	250
Mya arenaria		45			
Neanthes succinea		45			1477
Ogyrides alphaerostris	45	45			
Paraprionospio pinnata	159	159		23	45
Parvilucina crenella				23	68
Pectinaria gouldii		23		23	500
Phoronis spp.	23	23			45
Podarkeopsis levifuscina		23			
Polydora cornuta					68
Ptilanthura tenuis					23
Spiophanes bombyx				114	
Streblospio benedicti				23	204
Synidotea laevidorsalis (Epi.)					68
Total Abundance w/ Epifauna	341	818	68	659	4067
Total Abundance w/o Epifauna	341	818	68	659	3317
Number of Taxa w/ Epifauna	5	14	2	13	22
Number of Taxa w/o Epifauna	5	14	2	13	15
BENTHIC BIOMASS (Grams per sq. meter)					
Site	25501	25502	25503	25504	25505
Acteocina canaliculata		0.0011	0.0091	0.0136	
Ampelisca verrilli				0.0091	
Arcuatula papyria (Epi.)					0.0114
Callinectes sapidus (Epi.)					0.0204
Clymenella torquata		0.3726			
Doridella obscura (Epi.)					0.0295
Edwardsia elegans				0.0068	
Erichsonella attenuata (Epi.)					0.0136
Gemma gemma					0.0409
Glycera dibranchiata		0.2454		0.4294	0.0750
Glycinde solitaria		0.0136			0.0204
Heteromastus filiformis					0.0545
Leitoscoloplos robustus				0.4408	
Leitoscoloplos spp.			0.0523		
Leptosynapta tenuis				0.0182	
Leucon americanus		0.0045			
Lyonsia hyalina					0.0045
Macoma mitchelli	0.1136	0.0454			0.0841
Mediomastus ambiseta				0.0068	
Molgula manhattensis (Epi.)					0.0613
Mucrogammarus mucronatus (Epi.)					0.0250
Mulinia lateralis	0.0432	0.0114		0.0023	0.4090
Mya arenaria		0.0159			
Neanthes succinea		0.0045			0.6452
Ogyrides alphaerostris	0.0295	0.1659			
Paraprionospio pinnata	0.0295	0.0432		0.0045	0.0159
Parvilucina crenella				0.0011	0.1477
Pectinaria gouldii		0.0204		0.0011	0.0523
Phoronis spp.	0.0045	0.0091			0.0023
Podarkeopsis levifuscina		0.0068			
Polydora cornuta					0.0023
Ptilanthura tenuis					0.0091
Spiophanes bombyx				0.0727	
Streblospio benedicti				0.0023	0.0068
Synidotea laevidorsalis (Epi.)					0.1340
Total Biomass w/ Epifauna	0.2204	0.9599	0.0613	1.0088	1.8653
Total Biomass w/o Epifauna	0.2204	0.9599	0.0613	1.0088	1.5700

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

Site	25506	25507	25508	25509	25510
Watershed	Mainstem	Mainstem	Mainstem	Mainstem	Mainstem
Habitat	High Meso Sand	High Meso Sand	Low Mesohaline	High Meso Sand	High Meso Sand
Date	09/26/18	08/21/18	08/21/18	08/22/18	09/27/18
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
BOTTOM ENVIRONMENT					
Depth (m)	2.5	5.9	8.4	5.4	1.4
Salinity (ppt)	15.77	8.47	8.59	7.35	9.39
Temperature (C)	25.33	27.48	27.44	26.74	23.79
Dissolved Oxygen (mg/L)	7.8	6.7	5.8	7.0	8.2
Sediment Silt-Clay (%)	2.08	1.47	2.17	18.88	17.05
Total Carbon (%)	0.04	0.05	0.08	0.44	0.14
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	2.67	3.33	2.20	2.33	2.00
Condition	Marginal	Meets Goal	Degraded	Degraded	Severely Degr.
# Attributes Scored	6	6	5	6	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	3.49 5	3.64 5	2.32 3	2.84 3	2.48 1
Abundance (#/m2)	1045 3	1522 5	841 3	1272 3	4430 3
Biomass (g/m2)	0.52 1	0.65 1	1.03 3	0.96 1	1.10 3
Pollution Indicative Spp Abund (%)	17.39 3	23.88 3	21.62 1	17.86 3	13.33 3
Pollution Indicative Spp Biom (%)	29.13	4.17	17.00	26.89	28.31
Pollution Sensitive Spp Abund (%)	10.87 3	26.87 3	32.43	25.00 3	1.03 1
Pollution Sensitive Spp Biom (%)	6.09	56.35	13.47 1	2.36	0.62
Carnivore-Omnivore Abund (%)	10.87 1	28.36 3	16.22	14.29 1	15.90 1
Deep Deposit Feeder Abund (%)	45.65	14.93	18.92	37.50	34.87
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	0.00	0.00	0.00	0.00	0.00
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	0.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	25506	25507	25508	25509	25510
Acteocina canaliculata		45	91	23	
Arcuatula papyria (Epi.)		45	45		
Carinoma tremaphoros		45			204
Chiridotea caeca		45			
Cyathura polita					45
Dipolydora commensalis (Epi.)					23
Edwardsia elegans	23	23			
Eteone heteropoda		45			114
Gemma gemma	91	23			227
Glycera dibranchiata	45			68	
Glycinde solitaria	23	136	45	23	
Heteromastus filiformis	114	182		91	1522
Leitoscoloplos spp.	23		136		
Leptosynapta tenuis	68				
Macoma mitchelli	68	250		341	1454
Maldanidae			23		
Mediomastus ambiseta	23			273	
Mulinia lateralis	68	182		227	364
Neanthes succinea	23	91		68	341
Paraonis fulgens		23			
Paraprionospio pinnata		23	45		
Parvilucina crenella		23	364		
Pectinaria gouldii		23		114	
Phoronis spp.	68	227	136		
Polydora cornuta					23
Saccoglossus kowalevskii				45	
Sayella chesapeakea (Epi.)					23
Scoloplos texana	45				
Streblospio benedicti	91	114			114
Tubificoides spp.	273	23			23
Total Abundance w/ Epifauna	1045	1568	886	1272	4476
Total Abundance w/o Epifauna	1045	1522	841	1272	4430
Number of Taxa w/ Epifauna	15	19	8	10	13
Number of Taxa w/o Epifauna	15	18	7	10	11
BENTHIC BIOMASS (Grams per sq. meter)					
Site	25506	25507	25508	25509	25510
Acteocina canaliculata		0.0227	0.0250	0.0114	
Arcuatula papyria (Epi.)		0.0250	0.0068		
Carinoma tremaphoros		0.0023			0.0295
Chiridotea caeca		0.0318			
Cyathura polita					0.0068
Dipolydora commensalis (Epi.)					0.0114
Edwardsia elegans	0.0227	0.0295			
Eteone heteropoda		0.0011			0.0114
Gemma gemma	0.0909	0.0227			0.0023
Glycera dibranchiata	0.0568			0.3703	
Glycinde solitaria	0.0045	0.0227	0.0068	0.0023	
Heteromastus filiformis	0.0750	0.0772		0.0409	0.2704
Leitoscoloplos spp.	0.0386		0.1568		
Leptosynapta tenuis	0.0682				
Macoma mitchelli	0.0045	0.0250		0.1431	0.0977
Maldanidae			0.0114		
Mediomastus ambiseta	0.0045			0.0091	
Mulinia lateralis	0.1091	0.0227		0.2590	0.2976
Neanthes succinea	0.0023	0.0023		0.0818	0.3794
Paraonis fulgens		0.0023			
Paraprionospio pinnata		0.0011	0.0182		
Parvilucina crenella		0.0523	0.7043		
Pectinaria gouldii		0.0114		0.0182	
Phoronis spp.	0.0227	0.3226	0.1068		
Polydora cornuta					0.0011
Saccoglossus kowalevskii				0.0273	
Sayella chesapeakea (Epi.)					0.0023
Scoloplos texana	0.0136				
Streblospio benedicti	0.0045	0.0023			0.0023
Tubificoides spp.	0.0045	0.0011			0.0011
Total Biomass w/ Epifauna	0.5226	0.6782	1.0360	0.9633	1.1133
Total Biomass w/o Epifauna	0.5226	0.6532	1.0292	0.9633	1.0996

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

Site	25511	25512	25513	25514	25515
Watershed	Mainstem	Mainstem	Mainstem	Mainstem	Mainstem
Habitat	Low Mesohaline	High Meso Sand	Low Mesohaline	High Meso Sand	High Meso Sand
Date	09/27/18	09/27/18	09/27/18	09/06/18	08/22/18
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
BOTTOM ENVIRONMENT					
Depth (m)	5.9	1.4	1.4	1.3	9.6
Salinity (ppt)	10.35	7.32	9.45	6.30	11.55
Temperature (C)	23.63	23.29	24.15	30.07	26.76
Dissolved Oxygen (mg/L)	5.3	7.0	8.0	7.7	1.0
Sediment Silt-Clay (%)	23.05	3.64	8.00	2.20	39.05
Total Carbon (%)	0.29	0.07	0.19	0.16	1.43
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	3.80	3.00	3.00	2.33	1.00
Condition	Meets Goal	Meets Goal	Meets Goal	Degraded	Severely Degr.
# Attributes Scored	5	6	5	6	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	2.61 5	2.25 1	2.81 5	1.97 1	0.00 1
Abundance (#/m2)	2522 3	2340 5	5998 3	1522 5	182 1
Biomass (g/m2)	4.63 3	1.14 3	1.89 3	0.42 1	0.20 1
Pollution Indicative Spp Abund (%)	7.21 5	1.94 5	17.80 3	0.00 5	100.00 1
Pollution Indicative Spp Biom (%)	2.23	0.10	3.25	0.00	100.00
Pollution Sensitive Spp Abund (%)	25.23	12.62 3	9.09	4.48 1	0.00 1
Pollution Sensitive Spp Biom (%)	59.96 3	34.03	13.61 1	16.94	0.00
Carnivore-Omnivore Abund (%)	19.82	14.56 1	11.74	4.48 1	0.00 1
Deep Deposit Feeder Abund (%)	31.53	42.72	45.83	29.85	100.00
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	0.00	0.00	0.00	0.00	0.00
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	0.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	25511	25512	25513	25514	25515
Amerocolodes species complex		91			
Carinoma tremaphoros	23	91		23	
Cyathura polita	45	204	182	23	
Cyclaspis varians			45		
Edotea triloba (Epi.)			23		
Edwardsia elegans			136		
Erichsonella attenuata (Epi.)			45		
Eteone heteropoda	23		136		
Gammarus spp. (Epi.)			45		
Gemma gemma		23	500	91	
Hargeria rapax			23		
Heteromastus filiformis	750	1000	2363	454	
Laeonereis culveri			23	23	
Leitoscoloplos robustus					182
Leitoscoloplos spp.	45				
Leptocheirus plumulosus		23		772	
Littoridinops tenuipes (Epi.)			23		
Macoma balthica	568		23		
Macoma mitchelli	523	727	932	68	
Marenzelleria viridis	23	91		45	
Mediomastus ambiseta			341		
Micrura leidyi	68				
Mulinia lateralis	68		45		
Mytilidae (Epi.)			23		
Neanthes succinea	341	45	227		
Polydora cornuta			91	23	
Streblospio benedicti	45	45	886		
Stylochus ellipticus (Epi.)			23		
Tubificoides spp.			45		
Total Abundance w/ Epifauna	2522	2340	6180	1522	182
Total Abundance w/o Epifauna	2522	2340	5998	1522	182
Number of Taxa w/ Epifauna	12	10	22	9	1
Number of Taxa w/o Epifauna	12	10	16	9	1
BENTHIC BIOMASS (Grams per sq. meter)					
Site	25511	25512	25513	25514	25515
Amerocolodes species complex		0.0068			
Carinoma tremaphoros	0.0023	0.0227		0.0011	
Cyathura polita	0.0432	0.1431	0.1818	0.0011	
Cyclaspis varians			0.0011		
Edotea triloba (Epi.)			0.0011		
Edwardsia elegans			0.0250		
Erichsonella attenuata (Epi.)			0.0250		
Eteone heteropoda	0.0068		0.0273		
Gammarus spp. (Epi.)			0.0023		
Gemma gemma		0.0023	0.2749	0.0273	
Hargeria rapax			0.0011		
Heteromastus filiformis	0.1590	0.3544	0.3908	0.1204	
Laeonereis culveri			0.0068	0.0250	
Leitoscoloplos robustus					0.1954
Leitoscoloplos spp.	0.0409				
Leptocheirus plumulosus		0.0045		0.1727	
Littoridinops tenuipes (Epi.)			0.0045		
Macoma balthica	2.6673		0.0500		
Macoma mitchelli	0.7134	0.2976	0.6839	0.0023	
Marenzelleria viridis	0.0636	0.2454		0.0704	
Mediomastus ambiseta			0.0250		
Micrura leidyi	0.5180				
Mulinia lateralis	0.0545		0.0068		
Mytilidae (Epi.)			0.0011		
Neanthes succinea	0.3567	0.0636	0.1795		
Polydora cornuta			0.0023	0.0023	
Streblospio benedicti	0.0011	0.0011	0.0273		
Stylochus ellipticus (Epi.)			0.0068		
Tubificoides spp.			0.0023		
Total Biomass w/ Epifauna	4.6269	1.1417	1.9267	0.4226	0.1954
Total Biomass w/o Epifauna	4.6269	1.1417	1.8858	0.4226	0.1954

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

Site	25516	25517	25518	25519	25520
Watershed	Mainstem	Mainstem	Mainstem	Mainstem	Mainstem
Habitat	Low Mesohaline	Low Mesohaline	Low Mesohaline	Low Mesohaline	High Meso Mud
Date	09/27/18	08/22/18	09/25/18	08/22/18	08/22/18
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
BOTTOM ENVIRONMENT					
Depth (m)	2.9	6.5	3.9	7.3	9.9
Salinity (ppt)	8.61	4.83	10.26	9.02	9.94
Temperature (C)	23.27	26.62	23.01	26.87	26.75
Dissolved Oxygen (mg/L)	6.1	7.3	6.3	1.2	2.6
Sediment Silt-Clay (%)	90.28	19.81	76.44	83.11	82.37
Total Carbon (%)	1.58	0.39	1.50	2.35	2.33
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	2.60	3.40	2.60	1.80	1.00
Condition	Degraded	Meets Goal	Degraded	Severely Degr.	Severely Degr.
# Attributes Scored	5	5	5	5	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	2.37 3	2.47 3	2.29 3	0.00 1	0.00 1
Abundance (#/m2)	1272 3	5930 3	1318 3	23 1	0 1
Biomass (g/m2)	2.07 3	5.02 5	3.07 3	0.01 1	0.00 1
Pollution Indicative Spp Abund (%)	12.50 3	6.90 5	29.31 1	0.00 5	100.00
Pollution Indicative Spp Biom (%)	4.40	12.38	3.33	0.00	100.00 1
Pollution Sensitive Spp Abund (%)	14.29	2.68	29.31	0.00	0.00
Pollution Sensitive Spp Biom (%)	30.11 1	22.09 1	76.22 3	0.00 1	0.00 1
Carnivore-Omnivore Abund (%)	19.64	38.70	3.45	100.00	0.00 1
Deep Deposit Feeder Abund (%)	12.50	44.83	36.21	0.00	0.00
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	6.20	0.00	0.00	0.00	0.00
Tany./Chir. Abundance Ratio	100.00	0.00	0.00	0.00	0.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	25516	25517	25518	25519	25520
Carinoma tremaphoros	23	1113	45	23	
Coelotanypus spp.	45				
Cyathura polita	159				
Edwardsia elegans		318			
Eteone heteropoda		114			
Heteromastus filiformis	45	2590	23		
Leitoscoloplos robustus			68		
Leitoscoloplos spp.	114	68			
Leptocheirus plumulosus	523				
Macoma balthica	23	114	386		
Macoma mitchelli	318	591	91		
Marenzelleria viridis		23			
Micrura leidyi		23			
Mulinia lateralis		182			
Mya arenaria		23			
Neanthes succinea	23	727			
Streblospio benedicti		45	318		
Tubificoides spp.			386		
Total Abundance w/ Epifauna	1272	5930	1318	23	0
Total Abundance w/o Epifauna	1272	5930	1318	23	
Number of Taxa w/ Epifauna	9	13	7	1	0
Number of Taxa w/o Epifauna	9	13	7	1	0
BENTHIC BIOMASS (Grams per sq. meter)					
Site	25516	25517	25518	25519	25520
Carinoma tremaphoros	0.0182		0.0591	0.0114	
Coelotanypus spp.	0.0068				
Cyathura polita	0.5362				
Edwardsia elegans		0.1250			
Eteone heteropoda		0.0068			
Heteromastus filiformis	0.0023	0.7475	0.0341		
Leitoscoloplos robustus			0.0932		
Leitoscoloplos spp.	0.0841	0.1386			
Leptocheirus plumulosus	0.1454				
Macoma balthica	0.0863	1.0042	2.3379		
Macoma mitchelli	1.0588	1.2473	0.5203		
Marenzelleria viridis		0.0636			
Micrura leidyi		0.0545			
Mulinia lateralis		0.4748			
Mya arenaria		0.0409			
Neanthes succinea	0.1295	0.8997			
Streblospio benedicti		0.0011	0.0091		
Tubificoides spp.			0.0136		
Total Biomass w/ Epifauna	2.0675	5.0200	3.0672	0.0114	0.0000
Total Biomass w/o Epifauna	2.0675	5.0200	3.0672	0.0114	0.0000

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

Site	25521	25522	25523	25524	25525
Watershed	Mainstem	Mainstem	Mainstem	Mainstem	Mainstem
Habitat	Low Mesohaline	Low Mesohaline	High Meso Sand	Low Mesohaline	Low Mesohaline
Date	08/22/18	09/22/18	08/22/18	09/25/18	08/22/18
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
BOTTOM ENVIRONMENT					
Depth (m)	7.3	8.1	3.0	1.6	9.0
Salinity (ppt)	6.88	10.30	7.01	9.77	5.83
Temperature (C)	26.72	23.37	26.90	22.07	26.37
Dissolved Oxygen (mg/L)	7.2	6.0	7.3	6.0	4.2
Sediment Silt-Clay (%)	11.03	69.93	9.45	57.96	95.72
Total Carbon (%)	0.51	2.53	0.16	1.27	3.09
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	3.00	1.80	2.33	3.00	2.60
Condition	Meets Goal	Severely Degr.	Degraded	Meets Goal	Degraded
# Attributes Scored	5	5	6	5	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	3.13 5	1.37 1	1.70 1	2.49 3	1.61 1
Abundance (#/m2)	1772 5	114 1	3044 3	4317 3	954 3
Biomass (g/m2)	3.18 3	0.03 1	2.17 3	3.00 3	4.53 3
Pollution Indicative Spp Abund (%)	51.28 1	0.00 5	8.96 5	42.11 1	54.76 1
Pollution Indicative Spp Biom (%)	27.52	0.00	8.02	1.33	14.21
Pollution Sensitive Spp Abund (%)	8.97	0.00	1.49 1	33.68	35.71
Pollution Sensitive Spp Biom (%)	29.02 1	0.00 1	15.63	88.86 5	84.49 5
Carnivore-Omnivore Abund (%)	38.46	0.00	7.46 1	12.11	7.14
Deep Deposit Feeder Abund (%)	15.38	80.00	67.16	19.47	54.76
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	9.80	0.00	9.80	6.00	0.00
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	0.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	25521	25522	25523	25524	25525
Americamysis almyra (Epi.)				23	
Carinoma tremaphoros	91			45	45
Chironomus spp.	386		182		
Cyathura polita			23	409	
Edwardsia elegans	23				
Eteone heteropoda			23	23	
Gemma gemma			545		
Glycinde solitaria	23				
Heteromastus filiformis	23	23	1977	659	
Hobsonia florida	23				
Laeonereis culveri				45	
Leitoscoloplos robustus	227		68		500
Leptocheirus plumulosus		23	68	45	
Macoma balthica	114		23	68	341
Macoma mitchelli	364		136	68	
Marenzelleria viridis				863	
Mulinia lateralis	45				23
Mya arenaria	23				
Neanthes succinea	159				23
Rangia cuneata				114	
Streblospio benedicti	250			1795	
Tubificoides spp.	23	68		182	23
Total Abundance w/ Epifauna	1772	114	3044	4340	954
Total Abundance w/o Epifauna	1772	114	3044	4317	954
Number of Taxa w/ Epifauna	14	3	9	13	6
Number of Taxa w/o Epifauna	14	3	9	12	6
BENTHIC BIOMASS (Grams per sq. meter)					
Site	25521	25522	25523	25524	25525
Americamysis almyra (Epi.)				0.0068	
Carinoma tremaphoros	0.0341			0.0136	0.0091
Chironomus spp.	0.0613		0.0432		
Cyathura polita			0.0318	1.0020	
Edwardsia elegans	0.0114				
Eteone heteropoda			0.0011	0.0011	
Gemma gemma			0.6157		
Glycinde solitaria	0.0045				
Heteromastus filiformis	0.0545	0.0182	0.6044	0.1863	
Hobsonia florida	0.0068				
Laeonereis culveri				0.0772	
Leitoscoloplos robustus	0.7952		0.1295		0.6293
Leptocheirus plumulosus		0.0068	0.0091	0.0091	
Macoma balthica	0.6384		0.3067	0.5203	3.8238
Macoma mitchelli	1.0042		0.4249	0.0068	
Marenzelleria viridis				0.9929	
Mulinia lateralis	0.0045				0.0136
Mya arenaria	0.2795				
Neanthes succinea	0.2681				0.0432
Rangia cuneata				0.1477	
Streblospio benedicti	0.0136			0.0386	
Tubificoides spp.	0.0023	0.0045		0.0011	0.0068
Total Biomass w/ Epifauna	3.1785	0.0295	2.1664	3.0036	4.5258
Total Biomass w/o Epifauna	3.1785	0.0295	2.1664	2.9968	4.5258

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

Site	25301	25302	25303	25304	25305	
Watershed	Western Tribs	Western Tribs	Western Tribs	Western Tribs	Western Tribs	
Habitat	Low Mesohaline	Low Mesohaline	Low Mesohaline	Low Mesohaline	Low Mesohaline	
Date	09/06/18	09/06/18	09/06/18	08/29/18	08/29/18	
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab	
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044	
BOTTOM ENVIRONMENT						
Depth (m)	2.9	1.0	1.7	5.8	6.1	
Salinity (ppt)	5.42	5.55	4.82	4.48	4.48	
Temperature (C)	29.50	30.65	31.22	26.99	26.99	
Dissolved Oxygen (mg/L)	1.0	8.8	4.8	1.9	2.8	
Sediment Silt-Clay (%)	95.80	3.29	26.64	64.02	87.34	
Total Carbon (%)	2.57	0.09	0.79	6.30	5.75	
BENTHIC INDEX OF BIOTIC INTEGRITY						
B-IBI Score	3.00	2.60	3.00	1.00	1.00	
Condition	Meets Goal	Degraded	Meets Goal	Severely Degr.	Severely Degr.	
# Attributes Scored	5	5	5	5	5	
	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	1.87	3	1.53	1	2.05	3
Abundance (#/m2)	250	1	1340	3	1568	5
Biomass (g/m2)	2.35	3	1.01	3	2.23	3
Pollution Indicative Spp Abund (%)	0.00	5	5.08	5	52.17	1
Pollution Indicative Spp Biom (%)	0.00		0.67		6.82	1
Pollution Sensitive Spp Abund (%)	63.64		15.25		28.99	
Pollution Sensitive Spp Biom (%)	79.71	3	14.11	1	76.34	3
Carnivore-Omnivore Abund (%)	27.27		5.08		71.01	
Deep Deposit Feeder Abund (%)	9.09		1.69		15.94	
TF Poll. Indicative Spp Abund (%)	0.00		0.00		0.00	
Limnodrilus Abundance (%)	0.00		0.00		0.00	
Oligo Poll. Indic. Spp Abund (%)	0.00		0.00		0.00	
Oligo Poll. Sens. Spp Abund (%)	0.00		0.00		0.00	
Tolerance Score	0.00		9.80		9.80	
Tany./Chir. Abundance Ratio	0.00		0.00		0.00	

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	25301	25302	25303	25304	25305
Carinoma tremaphoros	45		23		
Chironomus spp.		23	818		
Cyathura polita		45	273		
Glycinde solitaria	23				
Heteromastus filiformis	23	23	227		
Lepidactylus dytiscus		977			
Leptocheirus plumulosus		23			
Macoma balthica	136		136		
Macoma mitchelli	23	23	23		
Marenzelleria viridis		159	45		
Polydora cornuta		23			
Streblospio benedicti		45			
Tubificoides spp.			23		
Total Abundance w/ Epifauna	250	1340	1568	0	0
Total Abundance w/o Epifauna	250	1340	1568		
Number of Taxa w/ Epifauna	5	9	8	0	0
Number of Taxa w/o Epifauna	5	9	8	0	0
BENTHIC BIOMASS (Grams per sq. meter)					
Site	25301	25302	25303	25304	25305
Carinoma tremaphoros	0.0318		0.0159		
Chironomus spp.		0.0045	0.1522		
Cyathura polita		0.0659	0.4544		
Glycinde solitaria	0.0068				
Heteromastus filiformis	0.0182	0.0114	0.0454		
Lepidactylus dytiscus		0.3158			
Leptocheirus plumulosus		0.0114			
Macoma balthica	1.8676		1.2201		
Macoma mitchelli	0.4271	0.5248	0.3135		
Marenzelleria viridis		0.0772	0.0295		
Polydora cornuta		0.0011			
Streblospio benedicti		0.0023			
Tubificoides spp.			0.0011		
Total Biomass w/ Epifauna	2.3515	1.0144	2.2322	0.0000	0.0000
Total Biomass w/o Epifauna	2.3515	1.0144	2.2322	0.0000	0.0000

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

Site	25306	25307	25308	25309	25310
Watershed	Western Tribs	Western Tribs	Western Tribs	Western Tribs	Western Tribs
Habitat	Low Mesohaline	Low Mesohaline	Low Mesohaline	Low Mesohaline	Low Mesohaline
Date	08/29/18	08/29/18	08/29/18	08/29/18	08/29/18
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
BOTTOM ENVIRONMENT					
Depth (m)	6.7	3.9	5.5	4.5	2.8
Salinity (ppt)	4.49	4.26	4.55	4.48	4.04
Temperature (C)	26.66	26.75	26.75	26.74	26.84
Dissolved Oxygen (mg/L)	1.7	5.3	4.9	5.0	5.7
Sediment Silt-Clay (%)	97.65	3.77	40.13	71.10	2.93
Total Carbon (%)	5.23	0.16	1.16	1.68	0.14
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	1.00	3.00	4.20	3.80	3.40
Condition	Severely Degr.	Meets Goal	Meets Goal	Meets Goal	Meets Goal
# Attributes Scored	5	5	5	5	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	0.00 1	2.38 3	2.27 3	2.01 3	2.20 3
Abundance (#/m2)	0 1	886 3	1454 3	1340 3	1454 3
Biomass (g/m2)	0.00 1	1.44 3	6.40 5	4.45 3	1.74 3
Pollution Indicative Spp Abund (%)	100.00 1	2.56 5	3.13 5	0.00 5	0.00 5
Pollution Indicative Spp Biom (%)	100.00 1	0.16	0.05	0.00	0.00
Pollution Sensitive Spp Abund (%)	0.00	23.08	59.38	61.02	14.06
Pollution Sensitive Spp Biom (%)	0.00 1	34.70 1	86.14 5	82.83 5	48.11 3
Carnivore-Omnivore Abund (%)	0.00	2.56	14.06	11.86	4.69
Deep Deposit Feeder Abund (%)	0.00	17.95	20.31	13.56	25.00
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	0.00	6.00	6.20	0.00	6.00
Tany./Chir. Abundance Ratio	0.00	0.00	100.00	0.00	0.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	25306	25307	25308	25309	25310
Carinoma tremaphoros			45	23	23
Coelotanypus spp.			23		
Eteone heteropoda		23			
Heteromastus filiformis		159	182	91	364
Leptocheirus plumulosus		318	68	136	682
Macoma balthica		68	772	795	91
Macoma mitchelli		182		45	136
Marenzelleria viridis		23	91	23	68
Mytilopsis leucophaeata (Epi.)		45		23	
Neanthes succinea			136	136	45
Rangia cuneata		114			45
Streblospio benedicti			23		
Tubificoides spp.			114	91	
Total Abundance w/ Epifauna	0	932	1454	1363	1454
Total Abundance w/o Epifauna		886	1454	1340	1454
Number of Taxa w/ Epifauna	0	8	9	9	8
Number of Taxa w/o Epifauna	0	7	9	8	8
BENTHIC BIOMASS (Grams per sq. meter)					
Site	25306	25307	25308	25309	25310
Carinoma tremaphoros			0.0091	0.0045	0.0045
Coelotanypus spp.			0.0023		
Eteone heteropoda		0.0023			
Heteromastus filiformis		0.0227	0.0409	0.0204	0.0863
Leptocheirus plumulosus		0.0977	0.0159	0.0432	0.2181
Macoma balthica		0.2158	5.4619	3.6738	0.4885
Macoma mitchelli		0.8179		0.2522	0.5657
Marenzelleria viridis		0.0045	0.0500	0.0091	0.0227
Mytilopsis leucophaeata (Epi.)		0.0011		0.0023	
Neanthes succinea			0.8156	0.4408	0.0295
Rangia cuneata		0.2795			0.3272
Streblospio benedicti			0.0011		
Tubificoides spp.			0.0023	0.0023	
Total Biomass w/ Epifauna	0.0000	1.4416	6.3991	4.4486	1.7426
Total Biomass w/o Epifauna	0.0000	1.4404	6.3991	4.4463	1.7426

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

Site	25311	25312	25313	25315	25316
Watershed	Western Tribs	Western Tribs	Western Tribs	Western Tribs	Western Tribs
Habitat	Low Mesohaline	Low Mesohaline	Low Mesohaline	Low Mesohaline	Low Mesohaline
Date	08/29/18	08/29/18	08/29/18	08/28/18	08/28/18
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
BOTTOM ENVIRONMENT					
Depth (m)	4.1	5.1	2.3	5.3	8.2
Salinity (ppt)	4.11	4.07	3.81	5.35	5.45
Temperature (C)	26.50	26.23	27.80	26.41	26.32
Dissolved Oxygen (mg/L)	3.1	1.8	7.4	3.9	1.9
Sediment Silt-Clay (%)	91.66	88.88	4.41	81.84	93.14
Total Carbon (%)	2.09	6.01	0.20	2.35	5.44
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	3.40	1.00	3.80	3.40	1.00
Condition	Meets Goal	Severely Degr.	Meets Goal	Meets Goal	Severely Degr.
# Attributes Scored	5	5	5	5	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	1.13 1	0.00 1	2.68 5	1.96 3	0.00 1
Abundance (#/m2)	1295 3	45 1	1136 3	1250 3	0 1
Biomass (g/m2)	4.85 3	0.01 1	2.99 3	2.82 3	0.00 1
Pollution Indicative Spp Abund (%)	0.00 5	100.00 1	6.00 5	0.00 5	100.00 1
Pollution Indicative Spp Biom (%)	0.00	100.00	0.08	0.00	100.00
Pollution Sensitive Spp Abund (%)	87.72	0.00	32.00	34.55	0.00
Pollution Sensitive Spp Biom (%)	96.55 5	0.00 1	79.50 3	66.13 3	0.00 1
Carnivore-Omnivore Abund (%)	1.75	100.00	16.00	41.82	0.00
Deep Deposit Feeder Abund (%)	10.53	0.00	30.00	0.00	0.00
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	0.00	9.80	6.00	0.00	0.00
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	0.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	25311	25312	25313	25315	25316
Apocorophium lacustre (Epi.)			23		
Carinoma tremaphoros			23	114	
Chironomus spp.		45			
Cyathura polita			136		
Geukensia demissa (Epi.)			23		
Heteromastus filiformis	68		341		
Leptocheirus plumulosus			45	273	
Littoridinops tenuipes (Epi.)			863		
Macoma balthica	1022			432	
Macoma mitchelli			273	23	
Marenzelleria viridis	114		68		
Mytilopsis leucophaeata (Epi.)			795		
Neanthes succinea	23		23	409	
Rangia cuneata			159		
Streblospio benedicti			68		
Tubificoides spp.	68				
Total Abundance w/ Epifauna	1295	45	2840	1250	0
Total Abundance w/o Epifauna	1295	45	1136	1250	
Number of Taxa w/ Epifauna	5	1	13	5	0
Number of Taxa w/o Epifauna	5	1	9	5	0

BENTHIC BIOMASS (Grams per sq. meter)					
Site	25311	25312	25313	25315	25316
Apocorophium lacustre (Epi.)			0.0011		
Carinoma tremaphoros			0.0023	0.0159	
Chironomus spp.		0.0068			
Cyathura polita			0.0750		
Geukensia demissa (Epi.)			0.0011		
Heteromastus filiformis	0.0273		0.0477		
Leptocheirus plumulosus			0.0045	0.0454	
Littoridinops tenuipes (Epi.)			0.0886		
Macoma balthica	4.5554			1.8630	
Macoma mitchelli			0.5135	0.2613	
Marenzelleria viridis	0.1227		0.0295		
Mytilopsis leucophaeata (Epi.)			0.0591		
Neanthes succinea	0.1386		0.0432	0.6316	
Rangia cuneata			2.2743		
Streblospio benedicti			0.0023		
Tubificoides spp.	0.0011				
Total Biomass w/ Epifauna	4.8450	0.0068	3.1422	2.8173	0.0000
Total Biomass w/o Epifauna	4.8450	0.0068	2.9922	2.8173	0.0000

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

Site	25317	25318	25319	25320	25321
Watershed	Western Tribs	Western Tribs	Western Tribs	Western Tribs	Western Tribs
Habitat	Low Mesohaline	Oligohaline	Oligohaline	Low Mesohaline	Oligohaline
Date	08/28/18	08/28/18	08/28/18	09/28/18	09/28/18
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
BOTTOM ENVIRONMENT					
Depth (m)	3.4	1.3	0.5	0.9	2.1
Salinity (ppt)	2.65	0.31	0.30	0.21	0.15
Temperature (C)	26.76	29.68	29.42	20.21	20.62
Dissolved Oxygen (mg/L)	3.9	9.8	11.1	8.8	8.5
Sediment Silt-Clay (%)	76.66	94.00	5.15	3.89	97.18
Total Carbon (%)	4.35	4.22	0.35	0.04	2.79
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	1.80	2.67	2.67	3.40	2.60
Condition	Severely Degr.	Marginal	Marginal	Meets Goal	Degraded
# Attributes Scored	5	6	6	5	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	2.24 3	2.31	2.30	2.35 3	0.00
Abundance (#/m2)	295 1	977 5	6134 1	591 3	23 1
Biomass (g/m2)	1.37 3	0.17	0.99	31.19 1	1.57
Pollution Indicative Spp Abund (%)	46.15 1	81.40	70.37	0.00 5	0.00
Pollution Indicative Spp Biom (%)	1.65	46.10	72.55	0.00	0.00
Pollution Sensitive Spp Abund (%)	23.08	4.65	3.70	38.46	100.00
Pollution Sensitive Spp Biom (%)	29.75 1	45.45	16.70	99.57 5	100.00
Carnivore-Omnivore Abund (%)	23.08	13.95 1	54.44 5	11.54	0.00 1
Deep Deposit Feeder Abund (%)	7.69	74.42	41.85	0.00	0.00
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	65.12	25.93	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	95.35 1	95.56 1	0.00	0.00 5
Oligo Poll. Sens. Spp Abund (%)	0.00	4.65 3	3.70 3	0.00	0.00 1
Tolerance Score	9.80	9.69 1	9.69 1	6.11	6.00 5
Tany./Chir. Abundance Ratio	0.00	16.67 5	0.00 5	0.00	0.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	25317	25318	25319	25320	25321
Carinoma tremaphoros			23		
Chironomus spp.	68	114	2726		
Coelotanypus spp.		23			
Corbicula fluminea				68	
Cyathura polita				68	
Lepidactylus dytiscus				227	
Leptocheirus plumulosus		45		68	
Limnodrilus hoffmeisteri		182	1113		
Macoma balthica	68				
Macoma mitchelli	68				
Marenzelleria viridis		45	227	45	
Parametriocnemus spp.			23		
Polypedilum halterale group			454		
Polypedilum spp.			114		
Rangia cuneata				114	23
Streblospio benedicti	68	23			
Tubificidae imm w/o cap chaetae *		454	477		
Tubificoides spp.	23	91	977		
Total Abundance w/ Epifauna	295	977	6134	591	23
Total Abundance w/o Epifauna	295	977	6134	591	23
Number of Taxa w/ Epifauna	5	7	8	6	1
Number of Taxa w/o Epifauna	5	7	8	6	1

BENTHIC BIOMASS (Grams per sq. meter)					
Site	25317	25318	25319	25320	25321
Carinoma tremaphoros			0.0364		
Chironomus spp.	0.0182	0.0341	0.6498		
Coelotanypus spp.		0.0045			
Corbicula fluminea				0.0613	
Cyathura polita				0.0045	
Lepidactylus dytiscus				0.0659	
Leptocheirus plumulosus		0.0136		0.0068	
Macoma balthica	0.4090				
Macoma mitchelli	0.9383				
Marenzelleria viridis		0.0795	0.1659	0.0364	
Oligochaeta		0.0409	0.0710		
Parametriocnemus spp.			0.0011		
Polypedilum halterale group			0.0500		
Polypedilum spp.			0.0011		
Rangia cuneata				31.0105	1.5677
Streblospio benedicti	0.0045	0.0011			
Tubificoides spp.	0.0045	0.0011	0.0182		
Total Biomass w/ Epifauna	1.3746	0.1749	0.9934	31.1855	1.5677
Total Biomass w/o Epifauna	1.3746	0.1749	0.9934	31.1855	1.5677

*Indicates taxa is skipped in taxon counts

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

Site	25322	25323	25324	25325	25326
Watershed	Western Tribs	Western Tribs	Western Tribs	Western Tribs	Western Tribs
Habitat	Oligohaline	Freshwater	Oligohaline	Oligohaline	Low Mesohaline
Date	09/28/18	08/16/18	09/19/18	09/19/18	08/29/18
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
BOTTOM ENVIRONMENT					
Depth (m)	1.8	0.5	0.2	0.2	1.8
Salinity (ppt)	0.13	0.12	0.09	0.05	4.60
Temperature (C)	20.46	26.45	23.96	22.16	28.32
Dissolved Oxygen (mg/L)	8.6	7.0	7.9	5.6	8.7
Sediment Silt-Clay (%)	83.50	92.65	95.16	92.94	2.42
Total Carbon (%)	2.53	2.61	3.21	2.56	0.05
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	2.33	2.00	3.00	2.33	2.60
Condition	Degraded	Severely Degr.	Meets Goal	Degraded	Degraded
# Attributes Scored	6	4	6	6	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	0.97	1.77	2.05	1.38	1.85
Abundance (#/m2)	114 1	5476 3	273 3	159 1	1409 3
Biomass (g/m2)	15.99	0.31	60.92	0.02	0.73 1
Pollution Indicative Spp Abund (%)	40.00	45.23	66.67	85.71	3.23 5
Pollution Indicative Spp Biom (%)	0.09	1.48	0.26	68.42	1.55
Pollution Sensitive Spp Abund (%)	60.00	0.00	8.33	0.00	9.68
Pollution Sensitive Spp Biom (%)	99.91	0.00	99.74	0.00	4.64 1
Carnivore-Omnivore Abund (%)	40.00	4.98	83.33	71.43	5 1.61
Deep Deposit Feeder Abund (%)	0.00	95.02	8.33	28.57	12.90
TF Poll. Indicative Spp Abund (%)	0.00	43.15	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	43.15	8.33	28.57	0.00
Oligo Poll. Indic. Spp Abund (%)	40.00	0.00	66.67	85.71	3 0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	1 0.00
Tolerance Score	6.08	9.75	8.56	7.56	3 6.00
Tany./Chir. Abundance Ratio	100.00	50.00	28.57	100.00	1 0.00

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	25322	25323	25324	25325	25326
Basommatophora *		23			
Chaoborus punctipennis			68	23	
Chironomus spp.			114		
Cladopelma spp.		23			
Coelotanypus spp.	45	114	45	91	
Cryptochironomus spp.		23			
Dero digitata		2840			
Dicrotendipes modestus		23			
Eteone heteropoda					23
Ferrissia spp. (Epi.)		932			
Gammarus spp. (Epi.)		68			
Girardia tigrina (Epi.)		23			
Gyraulus spp. (Epi.)		23			
Heteromastus filiformis					182
Lepidactylus dytiscus					886
Leptocheirus plumulosus					91
Limnodrilus hoffmeisteri		954			
Macoma mitchelli					68
Marenzelleria viridis					23
Menetus dilatatus (Epi.)		45			
Mytilopsis leucophaeata (Epi.)					159
Oecetis furva group (Epi.)		23			
Oecetis inconspicua (Epi.)		409			
Physa spp. (Epi.)		23			
Planorbidae *		45			
Procladius spp.		23			
Rangia cuneata	68		23		114
Streblospio benedicti					23
Tanytarsus spp. *		23			
Tanytarsus spp. G Epler		45			
Tubificidae imm w/o cap chaetae			23	45	
Tubificidae imm w/o cap chaetae *		1409			
Turbellaria *		23			
Total Abundance w/ Epifauna	114	7111	273	159	1568
Total Abundance w/o Epifauna	114	5476	273	159	1409
Number of Taxa w/ Epifauna	2	16	5	3	9
Number of Taxa w/o Epifauna	2	8	5	3	8
BENTHIC BIOMASS (Grams per sq. meter)					
Site	25322	25323	25324	25325	25326
Basommatophora *		0.0023			
Chaoborus punctipennis			0.0045	0.0068	
Chironomidae		0.0011			
Chironomus spp.			0.1500		
Coelotanypus spp.	0.0136	0.0045	0.0045	0.0136	
Eteone heteropoda					0.0091
Ferrissia spp. (Epi.)		0.0500			
Gammarus spp. (Epi.)		0.0204			
Girardia tigrina (Epi.)		0.0023			
Gyraulus spp. (Epi.)		0.0023			
Heteromastus filiformis					0.0295
Lepidactylus dytiscus					0.2999
Leptocheirus plumulosus					0.0091
Macoma mitchelli					0.3499
Marenzelleria viridis					0.0091
Menetus dilatatus (Epi.)		0.0091			
Mytilopsis leucophaeata (Epi.)					0.0045
Oecetis furva group (Epi.)		0.0273			
Oecetis inconspicua (Epi.)		0.0204			
Oligochaeta		0.3019			
Physa spp. (Epi.)		0.0159			
Planorbidae *		0.0023			
Rangia cuneata	15.9767		60.7624		0.0250
Streblospio benedicti					0.0023
Tubificidae imm w/o cap chaetae			0.0011	0.0011	
Turbellaria *		0.0011			
Total Biomass w/ Epifauna	15.9903	0.4610	60.9225	0.0216	0.7384
Total Biomass w/o Epifauna	15.9903	0.3076	60.9225	0.0216	0.7339

*Indicates taxa is skipped in taxon counts

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

Site	25101	25102	25103	25104	25105
Watershed	Potomac R	Potomac R	Potomac R	Potomac R	Potomac R
Habitat	High Meso Mud	High Meso Mud	High Meso Mud	High Meso Mud	High Meso Sand
Date	08/21/18	08/21/18	08/21/18	08/21/18	08/21/18
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
BOTTOM ENVIRONMENT					
Depth (m)	15.5	17.6	11.9	9.5	3.5
Salinity (ppt)	14.00	17.14	12.14	10.90	8.52
Temperature (C)	27.35	27.23	27.47	27.40	27.68
Dissolved Oxygen (mg/L)	0.1	0.1	0.1	1.3	6.8
Sediment Silt-Clay (%)	82.36	85.34	98.24	88.65	1.41
Total Carbon (%)	2.90	3.05	3.54	3.85	0.21
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	1.00	1.00	1.00	1.00	3.67
Condition	Severely Degr.	Severely Degr.	Severely Degr.	Severely Degr.	Meets Goal
# Attributes Scored	6	6	6	6	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	0.00 1	0.00 1	0.00 1	0.00 1	3.16 3
Abundance (#/m2)	0 1	0 1	0 1	0 1	1749 5
Biomass (g/m2)	0.00 1	0.00 1	0.00 1	0.00 1	1.22 3
Pollution Indicative Spp Abund (%)	100.00	100.00	100.00	100.00	2.60 5
Pollution Indicative Spp Biom (%)	100.00 1	100.00 1	100.00 1	100.00 1	0.93
Pollution Sensitive Spp Abund (%)	0.00	0.00	0.00	0.00	28.57 3
Pollution Sensitive Spp Biom (%)	0.00 1	0.00 1	0.00 1	0.00 1	13.08
Carnivore-Omnivore Abund (%)	0.00 1	0.00 1	0.00 1	0.00 1	27.27 3
Deep Deposit Feeder Abund (%)	0.00	0.00	0.00	0.00	14.29
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	0.00	0.00	0.00	0.00	0.00
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	0.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	25101	25102	25103	25104	25105
Acteocina canaliculata					91
Carinoma tremaphoros					45
Edotea triloba (Epi.)					23
Gemma gemma					136
Glycinde solitaria					204
Heteromastus filiformis					250
Macoma mitchelli					364
Marenzelleria viridis					23
Micrura leidyi					23
Mulinia lateralis					45
Neanthes succinea					114
Parvilucina crenella					273
Phoronis spp.					182
Total Abundance w/ Epifauna	0	0	0	0	1772
Total Abundance w/o Epifauna					1749
Number of Taxa w/ Epifauna	0	0	0	0	13
Number of Taxa w/o Epifauna	0	0	0	0	12
BENTHIC BIOMASS (Grams per sq. meter)					
Site	25101	25102	25103	25104	25105
Acteocina canaliculata					0.0318
Carinoma tremaphoros					0.0136
Edotea triloba (Epi.)					0.0023
Gemma gemma					0.0454
Glycinde solitaria					0.0250
Heteromastus filiformis					0.0477
Macoma mitchelli					0.2045
Marenzelleria viridis					0.0045
Micrura leidyi					0.0750
Mulinia lateralis					0.0114
Neanthes succinea					0.0409
Parvilucina crenella					0.6180
Phoronis spp.					0.0977
Total Biomass w/ Epifauna	0.0000	0.0000	0.0000	0.0000	1.2178
Total Biomass w/o Epifauna	0.0000	0.0000	0.0000	0.0000	1.2155

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

Site	25106	25107	25108	25109	25110
Watershed	Potomac R	Potomac R	Potomac R	Potomac R	Potomac R
Habitat	High Meso Sand	Low Mesohaline	High Meso Sand	Low Mesohaline	High Meso Mud
Date	09/21/18	08/21/18	08/21/18	09/21/18	08/21/18
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
BOTTOM ENVIRONMENT					
Depth (m)	5.5	7.7	6.7	2.1	7.9
Salinity (ppt)	6.53	7.91	7.47	1.26	7.64
Temperature (C)	25.72	27.58	27.37	25.65	27.47
Dissolved Oxygen (mg/L)	9.0	0.4	7.3	7.7	6.2
Sediment Silt-Clay (%)	22.44	95.60	7.00	1.99	82.87
Total Carbon (%)	0.59	3.09	0.22	0.24	2.71
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	1.67	1.00	1.00	1.40	1.00
Condition	Severely Degr.	Severely Degr.	Severely Degr.	Severely Degr.	Severely Degr.
# Attributes Scored	6	5	6	5	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	2.45 1	0.00 1	0.00 1	1.84 3	0.00 1
Abundance (#/m2)	2068 5	0 1	23 1	204 1	0 1
Biomass (g/m2)	0.79 1	0.00 1	0.00 1	0.02 1	0.00 1
Pollution Indicative Spp Abund (%)	37.36 1	100.00 1	100.00 1	44.44 1	100.00
Pollution Indicative Spp Biom (%)	3.45	100.00	100.00	21.05	100.00 1
Pollution Sensitive Spp Abund (%)	2.20 1	0.00	0.00 1	22.22	0.00
Pollution Sensitive Spp Biom (%)	40.80	0.00 1	0.00	5.26 1	0.00 1
Carnivore-Omnivore Abund (%)	19.78 1	0.00	0.00 1	0.00	0.00 1
Deep Deposit Feeder Abund (%)	32.97	0.00	0.00	0.00	0.00
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	9.80	0.00	0.00	6.00	0.00
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	0.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	25106	25107	25108	25109	25110
Apocorophium lacustre (Epi.)				68	
Carinoma tremaphoros	23				
Chironomus spp.	68				
Edotea triloba (Epi.)				45	
Eteone heteropoda	68				
Heteromastus filiformis	682				
Leptocheirus plumulosus				23	
Littoridinops tenuipes (Epi.)				5975	
Macoma balthica	45				
Macoma mitchelli	227				
Mytilopsis leucophaeata (Epi.)	23			23	
Neanthes succinea	250				
Polydora cornuta	68			45	
Rangia cuneata				45	
Streblospio benedicti	636		23	91	
Total Abundance w/ Epifauna	2090	0	23	6316	0
Total Abundance w/o Epifauna	2068		23	204	
Number of Taxa w/ Epifauna	10	0	1	8	0
Number of Taxa w/o Epifauna	9	0	1	4	0
BENTHIC BIOMASS (Grams per sq. meter)					
Site	25106	25107	25108	25109	25110
Apocorophium lacustre (Epi.)				0.0045	
Carinoma tremaphoros	0.0204				
Chironomus spp.	0.0114				
Edotea triloba (Epi.)				0.0068	
Eteone heteropoda	0.0023				
Heteromastus filiformis	0.0568				
Leptocheirus plumulosus				0.0136	
Littoridinops tenuipes (Epi.)				0.9724	
Macoma balthica	0.3226				
Macoma mitchelli	0.0909				
Mytilopsis leucophaeata (Epi.)	0.0023			0.0023	
Neanthes succinea	0.2681				
Polydora cornuta	0.0045			0.0023	
Rangia cuneata				0.0011	
Streblospio benedicti	0.0136		0.0023	0.0045	
Total Biomass w/ Epifauna	0.7929	0.0000	0.0023	1.0076	0.0000
Total Biomass w/o Epifauna	0.7907	0.0000	0.0023	0.0216	0.0000

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

Site	25111	25112	25113	25114	25115
Watershed	Potomac R	Potomac R	Potomac R	Potomac R	Potomac R
Habitat	Low Mesohaline	Low Mesohaline	Low Mesohaline	Low Mesohaline	Low Mesohaline
Date	08/21/18	09/21/18	08/21/18	09/21/18	09/21/18
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
BOTTOM ENVIRONMENT					
Depth (m)	8.7	3.9	5.8	11.6	9.0
Salinity (ppt)	6.70	4.35	5.37	1.19	0.86
Temperature (C)	27.63	25.43	27.57	25.00	24.76
Dissolved Oxygen (mg/L)	3.9	7.4	0.3	5.4	6.1
Sediment Silt-Clay (%)	77.89	8.54	88.59	96.95	99.27
Total Carbon (%)	2.74	0.36	2.40	2.76	2.64
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	1.00	1.00	3.40	1.00	1.00
Condition	Severely Degr.	Severely Degr.	Meets Goal	Severely Degr.	Severely Degr.
# Attributes Scored	5	5	5	5	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	0.00 1	1.16 1	1.45 1	0.00 1	0.00 1
Abundance (#/m2)	0 1	227 1	613 3	0 1	0 1
Biomass (g/m2)	0.00 1	0.01 1	2.56 3	0.00 1	0.00 1
Pollution Indicative Spp Abund (%)	100.00 1	70.00 1	0.00 5	100.00 1	100.00 1
Pollution Indicative Spp Biom (%)	100.00	50.00	0.00	100.00	100.00
Pollution Sensitive Spp Abund (%)	0.00	0.00	85.19	0.00	0.00
Pollution Sensitive Spp Biom (%)	0.00 1	0.00 1	99.96 5	0.00 1	0.00 1
Carnivore-Omnivore Abund (%)	0.00	0.00	0.00	0.00	0.00
Deep Deposit Feeder Abund (%)	0.00	0.00	62.96	0.00	0.00
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	0.00	0.00	0.00	0.00	0.00
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	0.00

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	25111	25112	25113	25114	25115
Macoma balthica			227		
Macoma mitchelli		45			
Mediomastus ambiseta			295		
Polydora cornuta		23			
Streblospio benedicti		159			
Tubificoides spp.			91		
Total Abundance w/ Epifauna	0	227	613	0	0
Total Abundance w/o Epifauna		227	613		
Number of Taxa w/ Epifauna	0	3	3	0	0
Number of Taxa w/o Epifauna	0	3	3	0	0
BENTHIC BIOMASS (Grams per sq. meter)					
Site	25111	25112	25113	25114	25115
Macoma balthica			2.5333		
Macoma mitchelli		0.0023			
Mediomastus ambiseta			0.0250		
Polydora cornuta		0.0045			
Streblospio benedicti		0.0068			
Tubificoides spp.			0.0011		
Total Biomass w/ Epifauna	0.0000	0.0136	2.5594	0.0000	0.0000
Total Biomass w/o Epifauna	0.0000	0.0136	2.5594	0.0000	0.0000

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

Site	25116	25117	25118	25119	25120	
Watershed	Potomac R	Potomac R	Potomac R	Potomac R	Potomac R	
Habitat	Low Mesohaline	Low Mesohaline	Low Mesohaline	Low Mesohaline	Oligohaline	
Date	09/21/18	09/21/18	09/21/18	09/21/18	09/04/18	
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab	
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044	
BOTTOM ENVIRONMENT						
Depth (m)	6.7	3.4	13.0	2.6	3.0	
Salinity (ppt)	0.67	0.36	0.29	4.04	0.12	
Temperature (C)	24.74	24.46	23.99	25.19	30.06	
Dissolved Oxygen (mg/L)	6.7	7.2	6.7	7.5	6.7	
Sediment Silt-Clay (%)	81.48	70.28	97.43	85.78	72.46	
Total Carbon (%)	1.69	1.79	2.57	2.61	2.73	
BENTHIC INDEX OF BIOTIC INTEGRITY						
B-IBI Score	2.60	3.80	3.40	1.40	3.33	
Condition	Degraded	Meets Goal	Meets Goal	Severely Degr.	Meets Goal	
# Attributes Scored	5	5	5	5	6	
	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	2.07	3	2.50	3	1.49	1
Abundance (#/m2)	318	1	750	3	977	3
Biomass (g/m2)	0.62	1	2.28	3	1.28	3
Pollution Indicative Spp Abund (%)	0.00	5	3.03	5	0.00	5
Pollution Indicative Spp Biom (%)	0.00		0.10		0.00	
Pollution Sensitive Spp Abund (%)	57.14		45.45		20.93	
Pollution Sensitive Spp Biom (%)	90.81	3	98.26	5	96.64	5
Carnivore-Omnivore Abund (%)	28.57		42.42		2.33	
Deep Deposit Feeder Abund (%)	57.14		42.42		76.74	
TF Poll. Indicative Spp Abund (%)	0.00		0.00		0.00	
Limnodrilus Abundance (%)	0.00		0.00		0.00	
Oligo Poll. Indic. Spp Abund (%)	0.00		0.00		0.00	
Oligo Poll. Sens. Spp Abund (%)	0.00		0.00		0.00	
Tolerance Score	8.50		0.00		8.50	
Tany./Chir. Abundance Ratio	0.00		0.00		100.00	

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	25116	25117	25118	25119	25120
Carinoma tremaphoros	68	45			
Ceratopogonidae					23
Chaoborus punctipennis	23		23	23	
Chaoborus spp.					114
Coelotanypus spp.				1068	454
Corbicula fluminea					23
Cyathura polita		250		23	45
Hermundura fauveli		23			
Heteromastus filiformis		159	659		
Littoridinops tenuipes (Epi.)					45
Macoma balthica	45	23	136		
Marenzelleria viridis		68	68		23
Mediomastus ambiseta	136				
Nectopsyche spp. (Epi.)					23
Rangia cuneata					23
Streblospio benedicti		23			
Tubificidae imm w/o cap chaetae					23
Tubificoides spp.	45	159	91	23	
Total Abundance w/ Epifauna	318	750	977	1136	795
Total Abundance w/o Epifauna	318	750	977	1136	727
Number of Taxa w/ Epifauna	5	8	5	4	10
Number of Taxa w/o Epifauna	5	8	5	4	8
BENTHIC BIOMASS (Grams per sq. meter)					
Site	25116	25117	25118	25119	25120
Carinoma tremaphoros	0.0523	0.0091			
Ceratopogonidae					0.0011
Chaoborus punctipennis	0.0023		0.0045	0.0011	
Chaoborus spp.					0.0114
Coelotanypus spp.				0.2863	0.0932
Corbicula fluminea					1.6949
Cyathura polita		0.6634		0.0364	0.0591
Hermundura fauveli		0.0136			
Heteromastus filiformis		0.0136	0.0341		
Littoridinops tenuipes (Epi.)					0.0114
Macoma balthica	0.5498	1.2837	1.1087		
Marenzelleria viridis		0.2954	0.1318		0.0727
Mediomastus ambiseta	0.0114				
Nectopsyche spp. (Epi.)					0.0011
Rangia cuneata					3.0627
Streblospio benedicti		0.0023			
Tubificidae imm w/o cap chaetae					0.0011
Tubificoides spp.	0.0023	0.0011	0.0045	0.0011	
Total Biomass w/ Epifauna	0.6180	2.2822	1.2837	0.3249	5.0086
Total Biomass w/o Epifauna	0.6180	2.2822	1.2837	0.3249	4.9961

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

Site	25121	25122	25123	25124	25125
Watershed	Potomac R	Potomac R	Potomac R	Potomac R	Potomac R
Habitat	Low Mesohaline	Oligohaline	Freshwater	Freshwater	Freshwater
Date	09/04/18	09/04/18	09/04/18	09/04/18	09/04/18
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
BOTTOM ENVIRONMENT					
Depth (m)	2.3	6.9	1.5	2.6	6.2
Salinity (ppt)	2.43	0.13	0.13	0.14	0.15
Temperature (C)	28.99	29.02	29.36	29.54	28.42
Dissolved Oxygen (mg/L)	6.1	7.4	7.0	6.9	6.1
Sediment Silt-Clay (%)	90.39	95.09	91.58	56.48	85.07
Total Carbon (%)	2.54	2.87	3.71	2.72	3.26
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	1.80	3.67	2.50	4.00	2.50
Condition	Severely Degr.	Meets Goal	Degraded	Meets Goal	Degraded
# Attributes Scored	5	6	4	4	4
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	1.96 3	3.15	2.66	2.79	0.98
Abundance (#/m2)	273 1	3067 5	250 1	3385 5	2931 5
Biomass (g/m2)	0.30 1	422.89	0.10	40.51	9.97
Pollution Indicative Spp Abund (%)	50.00 1	11.85	45.45	78.52	87.60
Pollution Indicative Spp Biom (%)	9.23	0.01	8.14	0.14	0.11
Pollution Sensitive Spp Abund (%)	25.00	42.22	0.00	3.36	0.00
Pollution Sensitive Spp Biom (%)	73.08 3	97.93	0.00	0.26	0.00
Carnivore-Omnivore Abund (%)	75.00	50.37 5	9.09	28.19	0.78
Deep Deposit Feeder Abund (%)	8.33	17.04	36.36 1	64.43 5	96.90 1
TF Poll. Indicative Spp Abund (%)	0.00	0.00	36.36 5	57.72 3	86.82 3
Limnodrilus Abundance (%)	0.00	0.74	36.36	57.72	86.82
Oligo Poll. Indic. Spp Abund (%)	0.00	40.00 3	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	2.22 3	0.00	0.00	0.00
Tolerance Score	6.20	6.54 3	8.21 3	8.56 3	9.65 1
Tany./Chir. Abundance Ratio	100.00	43.90 3	100.00	67.57	100.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	25121	25122	25123	25124	25125
Apocorophium lacustre (Epi.)		23			
Aulodrilus pigueti		23			
Bellamyia japonica (Epi.)				23	
Branchiura sowerbyi				68	
Campeloma decisum (Epi.)					23
Carinoma tremaphoros	23				
Chironomini		23			
Coelotanypus spp.	136	273	23	545	23
Corbicula fluminea		273	23	204	68
Cryptochironomus spp.				136	
Cyathura polita	45	568		91	
Cyrnellus fraternus (Epi.)				45	
Dero digitata		23			
Dicrotendipes spp.				23	
Gammarus daiberi (Epi.)		295			
Gammarus spp. (Epi.)				114	
Glyptotendipes chelonina		45			
Hexagenia limbata				23	
Isochaetides freyi				159	
Leptoceridae *		23			
Leptocheirus plumulosus	45				
Limnodrilus hoffmeisteri			68	909	159
Marenzelleria viridis		68		23	
Mediomastus ambiseta	23				
Nais variabilis		45			
Oecetis inconspicua (Epi.)		23			
Parachironomus frequens group		454			
Pisidium compressum			23		
Pisidium spp. *			45		
Polypedilum halterale group		45		45	
Procladius spp.		136		23	
Rangia cuneata		659			
Sphaeriidae *			45		
Stictochironomus caffarius				68	
Tubificidae imm w cap chaetae					295
Tubificidae imm w/o cap chaetae		23			
Tubificidae imm w/o cap chaetae *			23	1045	2386
Tubificoides spp.		409			
Unionidae				23	
Total Abundance w/ Epifauna	273	3431	250	3567	2954
Total Abundance w/o Epifauna	273	3067	250	3385	2931
Number of Taxa w/ Epifauna	5	18	4	18	5
Number of Taxa w/o Epifauna	5	15	4	14	4
BENTHIC BIOMASS (Grams per sq. meter)					
Site	25121	25122	25123	25124	25125
Apocorophium lacustre (Epi.)		0.0023			
Bellamyia japonica (Epi.)				16.5174	
Branchiura sowerbyi				0.1068	
Campeloma decisum (Epi.)					4.6803
Carinoma tremaphoros	0.0454				
Chironomidae		0.0954		0.0011	
Chironomini		0.0045			
Coelotanypus spp.	0.0273	0.0295	0.0023	0.0568	0.0114
Corbicula fluminea		8.6109	0.0682	39.7645	9.2675
Cyathura polita	0.2136	0.3726		0.0273	
Cyrnellus fraternus (Epi.)				0.0545	
Gammarus daiberi (Epi.)		0.0477			
Gammarus spp. (Epi.)				0.0273	
Hexagenia limbata				0.0159	
Leptoceridae *		0.0159			
Leptocheirus plumulosus	0.0068				
Marenzelleria viridis		0.1250		0.0772	
Mediomastus ambiseta	0.0023				
Oecetis inconspicua (Epi.)		0.0091			
Oligochaeta		0.0011	0.0057	0.4050	0.6895
Pisidium compressum			0.0114		
Pisidium spp. *			0.0091		
Rangia cuneata		413.6358			
Sphaeriidae *			0.0011		
Tubificoides spp.		0.0136			
Unionidae				0.0545	
Total Biomass w/ Epifauna	0.2954	422.9635	0.0977	57.1085	14.6487
Total Biomass w/o Epifauna	0.2954	422.8885	0.0977	40.5093	9.9684

*Indicates taxa is skipped in taxon counts

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

Site	25201	25202	25203	25204	25205
Watershed	Patuxent R	Patuxent R	Patuxent R	Patuxent R	Patuxent R
Habitat	High Meso Sand	High Meso Sand	High Meso Sand	High Meso Sand	High Meso Mud
Date	08/22/18	08/22/18	09/11/18	08/22/18	09/11/18
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
BOTTOM ENVIRONMENT					
Depth (m)	13.0	4.5	17.9	3.3	4.0
Salinity (ppt)	8.95	8.13	9.02	8.11	8.52
Temperature (C)	27.80	27.53	27.11	27.56	26.64
Dissolved Oxygen (mg/L)	3.0	5.8	4.5	5.5	4.5
Sediment Silt-Clay (%)	38.72	3.47	1.87	2.90	80.83
Total Carbon (%)	1.88	0.18	0.18	0.11	4.31
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	3.00	3.00	2.67	2.33	1.67
Condition	Meets Goal	Meets Goal	Marginal	Degraded	Severely Degr.
# Attributes Scored	6	6	6	6	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	1.98 1	2.95 3	1.80 1	2.34 1	1.00 1
Abundance (#/m2)	454 1	2045 5	1113 3	1886 5	45 1
Biomass (g/m2)	2.45 3	1.26 3	0.87 1	0.36 1	0.01 1
Pollution Indicative Spp Abund (%)	10.00 5	13.33 3	4.08 5	19.28 3	50.00
Pollution Indicative Spp Biom (%)	0.88	16.22	10.22	15.92	85.71 1
Pollution Sensitive Spp Abund (%)	35.00 3	4.44 1	2.04 1	1.20 1	0.00
Pollution Sensitive Spp Biom (%)	78.16	6.31	1.05	1.91	0.00 1
Carnivore-Omnivore Abund (%)	55.00 5	23.33 3	85.71 5	30.12 3	50.00 5
Deep Deposit Feeder Abund (%)	5.00	16.67	8.16	38.55	0.00
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	0.00	0.00	0.00	9.64	8.00
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	0.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	25201	25202	25203	25204	25205
Acteocina canaliculata		23			
Arcuatula papyria (Epi.)				23	
Carinoma tremaphoros	136	91	227	159	
Chironomini					23
Chironomus spp.				341	
Cryptochironomus spp.				23	
Diadumene leucolena (Epi.)			136		
Eteone heteropoda			23		
Gemma gemma			23	45	
Glycera dibranchiata		45			
Glycinde solitaria		45		23	
Heteromastus filiformis		318	91	727	
Laeonereis culveri				23	
Leitoscoloplos spp.	23				
Macoma balthica	159				
Macoma mitchelli		659		477	
Marenzelleria viridis		23			
Micrura leidyi			204		
Mulinia lateralis	23	159	23	23	
Mya arenaria			23		
Neanthes succinea	114	273	500		
Parvilucina crenella		250		45	
Polydora cornuta		23			
Streblospio benedicti		114			23
Tubificoides spp.		23			
Total Abundance w/ Epifauna	454	2045	1250	1908	45
Total Abundance w/o Epifauna	454	2045	1113	1886	45
Number of Taxa w/ Epifauna	5	13	9	11	2
Number of Taxa w/o Epifauna	5	13	8	10	2
BENTHIC BIOMASS (Grams per sq. meter)					
Site	25201	25202	25203	25204	25205
Acteocina canaliculata		0.0136			
Arcuatula papyria (Epi.)				0.0011	
Carinoma tremaphoros	0.0318	0.0182	0.0750	0.0886	
Chironomini					0.0011
Chironomus spp.				0.0454	
Cryptochironomus spp.				0.0011	
Diadumene leucolena (Epi.)			0.0523		
Eteone heteropoda			0.0023		
Gemma gemma			0.0011	0.0500	
Glycera dibranchiata		0.0954			
Glycinde solitaria		0.0250		0.0068	
Heteromastus filiformis		0.0636	0.0886	0.0932	
Laeonereis culveri				0.0011	
Leitoscoloplos spp.	0.0204				
Macoma balthica	1.9153				
Macoma mitchelli		0.0477		0.0318	
Marenzelleria viridis		0.0409			
Micrura leidyi			0.4021		
Mulinia lateralis	0.0011	0.1931	0.0863	0.0114	
Mya arenaria			0.0091		
Neanthes succinea	0.4817	0.1227	0.2022		
Parvilucina crenella		0.6180		0.0273	
Polydora cornuta		0.0045			
Streblospio benedicti		0.0114			0.0068
Tubificoides spp.		0.0068			
Total Biomass w/ Epifauna	2.4504	1.2610	0.9190	0.3578	0.0080
Total Biomass w/o Epifauna	2.4504	1.2610	0.8668	0.3567	0.0080

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

Site	25206	25207	25208	25209	25210	
Watershed	Patuxent R	Patuxent R	Patuxent R	Patuxent R	Patuxent R	
Habitat	High Meso Mud	High Meso Sand	High Meso Sand	High Meso Mud	High Meso Mud	
Date	09/11/18	09/11/18	09/11/18	09/11/18	09/11/18	
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab	
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044	
BOTTOM ENVIRONMENT						
Depth (m)	4.0	1.4	8.5	8.2	4.3	
Salinity (ppt)	8.46	7.90	9.24	9.16	8.61	
Temperature (C)	26.51	26.44	26.99	27.09	26.80	
Dissolved Oxygen (mg/L)	3.5	3.2	4.5	3.4	1.7	
Sediment Silt-Clay (%)	82.85	16.60	33.03	81.78	73.09	
Total Carbon (%)	3.37	0.48	1.39	2.95	3.81	
BENTHIC INDEX OF BIOTIC INTEGRITY						
B-IBI Score	2.00	2.33	3.33	2.00	2.33	
Condition	Severely Degr.	Degraded	Meets Goal	Severely Degr.	Degraded	
# Attributes Scored	6	6	6	6	6	
	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	1.42	1	3.12	3	3.12	3
Abundance (#/m2)	273	1	6066	1	1636	5
Biomass (g/m2)	0.27	1	2.16	3	1.84	3
Pollution Indicative Spp Abund (%)	75.00		26.97	1	22.22	3
Pollution Indicative Spp Biom (%)	24.37	3	5.57		5.92	3
Pollution Sensitive Spp Abund (%)	0.00		28.84	3	11.11	3
Pollution Sensitive Spp Biom (%)	0.00	1	42.67		54.87	1
Carnivore-Omnivore Abund (%)	66.67	5	22.10	3	30.56	3
Deep Deposit Feeder Abund (%)	8.33		18.73		36.11	
TF Poll. Indicative Spp Abund (%)	0.00		0.00		0.00	
Limnodrilus Abundance (%)	0.00		0.00		0.00	
Oligo Poll. Indic. Spp Abund (%)	0.00		0.00		0.00	
Oligo Poll. Sens. Spp Abund (%)	0.00		0.00		0.00	
Tolerance Score	9.80		0.00		9.80	
Tany./Chir. Abundance Ratio	0.00		0.00		0.00	

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	25206	25207	25208	25209	25210
Carinoma tremaphoros			114	23	
Chironomus spp.	182		45	23	
Cyathura polita		364			
Edotea triloba (Epi.)		45			
Edwardsia elegans		91			
Eteone heteropoda		750			
Gemma gemma		136			
Glycinde solitaria			68		
Grandidierella spp.		136			
Heteromastus filiformis	23	1045	159		
Hobsonia florida		45			
Laeonereis culveri		91			
Leitoscoloplos robustus			91		
Leptocheirus plumulosus		114			
Macoma balthica		23	114		
Macoma mitchelli	45	886	204		
Marenzelleria viridis		1363			
Micrura leidyi			23	23	
Neanthes succinea		23	250		23
Polypedilum scalaenum group		23			
Streblospio benedicti	23	886	227		
Tubificoides spp.		91	341		
Total Abundance w/ Epifauna	273	6112	1636	68	23
Total Abundance w/o Epifauna	273	6066	1636	68	23
Number of Taxa w/ Epifauna	4	17	11	3	1
Number of Taxa w/o Epifauna	4	16	11	3	1
BENTHIC BIOMASS (Grams per sq. meter)					
Site	25206	25207	25208	25209	25210
Carinoma tremaphoros			0.1068	0.0182	
Chironomus spp.	0.0636		0.0091	0.0011	
Cyathura polita		0.2249			
Edotea triloba (Epi.)		0.0159			
Edwardsia elegans		0.0613			
Eteone heteropoda		0.0954			
Gemma gemma		0.0432			
Glycinde solitaria			0.0295		
Grandidierella spp.		0.0159			
Heteromastus filiformis	0.0136	0.4612	0.0523		
Hobsonia florida		0.0023			
Laeonereis culveri		0.0932			
Leitoscoloplos robustus			0.0932		
Leptocheirus plumulosus		0.0227			
Macoma balthica		0.1818	0.9815		
Macoma mitchelli	0.1908	0.3885	0.2545		
Marenzelleria viridis		0.5157			
Micrura leidyi			0.0432	0.0011	
Neanthes succinea		0.0204	0.2590		0.0045
Polypedilum scalaenum group		0.0011			
Streblospio benedicti	0.0023	0.0250	0.0068		
Tubificoides spp.		0.0091	0.0068		
Total Biomass w/ Epifauna	0.2704	2.1777	1.8426	0.0204	0.0045
Total Biomass w/o Epifauna	0.2704	2.1618	1.8426	0.0204	0.0045

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

Site	25211	25212	25213	25214	25215
Watershed	Patuxent R	Patuxent R	Patuxent R	Patuxent R	Patuxent R
Habitat	Low Mesohaline	Low Mesohaline	Low Mesohaline	Low Mesohaline	Low Mesohaline
Date	09/12/18	09/12/18	09/12/18	09/12/18	09/12/18
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
BOTTOM ENVIRONMENT					
Depth (m)	1.9	1.8	4.9	3.7	4.3
Salinity (ppt)	7.26	7.29	6.73	7.37	7.23
Temperature (C)	26.01	25.99	25.73	26.05	26.07
Dissolved Oxygen (mg/L)	4.8	4.7	5.1	4.5	4.1
Sediment Silt-Clay (%)	2.97	2.91	91.30	17.07	86.85
Total Carbon (%)	0.03	0.54	2.89	0.46	2.54
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	2.20	2.60	1.00	1.40	1.40
Condition	Degraded	Degraded	Severely Degr.	Severely Degr.	Severely Degr.
# Attributes Scored	5	5	5	5	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	1.26 1	1.62 1	0.00 1	1.37 1	1.84 3
Abundance (#/m2)	1318 3	2090 5	0 1	568 3	159 1
Biomass (g/m2)	0.27 1	0.45 1	0.00 1	0.12 1	0.32 1
Pollution Indicative Spp Abund (%)	0.00 5	2.17 5	100.00 1	84.00 1	42.86 1
Pollution Indicative Spp Biom (%)	0.00	3.57	100.00	70.91	0.36
Pollution Sensitive Spp Abund (%)	3.45	2.17	0.00	0.00	0.00
Pollution Sensitive Spp Biom (%)	31.62 1	8.16 1	0.00 1	0.00 1	0.00 1
Carnivore-Omnivore Abund (%)	8.62	7.61	0.00	80.00	42.86
Deep Deposit Feeder Abund (%)	17.24	21.74	0.00	4.00	28.57
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	0.00	0.00	0.00	9.80	9.80
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	0.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	25211	25212	25213	25214	25215
Ameroculodes species complex		23			
Chironomus spp.				409	68
Cyclaspis varians		23			
Eteone heteropoda		45			
Heteromastus filiformis	227	454		23	23
Leptocheirus plumulosus		45			
Macoma mitchelli	932	1340		23	45
Marenzelleria viridis	45	45			
Neanthes succinea	114	114		45	
Streblospio benedicti				68	
Tubificoides spp.					23
Total Abundance w/ Epifauna	1318	2090	0	568	159
Total Abundance w/o Epifauna	1318	2090		568	159
Number of Taxa w/ Epifauna	4	8	0	5	4
Number of Taxa w/o Epifauna	4	8	0	5	4
BENTHIC BIOMASS (Grams per sq. meter)					
Site	25211	25212	25213	25214	25215
Ameroculodes species complex		0.0045			
Chironomus spp.				0.0795	0.0011
Cyclaspis varians		0.0023			
Eteone heteropoda		0.0159			
Heteromastus filiformis	0.0545	0.1204		0.0114	0.0011
Leptocheirus plumulosus		0.0091			
Macoma mitchelli	0.1091	0.1977		0.0204	0.3113
Marenzelleria viridis	0.0841	0.0364			
Neanthes succinea	0.0182	0.0591		0.0045	
Streblospio benedicti				0.0091	
Tubificoides spp.					0.0023
Total Biomass w/ Epifauna	0.2658	0.4453	0.0000	0.1250	0.3158
Total Biomass w/o Epifauna	0.2658	0.4453	0.0000	0.1250	0.3158

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

Site	25216	25217	25218	25219	25220
Watershed	Patuxent R	Patuxent R	Patuxent R	Patuxent R	Patuxent R
Habitat	Low Mesohaline	Low Mesohaline	Low Mesohaline	Low Mesohaline	Low Mesohaline
Date	09/12/18	09/12/18	09/12/18	09/10/18	09/10/18
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
BOTTOM ENVIRONMENT					
Depth (m)	2.9	1.7	6.4	2.1	1.3
Salinity (ppt)	5.74	6.05	7.25	5.93	5.99
Temperature (C)	25.40	25.63	26.00	25.14	25.47
Dissolved Oxygen (mg/L)	5.6	5.4	4.1	4.9	5.1
Sediment Silt-Clay (%)	74.91	6.50	84.58	81.26	6.81
Total Carbon (%)	2.22	0.20	2.05	2.51	0.25
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	3.40	3.00	1.00	2.60	4.20
Condition	Meets Goal	Meets Goal	Severely Degr.	Degraded	Meets Goal
# Attributes Scored	5	5	5	5	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	2.36 3	2.39 3	0.00 1	2.85 5	1.53 1
Abundance (#/m2)	977 3	1795 5	0 1	1295 3	1545 5
Biomass (g/m2)	3.18 3	1.35 3	0.00 1	0.61 1	7.14 5
Pollution Indicative Spp Abund (%)	6.98 5	16.46 3	100.00 1	28.07 1	4.41 5
Pollution Indicative Spp Biom (%)	0.64	4.73	100.00	3.88	0.37
Pollution Sensitive Spp Abund (%)	23.26	7.59	0.00	5.26	11.76
Pollution Sensitive Spp Biom (%)	71.53 3	32.09 1	0.00 1	59.52 3	94.89 5
Carnivore-Omnivore Abund (%)	23.26	25.32	0.00	21.05	5.88
Deep Deposit Feeder Abund (%)	2.33	13.92	0.00	40.35	72.06
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	17.54	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	6.20	0.00	0.00	8.77	6.00
Tany./Chir. Abundance Ratio	100.00	0.00	0.00	100.00	0.00

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	25216	25217	25218	25219	25220
Carinoma tremaphoros	91			114	45
Coelotanypus spp.	68			91	
Cyathura polita				45	23
Eteone heteropoda		295			23
Heteromastus filiformis	23	250		68	1113
Leptocheirus plumulosus	386	250		409	136
Macoma balthica	227	114		23	
Macoma mitchelli	114	704		23	
Marenzelleria viridis		23			136
Melita nitida (Epi.)	68			114	
Neanthes succinea	68	159		23	
Rangia cuneata					23
Rhithropanopeus harrisi (Epi.)					23
Streblospio benedicti				45	45
Tubificidae imm w/o cap chaetae				227	
Tubificoides spp.				227	
Total Abundance w/ Epifauna	1045	1795	0	1409	1568
Total Abundance w/o Epifauna	977	1795		1295	1545
Number of Taxa w/ Epifauna	8	7	0	12	9
Number of Taxa w/o Epifauna	7	7	0	11	8
BENTHIC BIOMASS (Grams per sq. meter)					
Site	25216	25217	25218	25219	25220
Carinoma tremaphoros	0.0091			0.0227	0.0182
Coelotanypus spp.	0.0204			0.0204	
Cyathura polita				0.0636	0.0386
Eteone heteropoda		0.0636			0.0250
Heteromastus filiformis	0.0045	0.0977		0.0386	0.3181
Leptocheirus plumulosus	0.1181	0.0477		0.0659	0.0023
Macoma balthica	2.2720	0.4271		0.3022	
Macoma mitchelli	0.6543	0.5725		0.0045	
Marenzelleria viridis		0.0045			0.1000
Melita nitida (Epi.)	0.0068			0.0068	
Neanthes succinea	0.0977	0.1318		0.0863	
Rangia cuneata					6.6388
Rhithropanopeus harrisi (Epi.)					0.1613
Streblospio benedicti				0.0023	0.0011
Tubificidae imm w/o cap chaetae				0.0011	
Tubificoides spp.				0.0068	
Total Biomass w/ Epifauna	3.1831	1.3450	0.0000	0.6214	7.3033
Total Biomass w/o Epifauna	3.1763	1.3450	0.0000	0.6146	7.1420

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

Site	25221	25222	25223	25224	25225
Watershed	Patuxent R	Patuxent R	Patuxent R	Patuxent R	Patuxent R
Habitat	Low Mesohaline	Low Mesohaline	Low Mesohaline	Freshwater	Freshwater
Date	09/10/18	09/10/18	09/10/18	09/12/18	09/12/18
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
BOTTOM ENVIRONMENT					
Depth (m)	1.3	1.8	6.6	2.2	0.6
Salinity (ppt)	4.46	4.91	3.42	0.10	0.10
Temperature (C)	23.71	24.88	25.06	22.29	22.63
Dissolved Oxygen (mg/L)	6.9	6.2	5.8	4.8	4.8
Sediment Silt-Clay (%)	92.15	78.23	83.72	81.21	25.45
Total Carbon (%)	2.58	2.72	2.25	6.73	1.19
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	1.80	2.20	2.60	4.00	2.50
Condition	Severely Degr.	Degraded	Degraded	Meets Goal	Degraded
# Attributes Scored	5	5	5	4	4
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	2.08 3	2.17 3	1.67 1	1.84	1.75
Abundance (#/m2)	364 1	1204 3	1863 5	3544 5	4203 3
Biomass (g/m2)	0.60 1	0.49 1	0.42 1	2.41	0.59
Pollution Indicative Spp Abund (%)	50.00 1	30.19 1	40.24 1	78.21	79.46
Pollution Indicative Spp Biom (%)	4.91	4.90	4.28	77.74	31.53
Pollution Sensitive Spp Abund (%)	31.25	15.09	9.76	10.26	0.00
Pollution Sensitive Spp Biom (%)	94.72 3	70.40 3	86.10 5	20.38	0.00
Carnivore-Omnivore Abund (%)	75.00	22.64	6.10	87.82	12.97
Deep Deposit Feeder Abund (%)	12.50	69.81	47.56	12.18 5	87.03 3
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	1.92 5	67.03 3
Limnodrilus Abundance (%)	0.00	20.75	0.00	1.92	82.70
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	6.20	9.03	6.83	9.41 1	9.76 1
Tany./Chir. Abundance Ratio	100.00	100.00	0.00	4.96	0.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	25221	25222	25223	25224	25225
Aulodrilus pigueti				68	
Branchiura sowerbyi				91	182
Bratislavia unidentata				23	
Carinoma tremaphoros	23	45	23		
Chaoborus punctipennis			23		
Chironomini *				23	
Chironomus spp.				2499	523
Coelotanypus spp.	182	68		136	
Cyathura polita	68	159	68	364	
Dero digitata				23	
Dero flabelliger				23	
Dero spp. *				45	
Gammarus spp. (Epi.)				136	
Ilyodrilus templetoni				23	
Limnodrilus claparedianus					500
Limnodrilus hoffmeisteri					159
Limnodrilus udekemianus					159
Macoma balthica	23				
Macoma mitchelli		23			
Marenzelleria viridis	23	23	68		
Polypedilum halterale group				68	23
Polypedilum spp.				23	
Pristina synclites				23	
Rangia cuneata			45		
Slavina appendiculata				23	
Streblospio benedicti		45	750		
Stylaria lacustris				23	
Tubificidae imm w/o cap chaetae		250		68	
Tubificidae imm w/o cap chaetae *					2658
Tubificoides spp.	45	591	886		
Total Abundance w/ Epifauna	364	1204	1863	3681	4203
Total Abundance w/o Epifauna	364	1204	1863	3544	4203
Number of Taxa w/ Epifauna	6	8	7	16	6
Number of Taxa w/o Epifauna	6	8	7	15	6
BENTHIC BIOMASS (Grams per sq. meter)					
Site	25221	25222	25223	25224	25225
Branchiura sowerbyi				0.0364	0.1954
Carinoma tremaphoros	0.0011	0.0182	0.0204		
Chaoborus punctipennis			0.0045		
Chironomini *				0.0045	
Chironomus spp.				1.8676	0.1863
Coelotanypus spp.	0.0295	0.0182		0.0045	
Cyathura polita	0.2772	0.2454	0.2317	0.4908	
Gammarus spp. (Epi.)				0.0045	
Macoma balthica	0.1227				
Macoma mitchelli		0.0909			
Marenzelleria viridis	0.1704	0.0977	0.0909		
Oligochaeta				0.0011	0.2080
Polypedilum halterale group				0.0011	0.0011
Polypedilum spp.				0.0023	
Rangia cuneata			0.0432		
Streblospio benedicti		0.0045	0.0182		
Site	25221	25222	25223	25224	25225
Tubificidae imm w/o cap chaetae		0.0011			
Tubificoides spp.	0.0011	0.0114	0.0159		
Total Biomass w/ Epifauna	0.6021	0.4873	0.4249	2.4129	0.5908
Total Biomass w/o Epifauna	0.6021	0.4873	0.4249	2.4083	0.5908

*Indicates taxa is skipped in taxon counts

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

Site	25601	25602	25603	25604	25605
Watershed	Upper Bay	Upper Bay	Upper Bay	Upper Bay	Upper Bay
Habitat	Low Mesohaline	Low Mesohaline	Low Mesohaline	Low Mesohaline	Low Mesohaline
Date	08/22/18	08/22/18	08/22/18	08/30/18	08/30/18
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
BOTTOM ENVIRONMENT					
Depth (m)	5.7	8.5	10.1	2.1	6.2
Salinity (ppt)	6.04	10.82	10.72	2.27	4.43
Temperature (C)	26.68	26.50	26.44	28.02	26.85
Dissolved Oxygen (mg/L)	3.8	1.2	0.6	8.9	4.1
Sediment Silt-Clay (%)	13.20	94.27	93.99	2.64	90.73
Total Carbon (%)	0.40	2.85	2.07	0.08	4.50
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	5.00	1.40	1.00	4.20	3.40
Condition	Meets Goal	Severely Degr.	Severely Degr.	Meets Goal	Meets Goal
# Attributes Scored	5	5	5	5	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	2.58 5	0.00 1	0.92 1	2.26 3	2.29 3
Abundance (#/m2)	1795 5	545 3	68 1	2431 5	1068 3
Biomass (g/m2)	5.28 5	0.58 1	0.03 1	15.97 3	3.25 3
Pollution Indicative Spp Abund (%)	2.53 5	100.00 1	66.67 1	0.00 5	0.00 5
Pollution Indicative Spp Biom (%)	0.17	100.00	96.00	0.00	0.00
Pollution Sensitive Spp Abund (%)	51.90	0.00	0.00	25.23	44.68
Pollution Sensitive Spp Biom (%)	91.01 5	0.00 1	0.00 1	92.76 5	76.57 3
Carnivore-Omnivore Abund (%)	30.38	0.00	0.00	18.69	27.66
Deep Deposit Feeder Abund (%)	6.33	100.00	100.00	7.48	12.77
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	9.80	0.00	0.00	6.00	0.00
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	0.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	25601	25602	25603	25604	25605
Apocorophium lacustre (Epi.)				23	
Carinoma tremaphoros	341			23	114
Chironomus spp.	23				
Cyathura polita				409	
Edwardsia elegans	23				
Gemma gemma	45				
Heteromastus filiformis	114			182	91
Leitoscoloplos robustus		545			
Leitoscoloplos spp.			45		
Lepidactylus dytiscus				1136	
Leptocheirus plumulosus				432	136
Macoma balthica	772			23	477
Macoma mitchelli	136			23	23
Marenzelleria viridis	114			45	
Mya arenaria	45				
Neanthes succinea	159			23	182
Rangia cuneata				136	
Streblospio benedicti	23				
Tubificoides spp.			23		45
Total Abundance w/ Epifauna	1795	545	68	2454	1068
Total Abundance w/o Epifauna	1795	545	68	2431	1068
Number of Taxa w/ Epifauna	11	1	2	11	7
Number of Taxa w/o Epifauna	11	1	2	10	7
BENTHIC BIOMASS (Grams per sq. meter)					
Site	25601	25602	25603	25604	25605
Apocorophium lacustre (Epi.)				0.0023	
Carinoma tremaphoros	0.0841			0.0045	0.0182
Chironomus spp.	0.0045				
Cyathura polita				0.2340	
Edwardsia elegans	0.0045				
Gemma gemma	0.0091				
Heteromastus filiformis	0.0613			0.0409	0.0091
Leitoscoloplos robustus		0.5794			
Leitoscoloplos spp.			0.0273		
Lepidactylus dytiscus				0.4044	
Leptocheirus plumulosus				0.0954	0.0136
Macoma balthica	2.7787			0.1000	2.4878
Macoma mitchelli	0.0386			0.6066	0.1045
Marenzelleria viridis	0.0545			0.0182	
Mya arenaria	1.9721				
Neanthes succinea	0.2681			0.0045	0.6112
Rangia cuneata				14.4590	
Streblospio benedicti	0.0045				
Tubificoides spp.			0.0011		0.0045
Total Biomass w/ Epifauna	5.2801	0.5794	0.0284	15.9699	3.2490
Total Biomass w/o Epifauna	5.2801	0.5794	0.0284	15.9676	3.2490

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

Site	25606	25607	25608	25609	25610	
Watershed	Upper Bay	Upper Bay	Upper Bay	Upper Bay	Upper Bay	
Habitat	Low Mesohaline	Low Mesohaline	Low Mesohaline	Low Mesohaline	Low Mesohaline	
Date	08/30/18	08/30/18	08/30/18	08/30/18	08/30/18	
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab	
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044	
BOTTOM ENVIRONMENT						
Depth (m)	11.6	4.8	3.5	4.3	3.9	
Salinity (ppt)	9.83	2.35	1.78	2.46	1.61	
Temperature (C)	26.27	27.09	26.78	27.87	27.86	
Dissolved Oxygen (mg/L)	1.0	7.0	6.5	7.7	7.5	
Sediment Silt-Clay (%)	95.63	92.67	9.99	86.06	90.14	
Total Carbon (%)	3.77	2.92	0.34	3.04	3.32	
BENTHIC INDEX OF BIOTIC INTEGRITY						
B-IBI Score	1.00	3.80	3.80	4.20	3.00	
Condition	Severely Degr.	Meets Goal	Meets Goal	Meets Goal	Meets Goal	
# Attributes Scored	5	5	5	5	5	
	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	0.00	1	1.88	3	1.70	1
Abundance (#/m2)	68	1	591	3	1545	5
Biomass (g/m2)	0.02	1	2.03	3	3.20	3
Pollution Indicative Spp Abund (%)	100.00	1	3.85	5	0.00	5
Pollution Indicative Spp Biom (%)	100.00		0.11		0.00	
Pollution Sensitive Spp Abund (%)	0.00		84.62		45.59	
Pollution Sensitive Spp Biom (%)	0.00	1	98.99	5	96.27	5
Carnivore-Omnivore Abund (%)	100.00		57.69		41.18	
Deep Deposit Feeder Abund (%)	0.00		0.00		0.00	
TF Poll. Indicative Spp Abund (%)	0.00		0.00		0.00	
Limnodrilus Abundance (%)	0.00		0.00		0.00	
Oligo Poll. Indic. Spp Abund (%)	0.00		0.00		0.00	
Oligo Poll. Sens. Spp Abund (%)	0.00		0.00		0.00	
Tolerance Score	6.20		6.00		6.38	
Tany./Chir. Abundance Ratio	100.00		0.00		0.00	

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	25606	25607	25608	25609	25610
Carinoma tremaphoros			23	23	
Chaoborus punctipennis				23	
Chiridotea almyra			23		
Coelotanypus spp.	68				
Cryptochironomus spp.				23	
Cyathura polita		341	568	204	114
Edotea triloba (Epi.)			23		
Harnischia spp.			23		
Heteromastus filiformis				23	
Leptocheirus plumulosus		68	772	159	159
Macoma balthica		23			
Macoma mitchelli				23	
Marenzelleria viridis		45	68	23	45
Melita nitida (Epi.)				91	136
Neanthes succinea				45	
Rangia cuneata		91	68	68	68
Streblospio benedicti		23			
Tubificoides spp.				136	
Total Abundance w/ Epifauna	68	591	1568	841	523
Total Abundance w/o Epifauna	68	591	1545	750	386
Number of Taxa w/ Epifauna	1	6	8	12	5
Number of Taxa w/o Epifauna	1	6	7	11	4
BENTHIC BIOMASS (Grams per sq. meter)					
Site	25606	25607	25608	25609	25610
Carinoma tremaphoros			0.0023	0.0068	
Chaoborus punctipennis				0.0011	
Chiridotea almyra			0.0045		
Coelotanypus spp.	0.0250				
Cryptochironomus spp.				0.0011	
Cyathura polita		0.3090	0.3044	0.4044	0.1818
Edotea triloba (Epi.)			0.0023		
Harnischia spp.			0.0011		
Heteromastus filiformis				0.0011	
Leptocheirus plumulosus			0.1113	0.0545	0.0545
Macoma balthica		0.3453			
Macoma mitchelli				0.0045	
Marenzelleria viridis		0.0136	0.0454	0.0114	0.0727
Melita nitida (Epi.)				0.0045	0.0068
Neanthes succinea				0.0477	
Rangia cuneata		1.3450	2.7264	0.9792	2.8900
Streblospio benedicti		0.0023			
Tubificoides spp.				0.0011	
Total Biomass w/ Epifauna	0.0250	2.0334	3.1978	1.5177	3.2058
Total Biomass w/o Epifauna	0.0250	2.0334	3.1956	1.5132	3.1990

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

Site	25611	25612	25613	25614	25615	
Watershed	Upper Bay	Upper Bay	Upper Bay	Upper Bay	Upper Bay	
Habitat	Low Mesohaline	Low Mesohaline	Low Mesohaline	Low Mesohaline	Low Mesohaline	
Date	08/30/18	09/28/18	08/30/18	09/28/18	09/28/18	
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab	
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044	
BOTTOM ENVIRONMENT						
Depth (m)	4.9	4.9	4.6	4.6	5.1	
Salinity (ppt)	0.98	2.41	0.79	1.93	1.05	
Temperature (C)	26.92	20.80	27.65	20.89	20.36	
Dissolved Oxygen (mg/L)	6.8	5.9	7.2	7.2	8.3	
Sediment Silt-Clay (%)	93.79	80.71	92.55	82.48	86.54	
Total Carbon (%)	3.29	4.25	3.40	3.82	2.65	
BENTHIC INDEX OF BIOTIC INTEGRITY						
B-IBI Score	3.00	4.20	3.40	2.60	3.00	
Condition	Meets Goal	Meets Goal	Meets Goal	Degraded	Meets Goal	
# Attributes Scored	5	5	5	5	5	
	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	1.66	1	2.68	5	2.48	3
Abundance (#/m2)	659	3	1545	5	1795	5
Biomass (g/m2)	1.06	3	21.70	3	25.53	3
Pollution Indicative Spp Abund (%)	13.79	3	11.76	3	28.17	1
Pollution Indicative Spp Biom (%)	0.43		0.06		0.04	
Pollution Sensitive Spp Abund (%)	13.79		55.88		35.21	
Pollution Sensitive Spp Biom (%)	89.89	5	99.57	5	99.84	5
Carnivore-Omnivore Abund (%)	10.34		48.53		19.72	
Deep Deposit Feeder Abund (%)	65.52		16.18		29.58	
TF Poll. Indicative Spp Abund (%)	0.00		0.00		0.00	
Limnodrilus Abundance (%)	0.00		0.00		0.00	
Oligo Poll. Indic. Spp Abund (%)	0.00		0.00		0.00	
Oligo Poll. Sens. Spp Abund (%)	0.00		0.00		0.00	
Tolerance Score	6.00		6.08		6.26	
Tany./Chir. Abundance Ratio	0.00		100.00		0.00	

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	25611	25612	25613	25614	25615
Balanus improvisus (Epi.)		23		136	
Carinoma tremaphoros	23	159	23	68	23
Cassidinidea ovalis (Epi.)				68	
Coelotanypus spp.		45		68	
Cryptochironomus spp.			45		
Cyathura polita	45	523	250	523	159
Leptocheirus plumulosus			45		
Macoma mitchelli	23				
Marenzelleria viridis		273	136	45	136
Mytilopsis leucophaeata (Epi.)	45	1250		932	
Neanthes succinea		23		204	
Polydora cornuta		68			
Procladius spp.					45
Rangia cuneata	45	68	182	23	45
Rhithropanopeus harrisi (Epi.)	23	23		23	
Streblospio benedicti	91	136	454	204	23
Tubificoides spp.	432	250	477	659	
Total Abundance w/ Epifauna	727	2840	1613	2954	432
Total Abundance w/o Epifauna	659	1545	1613	1795	432
Number of Taxa w/ Epifauna	8	12	8	12	6
Number of Taxa w/o Epifauna	6	9	8	8	6
BENTHIC BIOMASS (Grams per sq. meter)					
Site	25611	25612	25613	25614	25615
Balanus improvisus (Epi.)		0.0750		0.5476	
Carinoma tremaphoros	0.0091	0.0545	0.0114	0.0114	0.0273
Cassidinidea ovalis (Epi.)				0.0023	
Coelotanypus spp.		0.0091		0.0091	
Cryptochironomus spp.			0.0011		
Cyathura polita	0.1000	0.5385	0.2704	0.1227	0.1386
Leptocheirus plumulosus			0.0114		
Macoma mitchelli	0.0727				
Marenzelleria viridis		0.2045	0.1500	0.0386	0.1045
Mytilopsis leucophaeata (Epi.)	0.0454	0.5248		2.0948	
Neanthes succinea		0.0091		0.3999	
Polydora cornuta		0.0091			
Procladius spp.					0.0011
Rangia cuneata	0.8497	20.8683	25.0715	0.1000	18.8031
Rhithropanopeus harrisi (Epi.)	0.4953	0.0341		1.2769	
Streblospio benedicti	0.0045	0.0045	0.0114	0.0068	0.0045
Tubificoides spp.	0.0204	0.0068	0.0045	0.0045	
Total Biomass w/ Epifauna	1.5972	22.3383	25.5316	4.6144	19.0791
Total Biomass w/o Epifauna	1.0565	21.7044	25.5316	0.6930	19.0791

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

Site	25616	25617	25618	25619	25620	
Watershed	Upper Bay	Upper Bay	Upper Bay	Upper Bay	Upper Bay	
Habitat	Low Mesohaline	Low Mesohaline	Oligohaline	Low Mesohaline	Oligohaline	
Date	09/28/18	09/28/18	09/28/18	09/28/18	09/28/18	
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab	
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044	
BOTTOM ENVIRONMENT						
Depth (m)	4.6	3.7	8.3	10.7	1.2	
Salinity (ppt)	0.50	0.08	1.08	5.14	0.64	
Temperature (C)	20.81	19.81	20.55	22.07	20.70	
Dissolved Oxygen (mg/L)	8.4	8.8	7.6	5.2	8.9	
Sediment Silt-Clay (%)	83.03	78.18	86.89	91.04	92.98	
Total Carbon (%)	1.70	3.08	5.27	3.72	3.70	
BENTHIC INDEX OF BIOTIC INTEGRITY						
B-IBI Score	3.40	3.80	3.80	2.20	2.67	
Condition	Meets Goal	Meets Goal	Meets Goal	Degraded	Marginal	
# Attributes Scored	5	5	5	5	6	
	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	2.59	5	1.78	3	1.45	1
Abundance (#/m2)	727	3	1113	3	1272	5
Biomass (g/m2)	20.76	3	28.30	3	5.59	1
Pollution Indicative Spp Abund (%)	21.88	1	2.04	5	0.00	5
Pollution Indicative Spp Biom (%)	0.04		0.01		0.00	
Pollution Sensitive Spp Abund (%)	65.63		91.84		87.50	
Pollution Sensitive Spp Biom (%)	99.92	5	99.98	5	99.84	3
Carnivore-Omnivore Abund (%)	25.00		26.53		8.93	1
Deep Deposit Feeder Abund (%)	6.25		4.08		8.93	
TF Poll. Indicative Spp Abund (%)	0.00		0.00		0.00	
Limnodrilus Abundance (%)	0.00		0.00		0.00	
Oligo Poll. Indic. Spp Abund (%)	0.00		0.00		8.93	5
Oligo Poll. Sens. Spp Abund (%)	0.00		0.00		71.43	5
Tolerance Score	6.25		6.30		8.50	3
Tany./Chir. Abundance Ratio	100.00		100.00		0.00	

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	25616	25617	25618	25619	25620
Carinoma tremaphoros				68	
Chaoborus punctipennis	23	23	23		
Coelotanypus spp.	23	23			136
Cyathura polita	136	250	91	23	
Hobsonia florida			23		
Lepidactylus dytiscus					45
Leptocheirus plumulosus	23				
Macoma balthica			114		
Marenzelleria viridis	136	613	909	136	
Mytilopsis leucophaeata (Epi.)	23	114			
Rangia cuneata	204	159			
Streblospio benedicti	136				
Tubificoides spp.	45	45	114		
Total Abundance w/ Epifauna	750	1227	1272	227	182
Total Abundance w/o Epifauna	727	1113	1272	227	182
Number of Taxa w/ Epifauna	9	7	6	3	2
Number of Taxa w/o Epifauna	8	6	6	3	2
BENTHIC BIOMASS (Grams per sq. meter)					
Site	25616	25617	25618	25619	25620
Carinoma tremaphoros				0.0114	
Chaoborus punctipennis	0.0045	0.0023	0.0023		
Coelotanypus spp.	0.0045	0.0023			0.0204
Cyathura polita	0.0341	0.1159	0.2590	0.1659	
Hobsonia florida			0.0045		
Lepidactylus dytiscus					0.0045
Leptocheirus plumulosus	0.0011				
Macoma balthica			4.6894		
Marenzelleria viridis	0.1045	0.6021	0.6362	0.5112	
Mytilopsis leucophaeata (Epi.)	0.1227	0.5657			
Rangia cuneata	20.6002	27.5753			
Streblospio benedicti	0.0045				
Tubificoides spp.	0.0023	0.0011	0.0023		
Total Biomass w/ Epifauna	20.8785	28.8646	5.5937	0.6884	0.0250
Total Biomass w/o Epifauna	20.7559	28.2989	5.5937	0.6884	0.0250

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

Site	25621	25622	25623	25625	25626
Watershed	Upper Bay	Upper Bay	Upper Bay	Upper Bay	Upper Bay
Habitat	Oligohaline	Oligohaline	Oligohaline	Freshwater	Freshwater
Date	09/28/18	09/28/18	09/28/18	09/19/18	09/19/18
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
BOTTOM ENVIRONMENT					
Depth (m)	3.5	2.1	3.1	0.5	2.9
Salinity (ppt)	0.08	0.08	0.08	0.09	0.09
Temperature (C)	19.81	19.96	19.44	23.76	20.99
Dissolved Oxygen (mg/L)	8.6	8.4	8.6	10.1	9.0
Sediment Silt-Clay (%)	73.15	2.34	79.37	91.86	3.43
Total Carbon (%)	1.40	0.07	1.89	3.28	0.05
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	3.67	3.67	2.67	4.00	5.00
Condition	Meets Goal	Meets Goal	Marginal	Meets Goal	Meets Goal
# Attributes Scored	6	6	6	4	4
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	2.13	2.06	2.35	1.64	0.09
Abundance (#/m2)	682 5	1295 5	2317 5	1000 3	2068 5
Biomass (g/m2)	23.50	64.66	192.45	0.16	0.10
Pollution Indicative Spp Abund (%)	16.67	1.75	41.18	36.36	0.00
Pollution Indicative Spp Biom (%)	0.02	0.00	0.05	63.83	0.00
Pollution Sensitive Spp Abund (%)	73.33	19.30	19.61	0.00	1.10
Pollution Sensitive Spp Biom (%)	99.46	0.19	50.60	0.00	9.09
Carnivore-Omnivore Abund (%)	63.33 5	17.54 3	11.76 1	77.27	1.10
Deep Deposit Feeder Abund (%)	3.33	10.53	34.31	22.73 5	0.00 5
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	18.18 5	0.00 5
Limnodrilus Abundance (%)	0.00	1.75	34.31	18.18	0.00
Oligo Poll. Indic. Spp Abund (%)	26.67 5	71.93 3	80.39 3	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	10.00 3	22.81 3	5.88 3	0.00	0.00
Tolerance Score	6.13 3	6.43 3	7.61 3	8.25 3	6.30 5
Tany./Chir. Abundance Ratio	100.00 1	0.00 5	100.00 1	100.00	0.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2018 (CRUISE 01:2018/2019) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	25621	25622	25623	25625	25626
Aulodrilus pigueti				45	
Chaoborus punctipennis				636	
Chiridotea almyra		91			
Coelotanypus spp.	114		159	136	
Corbicula fluminea	45	727	909		2045
Cryptochironomus spp.		23			
Cyathura polita	318	45	114		23
Gammarus spp. (Epi.)	23	68	91		
Limnodrilus hoffmeisteri			182	91	
Marenzelleria viridis	68	204	136		
Melita nitida (Epi.)	23				
Mytilopsis leucophaeata (Epi.)	318				
Polypedilum halterale group		68			
Rangia cuneata	114		204		
Rhithropanopeus harrisi (Epi.)	23				
Tubificidae imm w/o cap chaetae		23			
Tubificidae imm w/o cap chaetae *			613	91	
Tubificoides spp.	23	114			
Total Abundance w/ Epifauna	1068	1363	2408	1000	2068
Total Abundance w/o Epifauna	682	1295	2317	1000	2068
Number of Taxa w/ Epifauna	10	9	7	4	2
Number of Taxa w/o Epifauna	6	8	6	4	2
BENTHIC BIOMASS (Grams per sq. meter)					
Site	25621	25622	25623	25625	25626
Chaoborus punctipennis				0.0432	
Chiridotea almyra		0.0136			
Chironomidae		0.0011			
Coelotanypus spp.	0.0045		0.0227	0.1022	
Corbicula fluminea	0.1204	64.5203	94.9855		0.0909
Cyathura polita	0.0500	0.0159	0.0477		0.0091
Gammarus spp. (Epi.)	0.0068	0.0023	0.0114		
Marenzelleria viridis	0.1250	0.1068	0.2340		
Melita nitida (Epi.)	0.0023				
Mytilopsis leucophaeata (Epi.)	2.6355				
Oligochaeta			0.0682	0.0148	
Rangia cuneata	23.2017		97.0916		
Rhithropanopeus harrisi (Epi.)	0.9974				
Tubificidae imm w/o cap chaetae		0.0011			
Tubificoides spp.	0.0011	0.0023			
Total Biomass w/ Epifauna	27.1447	64.6634	192.4611	0.1602	0.1000
Total Biomass w/o Epifauna	23.5027	64.6611	192.4498	0.1602	0.1000